VALUE ADDED COURSE BROCHURE, OUTCOMES, SYLLABUS FOR ACADEMIC YEAR 2021-22

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

PRIST /MECH/CIRC/ 2021-2022 / VALUE ADDED COURSE/01 22.02.2022

It is informed that the VALUE ADDED COURSE will be conduct from 07.03.2022 to 16.03.2022 in online mode.

1) CERTIFICATE COURSE

- 3D-PRINTING

Students from mechanical department those who are interest can enroll their names and course to the HOD on or before 28.02.2022

HOD

COPY TO:
1.Department Circular file
2.HOD'S-CSE/EEE/ECE/CIVIL/MECH

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, Tamil Nadu, India.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be U
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAM



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

DEPARTMENT OF MECHANICAL ENGINEERING

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, Tamil Nadu

ABOUT THE DEPARTMENT

The department of Mechanical Engineering came into existence in 2000 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

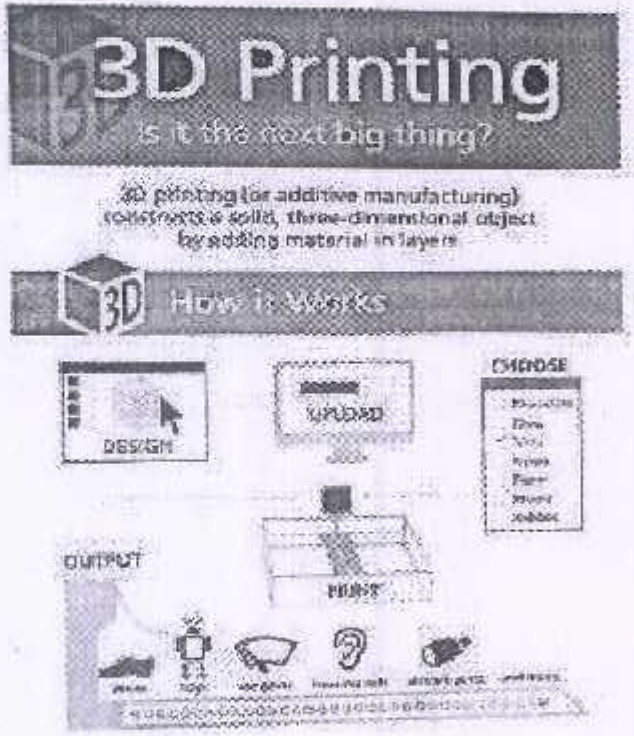
INFORMATION BROUCHER VALUE ADDED COURSE- 3D PRINTING

COURSE HIGHLIGHTS

- *Getting to know the 3D printer, how they work, loading materials, levelling the bed, trouble shooting, extruder maintenance.*
- *3D printing applications in the real world.*
- *Advanced 3D printing in Industry.*
- *Advanced parametric 3D modelling skills e.g How to model complex shapes with patterns and working to tolerances.*
- *How to slice models and use*

HOD
Department of Mechanical Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

- *custom/advanced settings. e.g. build plate adhesion, infill, print speeds, support analysis and how to manage 3D printing budgets.*
- *Different types of 3D printing materials, including post processing methods.*
- *Sustainability and 3D printing.*
- *Review of learnbylayers full curriculum.*



COURSE OBJECTIVES

This course focuses on the fundamentals of print reading and the measuring skills needed to verify print requirements.
Visualization of 3D objects from orthographic views and the use of micrometers and dial calipers are stressed.

The concepts of Geometric Dimensioning and Tolerancing, and quality tools (such as Pareto diagrams and fishbone charts) are introduced.
Writing assignments, as appropriate to the discipline, are part of the course.

PRE-REQUISITES

Understand and design basic mechanical concepts and reverse engineering .

ELIGIBILITY

B.Tech – Mechanical students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours
Date : 07 MAR 2022 to 16 MAR 2022
Timing : 10.00 a.m – 4.00 pm

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR

HOD
Department of Mechanical Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)

3D PRINTING

OBJECTIVE:

The students should be made to:

- Understand the basic concepts and matrices of 3D Printing Technology

UNIT I INTRODUCTION 9

Introduction; Design considerations – Material, Size, Resolution, Process; Modelling and viewing - 3D; Scanning; Model preparation – Digital; Slicing; Software; File formats

UNIT II PRINCIPLE 9

Processes – Extrusion, Wire, Granular, Lamination, Photopolymerization; Materials - Paper, Plastics, Metals, Ceramics, Glass, Wood, Fiber, Sand, Biological Tissues, Hydrogels, Graphene; Material Selection – Processes, applications, limitations;

UNIT III INKJET TECHNOLOGY 9

Printer – Working Principle, Positioning System, Printhead, Printbed, Frames, Motion control; Printhead Considerations – Continuous Inkjet, Thermal Inkjet, Piezoelectric Drop-On-Demand; Material Formulation for Jetting; Liquid based fabrication – Continuousjet, Multijet; Powder based fabrication – Colorjet;

UNIT IV LASER TECHNOLOGY 9

Light Sources – Types, Characteristics; Optics – Deflection, Modulation; Material feeding and flow – Liquid, powder; Printing machines – Types, Working Principle, Build Platforms, Enclosed Movement, Support structures;

UNIT V INDUSTRIAL APPLICATIONS 9

Product Models, manufacturing – Printed electronics, Biopolymers, Packaging, Healthcare, Food, Medical, Biotechnology, Displays; Opensources; Future trends;

TOTAL: 45 PERIODS

OUTCOMES:

Upon completion of the course, the student should be able to:

- Learn 3D printing workflow
- Understand the basic types of 3D Printing, materials used and their applications
- Select appropriate method for designing and modeling applications

TEXT BOOK

1. Ian M. Hutchings, Graham D. Martin, "Inkjet Technology for Digital Fabrication", John Wiley & Sons, 2013.

2. Christopher Barnatt, "3D Printing: The Next Industrial Revolution", CreateSpace Independent Publishing Platform, 2013.

REFERENCES

1. Ibrahim Zeid, "Mastering CAD CAM" Tata McGraw-Hill Publishing Co.2007

2. Jean Harvath, "Mastering 3D Printing", APress, 2014 3. Chua, C.K., Leong K.F. and Lim, C.S., "Rapid prototyping: Principles and applications", second edition, World Scientific Publishers, 2010.

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU, INDIA.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU, INDIA.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

PRIST /MECH/CIRC/ 2021-2022 /VALUE ADDED COURSE/01 28.01.2022

It is informed that the VALUE ADDED COURSE will be conduct from 02.02.2022 to 12.02.2022 in online mode.

1) CERTIFICATE COURSES

- MARINE CONSTRUCTION AND WELDING

Students from mechanical department those who are interest can enroll their names and course to the HOD on or before 31.01.2022

HOD

HOD
Department of Mechanical Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL N



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

ABOUT THE DEPARTMENT

The department of Mechanical Engineering came into existence in 2000 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

INFORMATION BROUCHER VALUE ADDED COURSE- MARINE CONSTRUCTION AND WELDING

COURSE OBJECTIVES

• General and Industry Specific Safety (Welding and Allied Equipment) • Oxy Fuel, Arc and Inert Gas Theory • Blueprint Reading, Weld Symbols and Applied Math • Measuring and Layout

• Use of Hand Tools

• Use of Powered Fabrication Equipment • Oxy Fuel Cutting and Gouging

• Plasma Arc Cutting

• Shielded Metal Arc Welding

• Gas Metal Arc Welding

• Gas Tungsten Arc Welding • Flux Core Arc Welding • 3G and 4G D1.1 Structural Weld Test, SMAW and FCAW F*

• Intro to Pipe Welding • OSHA Safety Certifications • Lincoln/FANUC Robotic Welding

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

COURSE OVERVIEW

This program is designed to develop the skills necessary for performing work in the field of welding and fabrication. Instruction will begin with a strong emphasis on safety and will address the many precautions that need to be taken to insure the safe operations of welding and fabrication equipment, as well as general industrial safety.

The tools, applied math, layout, print reading, and measuring are explained as well as hands on fabrication. Processes covered are sawing, shearing, and punching of structural steel. Next, instruction will be provided in SMAW (Shielded Metal Arc Welding), GMAW (Gas Metal Arc Welding), FCAW (Flux Cored Arc Welding), GTAW (Gas Tungsten Arc Welding) and thermal cutting techniques.

Eligible students may elect to test under AWS QC 10 certification guidelines in the 3G and 4G positions pertaining to the AWS D1.1 Structural Code. Also covered will be Oxy Acetylene Cutting and Welding, Plasma Arc Cutting and Carbon Arc Cutting.

This training serves as a progressive introduction to the technical skills and practices to prepare students for employment as flame cutters, structural welders, tack welders, welder assemblers, welder helpers, arc cutters and production line welders.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

COURSE OUTCOMES

- ✓ The student will obtain entry level skills and understanding of virtually all the welding and cutting processes used in production and repair today. The student will have the theory, fundamentals of operation, equipment used and techniques recommended for all of the welding, cutting and fabrication processes that are commercially used.
- ✓ The student will have the opportunity of becoming certified under the welding code D1.1 in the processes covered by this class.
- ✓



PRE-REQUISITES

Understand and design basic mechanical concepts and reverse engineering.

ELIGIBILITY

B.Tech – Mechanical students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours
date : 02.02.2022 to 12.02.2022
Timing : 10.00 a.m - 4.00 pm

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
Thanjavur - 613 403

MARINE CONSTRUCTION AND WELDING

Objectives:

- Understand about different types of welding processes and equipments.
- Know about the special welding process.
- Study about metallurgy of welding.
- Acquire broader ideas about weldability of ferrous and non ferrous metals.
- Understand about welding economy and applications.

UNIT I METAL JOINING PROCESSES

Classification plastic welding, fusion welding, solid phase welding and sub classification. Study of power sources, electrodes, welding symbols - processes and applications: SMAW, GTAW, GMAW, electro gas welding and Electro Slag, resistance welding. Gas welding, oxy acetylene cutting, brazing and soldering.

UNIT II CASTING PROCESSES

Sand casting, pattern and core making, moulding process - sand properties, Gate cutting and allowances-melting furnaces – pit furnace and electric furnaces. Special casting processes – shell, investment, die casting – pressure and gravity types – squeeze casting - defects in casting

UNIT III FINISHING PROCESSES

Surface finishing processes: grinding processes, various types of grinders, work holding devices, grinding wheels and specification, selection of grinding wheels for specific applications – selection of cutting speed and work speed. Fine Finishing Process: Lapping, honing, and super finishing process, ship hull finishing.

UNIT IV METAL FORMING PROCESSES

Hot and cold working processes – rolling, forging, drawing and extrusion processes, bending, hot spinning, shearing, tube and wire drawing, cold forming, shot peening. Sheet metal working

UNIT V MACHINING PROCESSES

Drilling - classification, specification, cutters speed feed and description of parts parts- boring machines- classification, principle, parts- specification. Milling – classification, principle, parts- specification-operations. Shaper and Planer- Principle -parts -operations – CNC Machines

TOTAL : 45 PERIODS

OUTCOMES:

The students will be able

- To know the different welding process and select the appropriate process for different applications
- To have the knowledge of different casting process and select the appropriate process for different applications.
- To select the Grinding Wheel and process based on the surface finish required.
- To have the depth understanding of various hot working and cold working process.
- To select the appropriate machines or machines tools for different requirements.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act
THANJAVUR - 613 403, TAMIL NADU

HOD
Department of Mechanical Engineering
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU

PRIST
UNIVERSITY
NAAC A++ ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

PRIST /MECH/CIRC/ 2021-2022 /VALUE ADDED COURSE/01 10.08.2021

It is informed that the VALUE ADDED COURSE will be conduct from 23.08.2021 to 01.09.2021 in online mode.

I) CERTIFICATE COURSES

- **PIPING TECHNOLOGY**

Students from mechanical department those who are interest can enroll their names and course to the HOD on or before 13.08.2021

HOD
HOD
Department of Mechanical Engineering
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act-1956
THANJAVUR - 613 403, TAMIL NADU.



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act. 1956
THANJAVUR - 613 403. TAMIL NADU.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering came into existence in 2000 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

INFORMATION BROUCHER VALUE ADDED COURSE- PIPING TECHNOLOGY

COURSE HIGHLIGHTS

- Piping system designers that may decide to use expansion joints
- Expansion joint designers that use the information provided by piping system designers.
- To determine the best design to meet the requirements.
- Designers that use modern software systems to evaluate different options
- Engineers / Managers: field, maintenance, process, operations, construction, surveyors

Head
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403. TAMIL NADU.

About the Program

The objective of this course is to provide the candidates the Detail knowledge and skills in Piping Design discipline to facilitate faster learning curves while on the job.

This course will cover the fundamental principles and concepts used in Process Plant Layout and Piping Design Engineering. Upon completion of this course, students will have a clear understanding of the design and principles used in Piping Design System for Oil & Gas Energy Sector.

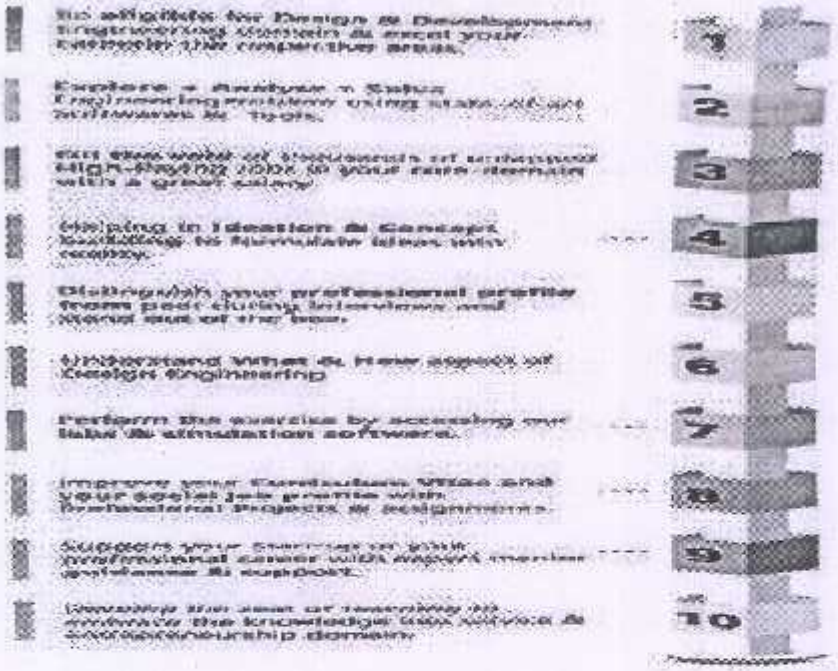
Learning-Based Outcomes

Get hands-on experience in applying design tools & techniques to real engineering problems and understand Design, Engineering, Construction, O & M, etc. Thus, become a Technology Driven Engineering Professional.

Trainer

Delivered by Senior Industry Professionals having extensive experience in Design & Engineering in diverse domains & industries. These practitioners are also Empanelled as subject matter experts with SmartBrains Engineers & Technologist Pvt. Ltd.

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL N



PRE-REQUISITES

Understand and design basic mechanical concepts and reverseengineering.

ELIGIBILITY

B.Tech – Mechanical students shall be eligible for the admission to thecourse.

COURSE DURATION: 45 Hours
date : 23.08.2021 to 01.09.2021
Timing : 10.00 a.m - 4.00 pm

HOD
Department of Mechanical Engineering
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU

PIPING TECHNOLOGY

OBJECTIVE:

This class covers the following topics: piping design, the effects on overall configuration on preliminary piping design, initial layout, the total system, introduction to pipe stress analysis, detailed piping design, and how all of this influences pipe support and pipe hanger design.

Syllabus

Part 1: Introduction - Overview of Piping

1. This section serves as an introductory overview of piping system design.
   a. Effects of operating conditions, including flow rate, design pressure and temperature on piping design
   b. Impact of internal and external forces on the design.
   c. Influences that the different modes of failure and the applicable codes have on the entire system.
   d. Piping layout, an overview of the general support classifications.

Part 2: Preliminary Piping Design - Piping System Components

1. Concepts used in developing an initial piping layout.
2. Design principles including fluid properties, flow rate, and physical laws which influence the complete piping system layout.
3. Understand the effect of different piping system components, such as tanks, vessels, valves, and pumps, on the overall configuration.

Part 3: Preliminary Piping Design - The Total System

1. The total piping system.
2. The different types of equipment and components that define various types of piping systems.
3. Differences between series piping, parallel piping and branch piping as well as their specialized applications.
4. The piping system conditions such as static and dynamic head loss
5. Influences on the selection and distribution of piping components throughout the entire system.

Part 4: Basic Concepts of Stress Analysis - Flexibility Analysis

1. Historical perspective of how earlier analysis techniques were developed in the absence of today' computer technology.
2. Review how earlier techniques have evolved ultimately leading to today's finite element practices.
3. The basic concepts of stress analysis will be covered, including failure theories, stress intensification factors and the overall purpose of stress analysis.

Part 5: Basic Concepts of Stress Analysis - Design Bases

1. A review of the different phases of project evolution.
2. The design bases which form the foundation of all our analyses, including physical attributes.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Head
Department of Mechanical Engineering
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

OUTCOMES:

- A general overview of piping engineering.
- An awareness of the processes and issues involved with designing, procurement and construction
- An awareness of the materials and equipment used
- An understanding of industry terms and acronyms
- An understanding the stress analysis.

HOD
Department of Mechanical Engineering
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY

DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

PRIST /MECH/CIRC/ 2021-2022 /VALUE ADDED COURSE/01 18.10.2021

It is informed that the VALUE ADDED COURSE will be conduct from 25.10.2021 to 09.11.2021 in online mode.

1) CERTIFICATE COURSES

- **QUALITY ASSURANCE ,SIX SIGMA AND LEAN MANUFACTURING**

Students from mechanical department those who are interest can enroll their names and course to the HOD on or before 22.10.2021

HOD
HOD
Department of Mechanical Engineering
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, Tamil Nadu.

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 35 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering came into existence in 2000 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

INFORMATION BROUCHER VALUE ADDED COURSE- QUALITY ASSURANCE ,SIX SIGMA AND LEAN MANUFACTURING

COURSE HIGHLIGHTS

- Training content are based on latest Six Sigma
- Earn 16 Hours PDU (Training) Certificate
- Training & Exam Fee Course ware Mock Tests and more.
- Best Certified Instructors with decades of experience in subject matter.
- Complimentary 180 Days of High Quality E-Learning Access
- Premium Access to Six Sigma resources and Six Sigma Job Portal.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.



COURSE OBJECTIVES

- Skill to predict, prevent and control defects in a process.
- Understanding the elements of waste.
- Skills to achieve sustainable quality improvements through process improvement.
- Understanding of variation in processes.
- Skills to reduce variation in processes and achieve predicted outcomes.
- Ability to identify, measure and analyze process potential.
- Usage of inferential statistics.
- Usage of hypothesis testing.

PRE-REQUISITES

Understand and design basic mechanical concepts and reverse engineering.

ELIGIBILITY

B.Tech – Mechanical students shall be eligible for the admissions to the course.

COURSE DURATION: 45 Hours

date : 25.10.2021 to 28.11.2021

Timing : 10.00 a.m - 4.30 p.m

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

QUALITY ASSURANCE, SIX SIGMA AND LEAN MANUFACTURING

OBJECTIVES:

- To impart knowledge to enable the students to design and implement Statistical Process Control in any industry

UNIT I QUALITY FUNDAMENTALS 9

Importance of quality- evolution of quality- definitions of quality- dimensions of quality- quality control- quality assurance- areas of quality- quality planning- quality objectives and policiesquality costs- economics of quality- quality loss function- quality Vs productivity- Quality Vs reliability.

UNIT II SIX SIGMA METHODOLOGY – TOOLS & TECHNIQUES 9

Cost of Quality – Conformance and Non-Conformance cost – 7 Basic Quality Control Tools – Seven Management tools – FMEA

Need for Six Sigma – Six Sigma Team – DMAIC Methodology: Define, Measure, Analyse, Improve and Control – Lean Six Sigma

UNIT III EVOLUTION & OVERVIEW OF LEAN MANUFACTURING 9

Evolution of Mass production – Traditional vs. Mass production – Evolution of Toyota (Lean) Production System – Business Dynamics of Lean production – Principles of Lean production: Value, Value stream, Flow, Pull, Perfection.

UNIT IV LEAN MANUFACTURING – TOOLS & TECHNIQUES 9

Ms: Muda, Mura, Muri – 7 Wastes in Manufacturing – Lean Tools to eliminate Muda – 5S – Standardised work – TPM – SMED – Jidoka – Poka Yoke – JIT – Heijunka – Kanban – One piece production.

UNIT V VALUE STREAM MAPPING 9

Need for Value Stream mapping – Steps involved in Value stream mapping – Choose value stream – PQ and PR analysis – Current State map – Lean Metrics – Future State Map – Kaizen plans – Lean implementation – Cultural change – Lean in the Supply chain.

TOTAL: 45 PERIODS

OUTCOMES:

- Control the quality of processes using control charts for variables in manufacturing industries.
- The students should apply the various tools, techniques and methodology of lean manufacturing
- six sigma concepts to the potential quality gaps in manufacturing / production industries.
- Able to learn concept of tool and technique
- Lean the Supply chain concept.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act, 1956
THANJAVUR

HOD
Department of Mechanical Engineering
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

REFERENCES:

1. Pascal Dennis, "Lean Production Simplified: A plain Language Guide to the World's Most Powerful Production System", Productivity Press, 2007.

2. Issa Bass and Barbara Lawton, "Lean Six Sigma using Sigma XL and Minitab", Tata McGraw Hill, 2010.

3. Yasuhiro Monden, "Toyota Production System: An Integrated Approach to Just-in-Time", CRC Press, 2012.

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, Tamil NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL [illegible]

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

CIRCULAR

PRIST /MECH/CIRC/ 2021-2022 / VALUE ADDED COURSE/01 16.09.2021

It is informed that the VALUE ADDED COURSE will be conduct from 27.09.2021 to 06.10.2021 in online mode.

I) CERTIFICATE COURSE

- SOLIDWORKS

Students from mechanical department those who are interest can enroll their names and course to the HOD on or before 20.09.2021

HOD

HOD
Department of Mechanical Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

COPY TO:
1.Department Circular file
2.HOD'S-CSE/EEE/ECE/CIVIL/MECH

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

DEPARTMENT OF MECHANICAL ENGINEERING

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering came into existence in 2008 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

INFORMATION BROUCHER

VALUE ADDED COURS- SOLIDWORKS

COURSE HIGHLIGHTS

- **CAD Modelling and Animation** - To develop 3D, animated movie of product design
- **Assembly Design** – To design parts and assemble them
- **Sheet Metal Design** – To design parts which are to be fabricated with sheet metal

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (Deemed to be University)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403

HOD
Department of Mechanical Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU

- **Costing** – To check the value of design against manufacturing cost
- **Product Data Management** – To repurpose design data in a safe manner
- **Weldment Design** – To model welded structures with standard structural members
- **Tolerance Analysis** - To analyze the tolerance level of each part individually and of parts when functioning collectively
- **CAD Library** – To turn up productivity by using CAD library
- **Interference Check** – To check how all the parts fit among themselves and operate according to the requirement

COURSE OBJECTIVES

Design and analyze some mechanical components using solidworks softwares, to see why they significant in design industries, what their major features and properties (including advantages and disadvantages) are, and how they are optimally used in drawing.

PRE-REQUISITES

Understand and design basic mechanical components and design concepts.

ELIGIBILITY

B Tech Mechanical students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours

date : 27.SEP.2021 to 06.OCT.2021
Timing: 10.00 a.m – 4.00 pm

HOD
Department of Mechanical Engineering
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Syllabus for SolidWorks Course

Total Course Duration: 45 Hrs

Section A: Basics & Introduction

- Graphic User Interface
- System requirements
- Parametric design
- Basic part modeling
- Feature based modeling
- File Management
- Managing SolidWorks environment

Section B: Sketching with SolidWorks

- 2D Sketching
- Sketching entities and relations
- 3D Sketching
- Editing & its features
- Dimensions
- Sketch tool
- Mirror, Convert entity
- Move & Copy

Section C: Part Modeling

- Part Modeling
- Extrude and Cutextrude
- Revolve and Sweep
- View toolbar
- Creating Reference geometries
- Fillet and Chamfer
- Hole wizard
- Calculating weight/mass & other geometric properties
- Export / Import of CAD files

Section D: Advanced Part Modeling

- Adding ribs and draft
- Circular and rectangular pattern
- Shell and Boss feature
- Configuration and Design Tables
- Material Library & Assigning Material
- Library Features & Smart Fasteners
- Boolean operations

REGISTRAR
Pennalyah Ramalyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

HOD
Department of Mechanical Engineering
Pennalyah Ramalyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Section E: Assembly Mode

- Getting started with Assembly
- Inserting components inassembly
- Top-Down Assembly
- Feature Manager Design tree & Symbols
- Hiding components & controlling transparency
- Sub Assemblies
- Using mates in assembly
- Use of Smart Fasteners
- Bottom -Up Assembly
- Interference detection and misalignment of holes
- Exploding assemblies and adding explode lines

Section F: Generating detail drawings from Model

- Drafting overview
- Drawing sheets and views
- Adding drawing views
- View settings and drawing properties
- Smart Dimensioning
- Annotations and Symbols
- Sheet Formats and Templates
- Ballooning for nomenclature
- Adding Bill of Material and tables

Section G: Surface Modeling / Sheet Metal

- Introduction to surfacing tools
- Sweep, Loft, Revolve, Offset etc.
- Filleting and trimming
- Utilization of Sheet Metal & forming tools

Section H: Add-on Modules

- Weldment
- Core & Cavity
- Pipe routing

OUTCOMES:

Upon completion of the course, the student should be able to:

- Learn SolidWorks workflow
- Understand the basic types of SolidWorks software used and their applications
- Select appropriate method for designing and modeling applications

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL ...

HOD
Department of Mechanical Engineering
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be ...
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil ...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF CIVIL ENGINEERING

05-08-2021

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2021 for students will be started on 13.08.2021 the academic year 2021-2022 odd Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course–2021 on **NAVIS WORKS** and the course coordinator is Mrs. J.SANTHIYAA JENIFER and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMILNADU.

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

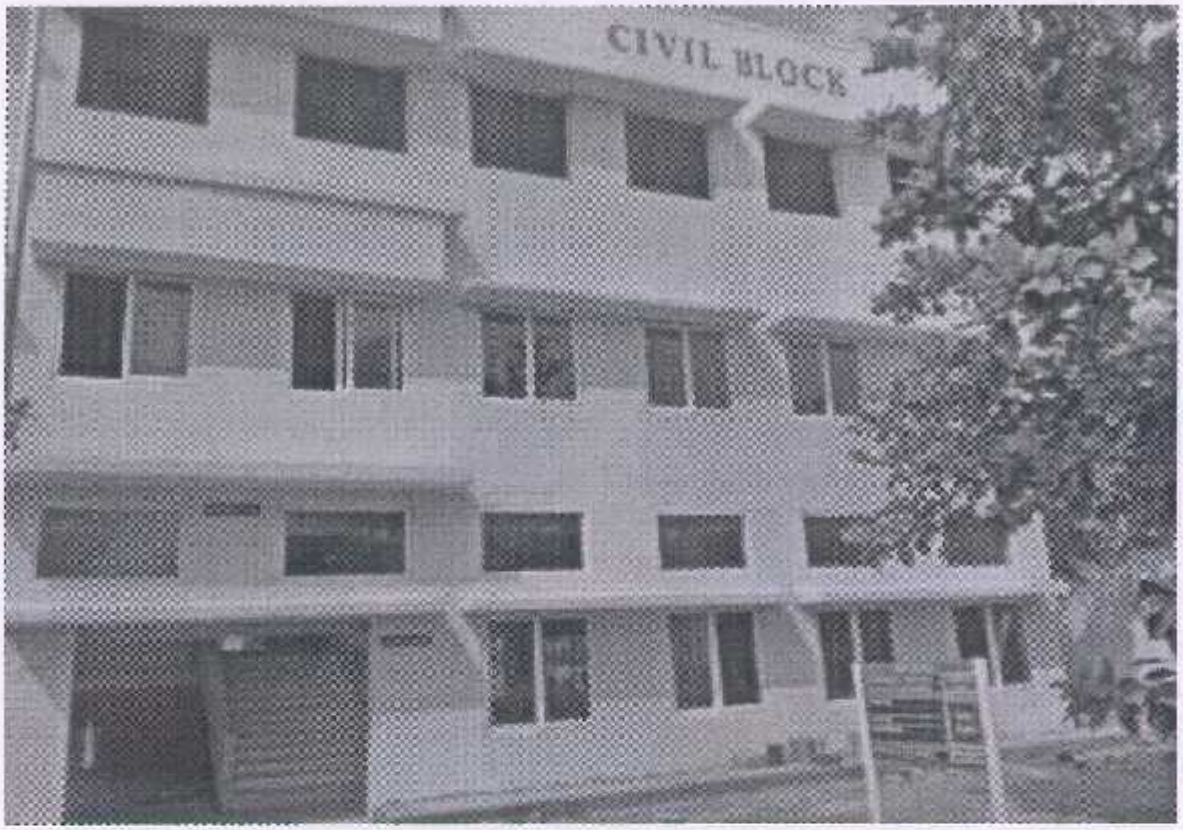
REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403. TAMIL...

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE COURSE

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of SriRam Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

Navisworks allows users to open and combine 3D models, navigate around them in real-time and review the model using a set of tools including comments, redlining, viewpoint, and measurements. The functionality of these formats varies on various levels, allowing professionals to download Navisworks type that is the most suited option for their project requirements and workflow needs.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR

Outline of the course:

S.No	Topics	Minimum
1.	INTRODUCTION TO NAVIS WORKS.	5hrs
2.	MODEL IMPORT AND INTEGRATION, FILES AND FILE TYPES.	5hrs
3.	MOVING AROUND THE MODEL.	5hrs
4.	MODEL REVIEW AND VISUALISATION, CLIMBING THE SELECTION TREE.	5hrs
5.	CLASH DETECTION AND RESOLUTION.	5hrs
6.	QUANTIFICATION AND TAKEOFF.	5hrs
7.	TIME LINER AND 4D SIMULATION.	5hrs
8.	MODEL SNAPSHOTS.	5hrs
9.	VIEWPOINTS, ANIMATIONS, AND SECTIONS.	5hrs

Duration of the Course: 45 hours.

Minimum Eligibility: UG&PG

Learning outcomes:

1. Integrating multiple design models ensures all systems work seamlessly.
2. Identifying and resolving conflicts between different systems early in the design process to avoid costly rework.
3. This software allows linking 3D models with time-related data, improving project planning and management.

Head of the Department
Department of Civil Engineering
Pennaiyah Ramaiyam Institute of
Science & Technology (Priat)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennaiyah Ramaiyam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF CIVIL ENGINEERING

06-01-2022

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2022 for students will be started on 11.01.2022 the academic year 2021-2022 even Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course –2022 on **TOTAL STATION & GPS** and the course coordinator is Mrs. T.VIDHUDHALAI and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL Nadu.

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

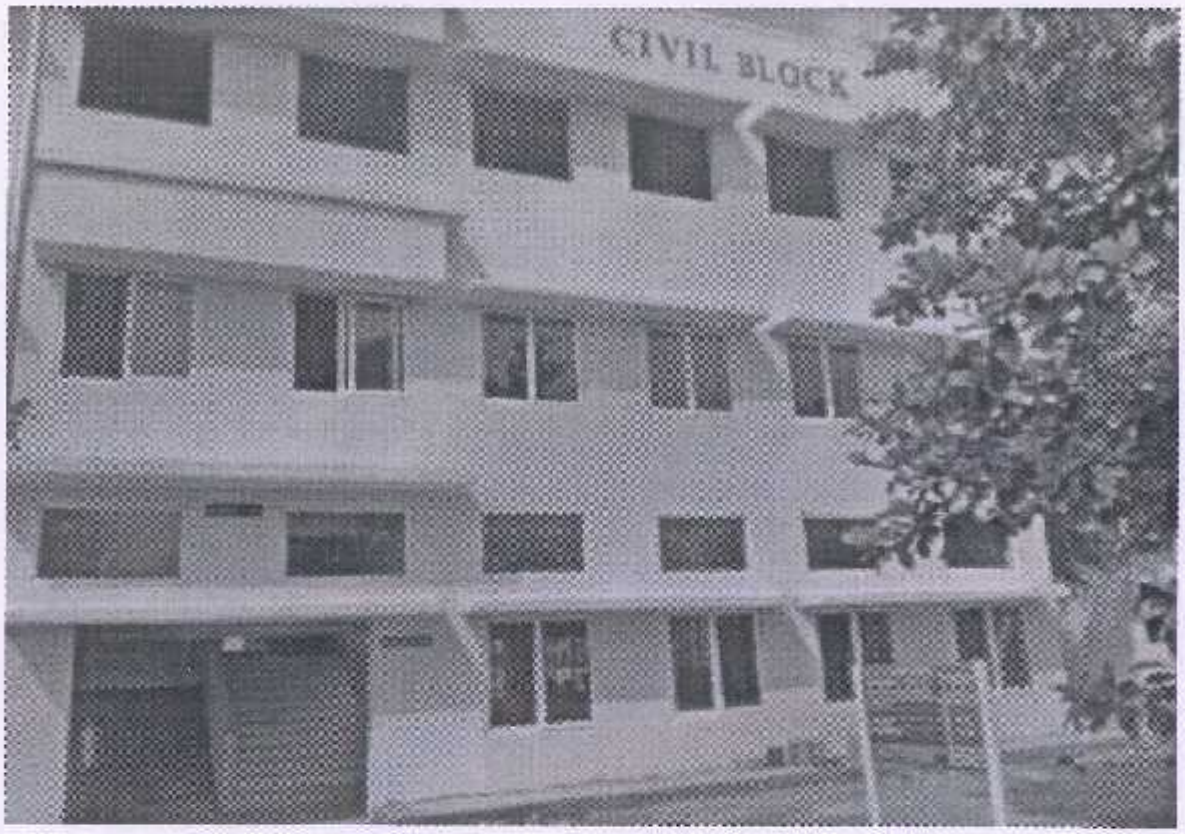
REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL Nadu.

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



DIPLOMA COURSE

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.
The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403. TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

A total station is a surveying instrument that combines an electronic theodolite and an electronic distance meter (EDM) to provide accurate measurements of both horizontal and vertical angles as well as distances. It is commonly used in construction, engineering, and land surveying projects to collect data for creating detailed maps, plans, and 3D models. A Total Station consists of a telescope, a computer, and a reflector.

The telescope is used to aim at a target, and the EDM measures the distance to the target by sending out a laser beam and measuring the time it takes for the beam to be reflected back. This time is used to calculate the distance to the target.

The format of the course will be lectures, short in-class assignments for participation, final exam and lab sessions. Students will gain hands-on experience using ESRI Arc GIS Pro software, one of the most widely used commercial GIS packages. However, knowledge gained during the theoretical and practical sessions will easily be transferable to other platforms like QGIS or GRASS.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL Nadu.

Outline of the course:

S.No	Topics	Minimum
1.	TOTAL STATION OPERATION	7 hrs
2.	CENTRING, LEVELLING AND FOCUSING.	7 hrs
3.	IMPORTING DATA FROM TOTAL STATION TO CADD SOFTWARE	7 hrs
4.	CONTOUR SURVEY, BUILDING MARKIN, ANGLE & DISTANCE MEASUREMENT .	7 hrs
5.	CALCULATION OF ARE , MEASUREMENT OF VOLUME.	7 hrs
6.	INTRODUCTION TO GIS.	7 hrs
7.	SPATIAL DATA MODELS & NON-SPATIAL DATA MODELS.	7 hrs
8.	GIS DATA INPUT, AND GEO-CORRECTION.	6 hrs
9.	PREPARATION OF FLUVIO-GEOMORPHIC MAPS.	5 hrs

Duration of the Course: 60 hours.

Minimum Eligibility: UG&PG

Learning outcomes:

1. Setting up total station, Stationing and orienting to a direction and back sight point.
2. Resection/free stationing from known points.
3. Setting out lines and levels for buildings, kerbs, manholes or gullies.
4. Gaining the basic knowledge of mapping the earth and its features.
5. Be able to successfully organize, manage, and present results in the form of a GIS project.
6. Understand how GIS methodologies can be used to address spatial analysis from the theoretical perspective..

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Priet)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU, S.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF CIVIL ENGINEERING

06-08-2021

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2021 for students will be started on 12.08.2021 the academic year 2021-2022 odd Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course – 2021 on **REVIT ARCHITECTURE** and the course coordinator is Dr.MUKESH GOEL and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

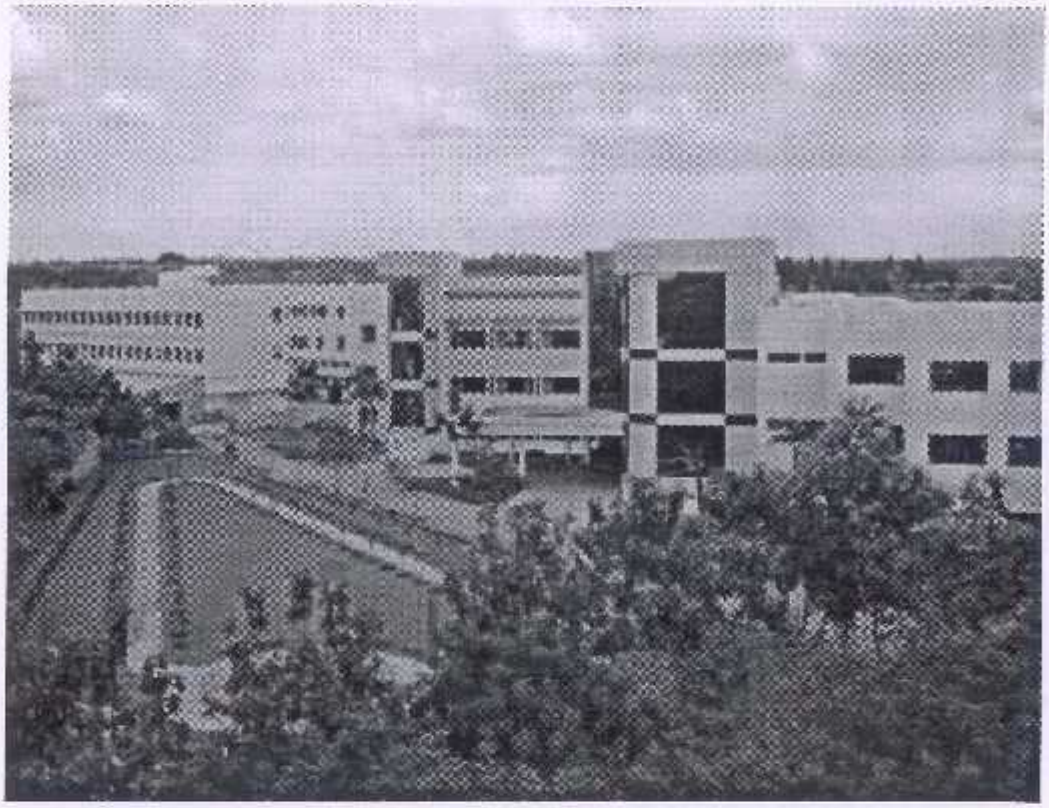
REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMILNADU.

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

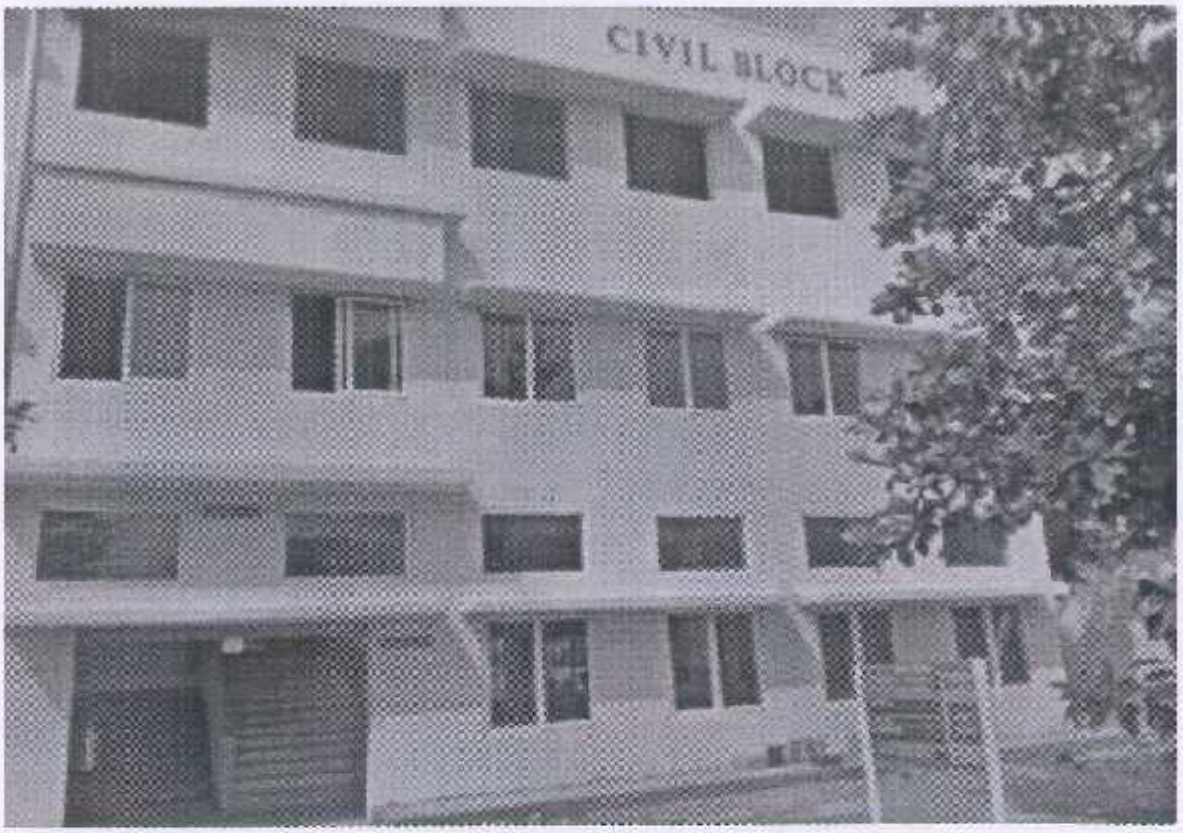
REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403. Tamil...

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE COURSE

REGISTRAR
Pannaiyan Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.
The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Priet)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

The Autodesk Revit software is a powerful Building Information Modeling (BIM) program that works the way architects think. The program streamlines the design process through the use of a central 3D model, where changes made in one view update across all views and on the printable sheets. This training guide is designed to teach you the Autodesk Revit functionality as you would work with it throughout the design process. You begin by learning about the user interface and basic drawing, editing, and viewing tools.

Then you learn design development tools including how to model walls, doors, windows, floors, ceilings, stairs and more. Finally, you learn the processes that take the model into the construction documentation phase. Since building projects themselves tend to be extremely complex, the Autodesk Revit software is also complex. The objective of the Autodesk Revit 2015 (R1): Architecture Fundamentals training guide is to enable students to create full 3D architectural project models and set them up in working drawings. This training guide focuses on basic tools that the majority of students need to work with the Autodesk Revit software. Topics Covered: Understand the purpose of Building Information Management (BIM) and how it is applied in the Autodesk Revit software. Navigating the Autodesk Revit workspace and interface. Working with the basic drawing and editing tools.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL Nadu.

Outline of the course:

S.No	Topics	Minimum
1.	INTRODUCTION TO REVIT ARCHITECTURE&BIM	5 hrs
2.	STARTING THE PROJECT & BUILDING THE MODEL..	5 hrs
3.	DETAILING OF THE MODEL .	5 hrs
4.	ADDING FLOORING, CEILING, ROOFING & BALCONY.	5 hrs
5.	MATERIAL APPLICATION & NEW MATERIAL.	5 hrs
6.	MASSING & SITE: TOPO SURFACE, SITE COMPONENT.	5 hrs
7.	3D MODEL OF THE HOUSE WITH MASSING & SITE COMPONENTS.	5 hrs
8.	EXTRUSIONS & OPENING.	5 hrs
9.	FINISHING THE MODEL.	5 hrs

Duration of the Course: 45 hours.

Minimum Eligibility: UG&PG

Learning outcomes:

1. Students will learn to capture and analyze concepts, and maintain your vision through design, documentation, and construction.
2. Students will learn to do building element energy analysis; use the API to perform pipe/duct calculations; perform static analysis from the cloud; create/manage the structural analytical model; automatically update your model with analysis results; and improve BIM-based building performance workflows.
3. Student will learn to dock dialogs in a single window; more easily model, edit, and document designs; place air terminal devices on duct faces; restrict angles for pipe, duct, and cable tray; cap open ends of pipe or duct content quickly; rebar placement constraints customization; gain control over rebar placement; and get more rebar options when modeling.

Head of the Department
Department of Civil Engineering
Pannaiyan Ramaiyam Institute of
Science & Technology (Priist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pannaiyan Ramaiyam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pannaiyan Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu, India

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Sonnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF CIVIL ENGINEERING

07-01-2022

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2022 for students will be started on 12.01.2022 the academic year 2021-2022 even Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course –2022 on **STADD PRO V8i** and the course coordinator is Mr. P.VENKATESWARAN and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (Priet)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

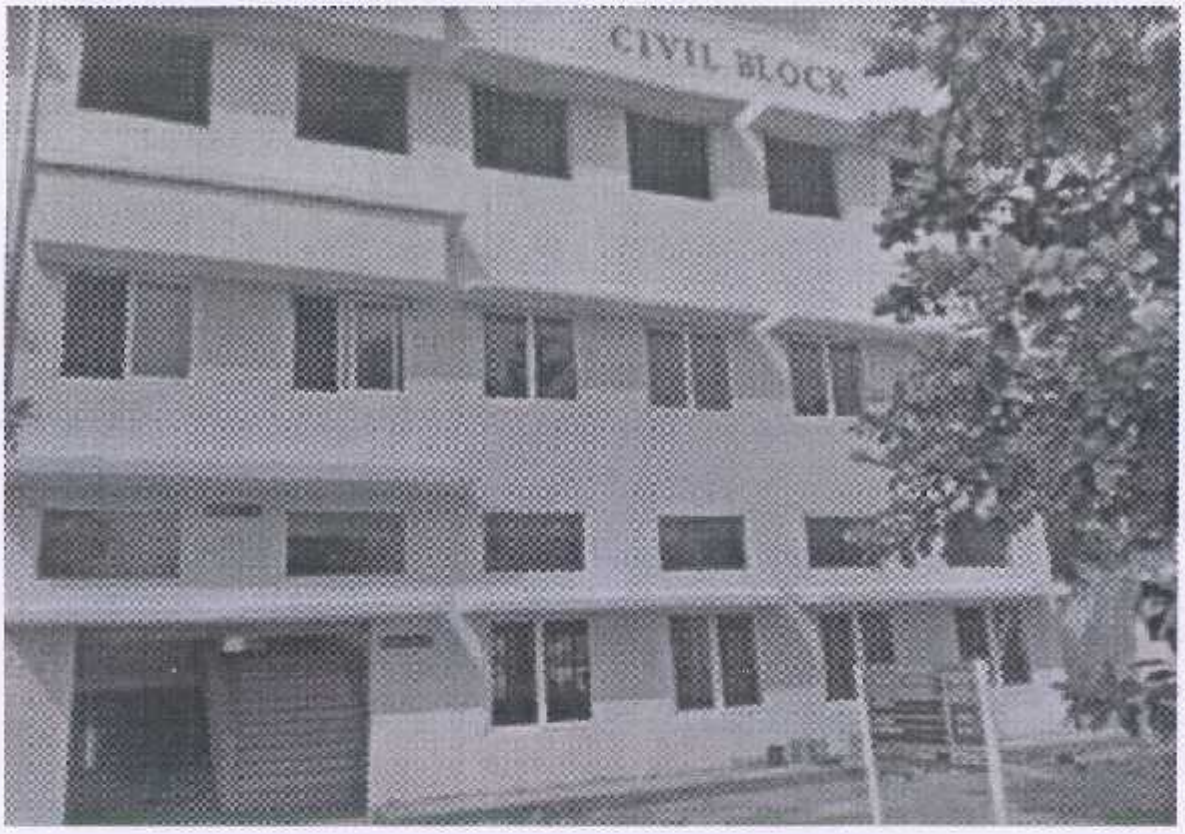
REGISTRAR
Pannaiyah Ramaiyah Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE COURSE

REGISTRAR
Pennaiyah Ramaiyah Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.
The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed. constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

STAAD's full form is Structural Analysis and Design. STAAD Pro is one of the popular software that is used for analyzing & designing structures like – buildings, towers, bridges, industrial, transportation, and utility structures. Designs may include any building structures like tunnels, culverts, bridges, piles, and petrochemical plants; and building materials like timber, concrete, steel, cold-formed steel, and aluminum.

STAAD or STAAD.Pro was developed by Research Engineers International at Yorba Linda, CA in 1997.To get rid of the boring & time-consuming manual procedures architectural Engineers started using automated software STAAD.Pro. STAAD.Pro permits structural engineers to design & analyze any type of structure virtually. Structural consultants, structural engineering firms, departments in construction companies, government agencies, owner/operators, offshore platform designers, and many more are extensively using this software.

STAAD.Pro V8i provides a flexible modeling environment, fluent data collaboration, and advanced features. It best structural analysis & design software that supports Indian as well as all international codes. STAAD.Pro® is one of the most widely-used software for developing and analyzing the designs of various structures, such as petrochemical plants, tunnels, bridges, etc. STAAD.Pro v8i, the latest version, allows civil engineering individuals to analyze structural designs in terms of factors like force, load, displacements, etc. Multisoft Virtual Academy STAAD.Pro v8i online training builds expertise in using the software at a professional level in domains, including construction companies, government agencies, architecture firms, etc.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Priet)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403. TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

Outline of the course:

S.NO	TOPICS	MINIMUM
1.	INTRODUCTION TO STAAD PRO V8i.	5 hrs
2.	MODEL GENERATION AND EDITING.	5 hrs
3.	INTRODUCTION TO LOADING AND AUTOMATIC LOAD GENERATION.	5 hrs
4.	CONCRETE DESIGN.	5 hrs
5.	SEISMOLOGY.	5 hrs
6.	FEM / FEA.	5 hrs
7.	STEEL DESIGN.	5 hrs
8.	REPORT GENERATION.	5 hrs
9.	FOUNDATION DESIGN.	5 hrs

Duration of the Course: 45 hours.

Minimum Eligibility: UG&PG

Learning outcomes:

1. Students will be able to complete object-oriented instinctive 2D/3D graphic model.
2. Students will know to make isometric & perspective views and 3D.
3. This course will introduce one to STAAD Pro's state-of-the-art user interface, prevailing analysis and design engines with sophisticated finite element (FEM), visualization tools, and dynamic analysis capabilities.
4. Students will learn how to achieve user-specified design parameters to customize.
5. Students will know to perform code check, member selection, and optimized member selection consisting of analysis/design.

Head of the Department
Department of Civil Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJA

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF CIVIL ENGINEERING

05-08-2021

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2021 for students will be started on 13.08.2021 the academic year 2021-2022 odd Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course-2021 on **PRIMAVERA** and the course coordinator is K.SHANTHI and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU.

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

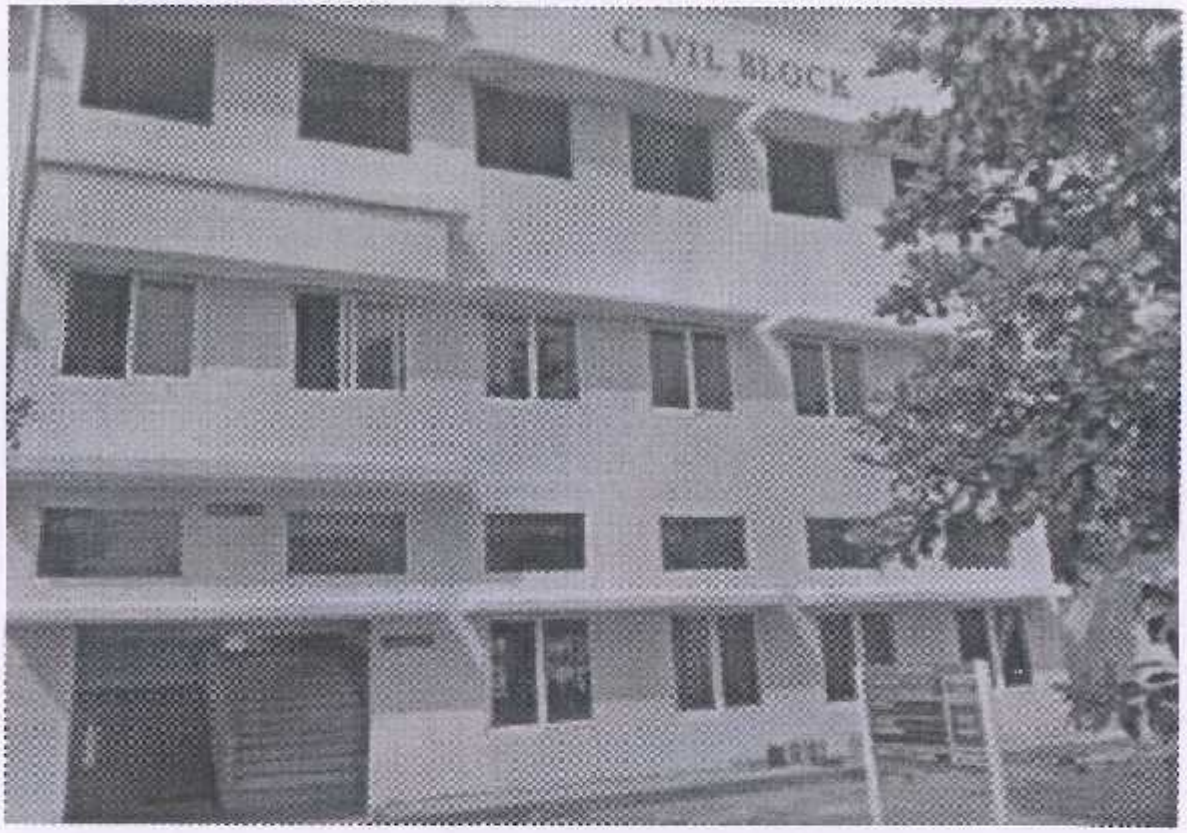
REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE COURSE

REGISTRAR
Pondicherry Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of SriRam Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the [illegible] 1956
THANJAVUR [illegible]

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

Primavera P6 Professional Project Management provides what modern project managers and schedulers value the most: control. Primavera P6 Professional Project Management, the industry-recognized benchmark for performant project management software, is designed to manage large-scale, highly complex, and diverse projects. It can organize projects with up to one hundred thousand activities and supports unlimited resources and target plans. Massive amounts of data necessitate using sophisticated yet highly adaptable organizational tools that allow users to organize, filter, and sort activities, projects, and resources.

A Windows client application for project scheduling, Primavera P6 Professional, is installed on a user's workstation. Like other Windows applications, it is executed from an executable file on the workstation.P6 Professional can be used independently with a locally installed database like Oracle XE or Microsoft SQL Server Express. It can also access a central database and function as a multi-user system when data must be shared.

P6 Professional is commonly used in the Engineering, Construction, Aerospace, Defense, Utilities, and Oil and Gas industries. In addition, P6 Professional is the tool of choice for power users, such as schedulers and project managers, in industries where detailed, fast, accurate scheduling and the critical path method are crucial to the planning, execution, and success of a project.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Priat)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Outline of the course:

S.No	Topics	Minimum
1.	INTRODUCTION TO PRIMAVERA.	5hrs
2.	OPENING A PROJECT.	5hrs
3.	INTRODUCTION TO CALENDAR.	5hrs
4.	WORK BREAKDOWN STRUCTURE.	5hrs
5.	CREATING ACTIVITIES.	5hrs
6.	TASK RELATIONSHIPS.	5hrs
7.	SCHEDULING.	5hrs
8.	CONSTRAINTS.	5hrs
9.	RESOURCES.	5hrs

Duration of the Course: 45 hours.

Minimum Eligibility: UG&PG

Learning outcomes:

1. Apply advanced resource management techniques to optimize resource allocation and utilization.
2. They are related to, but different from, teaching aims, which instead describe broadly what the session or course is about and its overall purpose.
3. Understanding of how to plan and schedule. Learn To: Create and schedule a project. Assign resources.
4. Implement effective risk management strategies, identifying and mitigating potential project risks proactively.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (Deemed to be
Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

DEPARTMENT OF CIVIL ENGINEERING

06-01-2022

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2022 for students will be started on 11.01.2022 the academic year 2021-2022 even Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course –2022 on BTM and the course coordinator is Mr. A.S.KAVIN SARVESHA and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

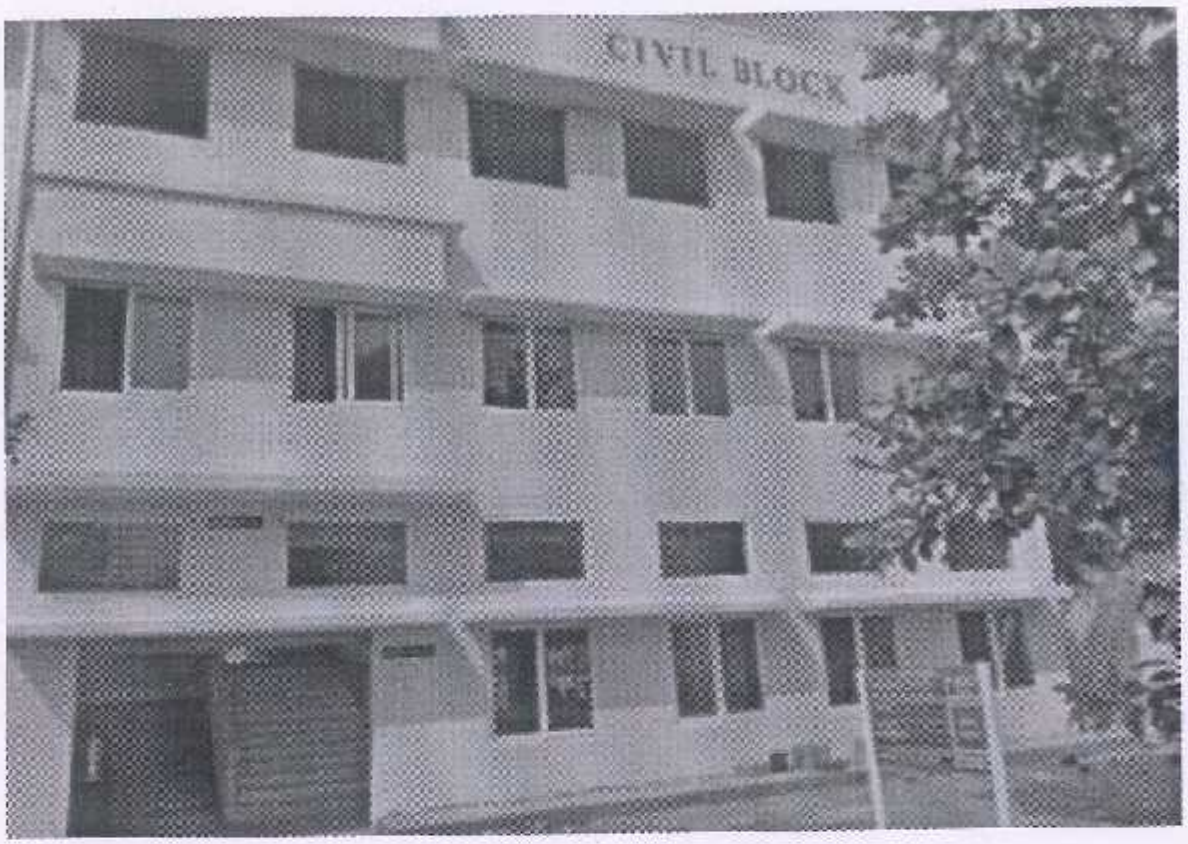
REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



DIPLOMA COURSE

REGISTRAR
Pondicherry Institute of
Science & Technology (PRIST)
Deemed to be University
Under Section 3 of the UGC Act, 1956
THANJAVUR - 613 403

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.
The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

BIM stands for Building Information Modeling and is a workflow process. It's based around models used for the planning, design, construction, and management of building and infrastructure projects. BIM software is used to model and optimize projects by planning, designing, building, and operating BIM models BIM software is 3D design and modeling software that can help optimize the work of designing for architecture, construction, plant, civil, and MEP projects. "BIM improves project task quality, provides better quality product, creates possibility of sharing information, and improves work efficiency." BIM models can be used to analyze or explore design options, visualizations, and documentations.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Ponnaiyah Ramajayam Institute of
Science & Technology
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Outline of the course:

S.No	Topics	Minimum
1	Revit Interface	5hrs
2	Walls, Curtain Walls, Windows and Doors	5hrs
3	Floors, Roofs and Ceilings	5hrs
4	Stairs, Railings and Ramps	5hrs
5	Adding - Modifying Families	5hrs
6	Massing - Conceptual Mass	5hrs
7	Model In-Place	5hrs
8	Schematic Design and Room & Color Fill Plans	5hrs
9	Materials, Visualization and Rendering	5hrs
10	Details and Annotations	5hrs
11	Schedules and Project Phasing	5hrs
12	Drawing Sets and Construction Documents	5hrs

Duration of the Course: 60 hours

Minimum Eligibility: UG&PG

Learning outcomes:

1. Understand the role and potential of BIM for the industry
2. Use of BIM in Building projects and provide the right level of detail.
3. Capable of advanced object use in BIM context through interactive editors and object libraries
4. Identify, describe and apply adequate modelling practices in view of intended uses for the models.
5. Capability of in-depth application of BIM in specific contexts of building rehabilitation and sustainability analysis/assessment.

Head of the Department
Department of Civil Engineering
Pennaiyah Ramaiyam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennaiyah Ramaiyam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022

1.3.2 Number of value-added courses for imparting transferable and life skills offered during the year

1.3.3 Total number of students enrolled in the courses under 1.3.2 above

S. No	Name of the value added courses (with 30 or more contact hours)offered
1.	NAVIS WORKS.
2.	TOTAL STATION & GPS.
3.	REVIT ARCHITECTURE.
4.	STADD PRO V8i.
5.	PRIMAVERA.
6.	BIM.
7.	3Ds Max.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

DEPARTMENT OF CIVIL ENGINEERING

06-08-2021

CIRCULAR

SUB: Add on Course – Reg

It is informed that Add on Course-Certificate Course-2021 for students will be started on 12.08.2021 the academic year 2021-2022 odd Semester. The detailed schedule will be given by the departments.

Head of the departments are requested to inform their students about the Add on Course – 2021 on **3DX MAX** and the course coordinator is Mr. S.RAMAKRISHNAN and motivates them to attend the course.

HOD's are requested to nominate one faculty member to co-ordinate the Add on Course.

Head of the Department
Department of Civil Engineering
Pennalyah Ramajayam Institute of
Science & Technology (Priet)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Pennalyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

HOD's for necessary

Action Notice Board

File

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to
U/s 3 of the
THANJAVUR -

PRIST

DEEMED TO BE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



ENGINEERING&TECHNOLOGY
ADD ON COURSE BROCHURE.

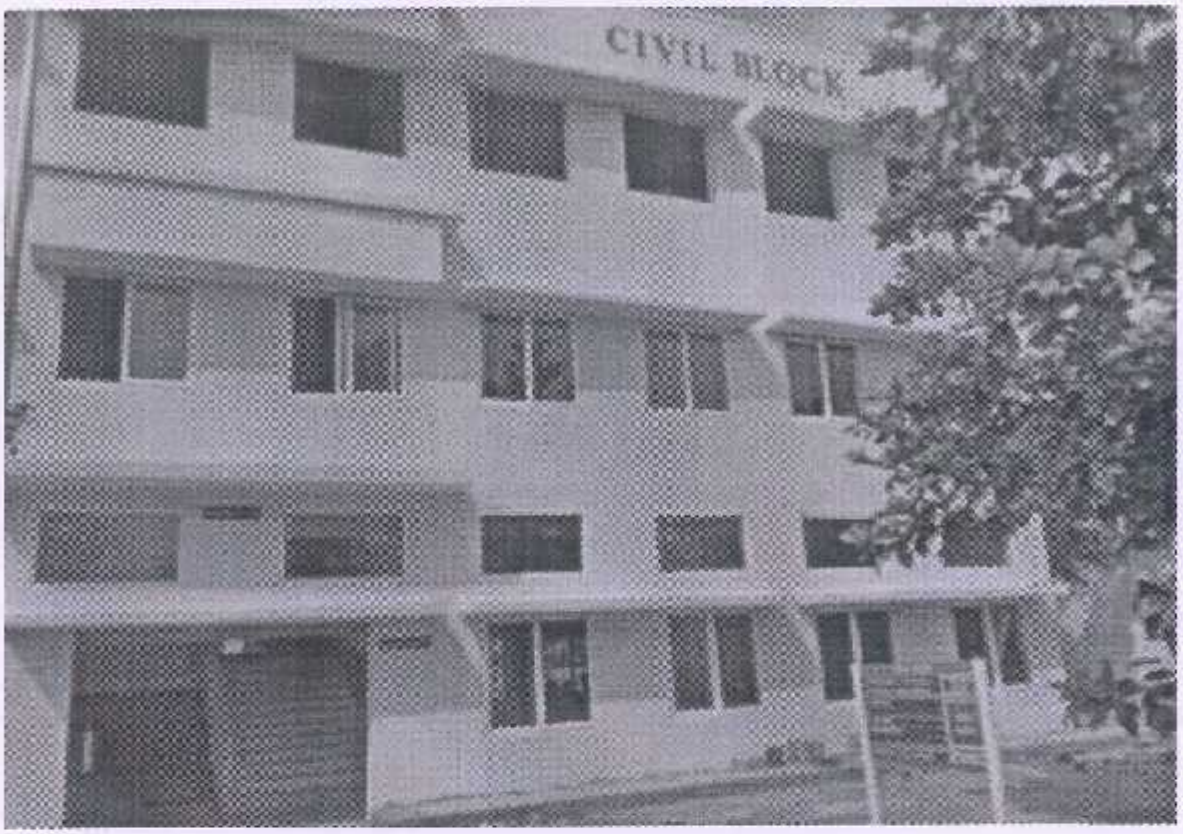
REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

PRIST

DEEMEDTOBE

UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING



CERTIFICATE COURSE

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be
U/s 3 of the
THANJAVUR -

ABOUT PRIST DEEMED TO BE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST), made a for into the academic domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Commerce & Business Management, Architecture, Agriculture, Law, Pharmacy & Polytechnic College, added feathers to the PRIST crown. PRIST University received university status under section 3 of UGC Act 1956 &also got NAAC Accredited status. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Trichy, Kumbakonam, Puducherry, Chennai, Madurai etc.

Ponnaiyah Ramajayam College applied for NAAC assessment and accreditation Council and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.
The academic reach extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Law, Agriculture &Architecture.

SCHOOL OF ENGINEERING & TECHNOLOGY

The Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Electrical and Electronics Engineering were established in2008 with an objective to impart quality education to meet today's competitive environment. All Departments has well experienced &dedicated faculty with strong commitment to provide vibrant learning environment to student in order to help them excel. To keep pace with the current technological trends, all departments have well designed, constantly reviewed syllabus to incorporate all advanced in existing& Emerging Technologies which gives the students a holistic and pragmatic view of the present scenario of Industry.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403

INTRODUCTION ABOUT THE DEPARTMENT

In PRIST UNIVERSITY the Department of Civil Engineering was established in 2008. Since then its excellence in each and every aspects has played an important role in the Institute. Our Department is offering B.Tech – Civil Engineering M.Tech – Structural Engineering & Doctorate in Civil Engineering. Civil Engineering Department has been actively involved in research and consultancy in all the fields of Civil Engineering. The Department has well equipped laboratories and research facilities. It is constantly modernizing the laboratory facilities with latest technology and research know-how.

The Department offers PG/UG degree courses and a number of add on courses. Group electives or major electives are offered to enable students choose from wide choice of fourteen courses. Also, we offer skill based electives, from the point of view of employment opportunities and free elective courses of inter disciplinary nature. The Advanced Learners are offered Extra Credit courses for earning extra credits.

INTRODUCTION ABOUT THE COURSE

Autodesk 3ds Max, formerly 3D Studio and 3D Studio Max, is a professional 3D computer graphics program for making 3D animations, models, games and images. It is developed and produced by Autodesk Media and Entertainment. It has modeling capabilities and a flexible plugin architecture and must be used on the Microsoft Windows platform. It is frequently used by video game developers, many TV commercial studios, and architectural visualization studios. It is also used for movie effects and movie pre-visualization. 3ds Max features shaders (such as ambient occlusion and subsurface scattering), dynamic simulation, particle systems, radiosity, normal map creation and rendering, global illumination, a customizable user interface, and its own scripting language.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL Nadu, India.

Outline of the course:

S.NO	TOPICS	MINIMUM
1	INTRODUCTION TO 3DS MAX	2 HRS
2	MODELING IN 3DS MAX	5 HRS
3	INTRODUCTION TO ANIMATION	3 HRS
4	ANIMATION PRINCIPLES	5 HRS
5	INTRODUCTION TO THE MATERIALS, INTERIORS AND FURNITURE	5 HRS
6	TEXTURES AND UV WORKFLOWS	5 HRS
7	INTRODUCTION TO LIGHTING: INTERIOR LIGHTING	5 HRS
8	3DS MAX RENDERING	5 HRS
9	MENTAL RAY	5 HRS

Duration of the Course: 40 hours

Minimum Eligibility: UG&PG

Learning outcomes:

1. Model objects using a variety of techniques.
2. Design and apply materials.
3. Build and animate simple, effective environments.
4. To enhance the computing skills of the students.

Head of the Department
Department of Civil Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (Prist)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU.

DEAN
School of Engineering and Tech
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL Nadu.

SCHOOL OF AGRICULTURE

VALUE ADDED COURSE

2021-2022

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403. TAMIL NADU.

SCHOOL OF AGRICULTURE

LIST OF VALUE ADDED COURSE

S.NO	COURSE TITLE
1	Certificate course on Agricultural technology
2	Certificate course on Agri- tourism
3	Certificate course on Kitchen garden
4	Certificate course on Non- chemical farming
5	Certificate course on Landscaping
6	Certificate course on Post harvest technology
7	Certificate course on Seed technology

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 • TAMILNADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date:21.6.2021

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 24.06.2021. Hence, requesting all the registered students to attend the classes without fail.

DEAN

SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be Univ...ity
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, T...NADU.

Copy to,

All teaching staff members

Students

Co - Ordinator

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMILNADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc., (Hons.) Agriculture

Certificate course on

"AGRICULTURAL TECHNOLOGY"

HEAD
School of Agriculture
Science & Technology (PRIST)
Institution Deemed to be University
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Science & Technology (PRIST)
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Science & Technology (PRIST)
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The agriculture is intended to impart high quality education so as to produce not just agricultural graduates but agro technocrats with practical and conceptual skills. With precise and

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

deliberate course modules, which provides education, research and training along with first hand field experiences, the students would sure be transformed as skilled human resources.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

What is agricultural technology?

Agricultural technology, also known as "agritech," encompasses a broad range of disciplines and devices that improve agricultural output. That includes vehicles, robotics, computers, satellites, drones, mobile devices, and software. The use of big data analytics and artificial intelligence (AI) technology in agriculture is also an example of how the farming sector is embracing technological advancement Changes in farming and field management during the past few decades have been revolutionary. The employment of modern, state-of-the-art technology in agriculture can be credited with much of the recent success in crop management and increased harvests

Benefits of starting an agricultural technology

The implementation of smart agricultural technology is advantageous for all players in the agri-food chain. With its use in optimizing and automating agricultural operations and field activities, growers and landowners can now save significant amounts of time and effort. These are just a few examples of how farming has benefited from advances in

HEAD
School of Agriculture
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

agriculture technology: The implementation of smart agricultural technology is advantageous for all players in the agri-food chain. With its use in optimizing and automating agricultural operations and field activities, growers and landowners can now save significant amounts of time and effort. These are just a few examples of how farming has benefited from advances in agriculture technology:

- Using less water, fertilizer, pesticides, and other inputs allows agricultural producers to cut costs and keep more of their profits;
- By preventing or drastically reducing the amount of chemical runoff into waterways, businesses lessen agriculture's impact on the environment and take steps toward greater sustainability;
- Increasing crop yields while decreasing labor inputs;
- Making it easier for farmers, agronomists, or other agricultural workers to communicate and coordinate activities using mobile devices, apps, or web-based resources;
- Lowering barriers to accessing agricultural insurance and financial services as well as market and technological data;
- Mitigation of the damage that could be caused by pests, natural calamities, and bad weather in agriculture with the help of affordable, always-on agricultural monitoring systems
- Increase in farm income through improved product quality and increased quality controls;
- Timely recognizing nutrient deficiency in plants and notifying agricultural producers of the type and amount of fertilizer and other amendments needed;
- Ability to foresee potential problems on the farm through the visualization of production patterns and trends gleaned from an analysis of current and historical agricultural data. By estimating their overall crop yield, agricultural producers can precisely budget for the next growing season and better prepare for emergencies.

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 23.8.2021

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 27.08.2021. Hence, requesting all the registered students to attend the classes without fail.

DEAN
SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Copy to,

All teaching staff members

Students

Co-Ordinator

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc., (Hons.) Agriculture

Certificate course on

"AGRI TOURISUM"

HEAD
School of Agriculture
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Agriculture
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The agriculture is intended to impart high quality education so as to produce not just agricultural graduates but agro technocrats with practical and conceptual skills. With precise and deliberate course modules, which provides education, research and training along with

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

first hand field experiences, the students would sure be transformed as skilled human resources.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

- Agritourism is a business model that is growing in popularity as Indiana farmers recognize a need to diversify their operations and supplement their farm incomes.
- In addition, there is a growing public desire to engage in rural experiences and outdoor recreational activities.
- By combining agriculture and tourism, agritourism offers rural experiences to urban residents and economic diversification to farmers. Planning for agritourism requires a forward-thinking, locally-driven process.
- Planners must acknowledge agriculture as a land use and a business. The Indiana Land Resource Council (ILRC) designed this planning guide for agritourism providers, community leaders, extension agents, and rural economic development and tourism professionals.

What is agritourism?

- Agritourism, sometimes called rural tourism, is a subset of the leisure and hospitality industry that combines elements of tourism and agriculture. Although farm tourism is one of the most well-known types of agritourism, there is a wide array of businesses that fall under this category.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu, India.

- In essence, any agricultural operation that provides tours or allows guests to visit or stay overnight on the property can be considered an agritourism business. Examples include:
- Vineyards and wine tours
- Family farms and hobby farms
- Farm-to-table culinary experiences
- Guest ranches or dude ranches
- Barn weddings
- Horseback rides and pony rides
- Petting zoos
- Corn mazes
- Horse-drawn carriage and sleigh rides
- Guided hunting trips on private land

Benefits of starting an agritourism business

- Many people who own an agricultural operation — such as a farm, ranch, or vineyard already have much of the necessary infrastructure, to start an agritourism business, including land, attractions, and amenities.
- Because this infrastructure often comes with a large overhead expense, the additional revenue generated by an agritourism venture can be a significant financial advantage when managed successfully.

Learn what it takes to manage a successful venture

- Developed by experts with significant experience in the tourism industry, this program provides the in-depth knowledge you need to successfully plan and manage an agritourism operation. Learn to adapt or expand existing infrastructure to create enjoyable, memorable experiences for visitors.
- Also gain insights in building a comprehensive business plan that includes elements like launching a website, promoting the business, booking guest reservations,

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

organizing activities, managing finances, and complying with local laws and regulations.

- Offered in an online format, the program allows you to complete coursework on a flexible schedule, from the comfort of your own home.

Learning outcomes of the course unit

- To obtain and diversify knowledge from tourism, rural tourism and their specific form agri-tourism.

Course contents

Unit I: Agritourism - as part of rural development and tourism. Definition and forms. Strengths and weaknesses.

Unit II: Business projects - their content and development. Economic and environmental aspects of agritourism.

Unit III: Characteristics of quality and their grant.

Unit IV: Field exercises in agro-tourism farms and facilities.

Unit V: Excursion on the international exhibition focusing on tourism, rural tourism and agritourism.

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 30.08.2021

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 06.09.2021. Hence, requesting all the registered students to attend the classes without fail.

DEAN
SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Copy to,

All teaching staff members

Students

Co - Ordinator

REGISTRAR
Pennaiyah Ramajayam Institute o,
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc.. (HONS.) Agriculture

Certificate course on

"KITCHEN GARDEN"

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The agriculture is intended to impart high quality education so as to produce not just agricultural graduates but agro technocrats with practical and conceptual skills. With precise and deliberate course modules, which provides education, research and training along with

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

first hand field experiences, the students would sure be transformed as skilled human resources.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

- Vegetable occupy an important place in our daily life particularly for vegetarians Vegetables are the only source to increase not only the nutritive values of foods but also its palatability. For a balanced diet, an adult should have an intake of 85 g of fruits and 300 g of vegetables per day as per the dietary recommendation of nutrition specialists. But the present level of production of vegetables in our country can permit a per capita consumption of only 120 g of vegetables per day.
- However, people in India especially in the rural areas seldom eat vegetables due to the following reasons. Considering the above facts, we should plan to produce our own vegetable requirements in our backyards using the available fresh water as well as the kitchen and bathroom wastewater. This will not only facilitate prevention of stagnation unused water which will be hazardous to our health through environmental pollution, but can be useful for successful production of our own requirement of vegetables. Cultivation in a small area facilitates the methods of controlling pests and diseases through the removal of affected parts and non-use of chemicals. This is a safe practice, which does not cause toxic residues of pesticides in the vegetables produced

What Kitchen garden?

- Kitchen garden is the growing of fruits and vegetables at the backyard of house by using kitchen waste water.
- Otherwise called as Home garden or Nutrition garden or Kitchen gardening or Vegetable gardening

HEAD
School of Agriculture
Pannaiyan Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pannaiyan Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Benefits of Kitchen-garden

- Supply fresh fruits and vegetables high in nutritive value.
- Supply fruits and vegetables free from toxic chemicals.
- Help to save expenditure on purchase of vegetables.
- Vegetables harvested from home garden taste better than those purchased from market.
- Effective utilization of kitchen waste water and kitchen waste materials. Exercise to the body and mind.

Learning outcomes of the course unit

- Gardeners fed their families first and then sell, barter or give away surplus garden foods. In certain contexts, however, income generation may become the primary objective of the home garden. In any case, it is counterproductive to impose the nutrition objective to the exclusion of the income generation objective, since in most contexts they are linked and compatible.
- The potential economic benefits of home gardening include the following
- Gardening gives dual benefits of food and income generation
- Garden provide fodder for household animals and supplies for other household needs (hand-crafts, fuel wood, furniture, baskets, etc.)

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 17.11.2021

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 22.11.2021. Hence, requesting all the registered students to attend the classes without fail.

DEAN

SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NA...

Copy to,

All teaching staff members

Students

Co - Ordinator

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc.(Hons.) Agriculture

Certificate course on

"LANDSCAPING"

HEAD
School of Agriculture
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403 TAMIL NADU.

DEAN
School of Agriculture
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
Faculty of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

- Green revolution technologies such as greater use of synthetic agro chemicals like fertilizers and pesticides, adoption of nutrient responsive, high-yielding varieties of crops, greater exploitation of irrigation potentials etc., has boosted the production out put in most of cases.
- It concentrates on building up the biological fertility of the soil so that the crops take the nutrients they need from steady turnover within the soil nutrients produced in this way and are released in harmony with the need of the plants.
- Organic farmers recycle all wastes and manures within a farm, but the export of the products from the farm results in a steady drain of nutrients

What is landscaping?

The process of making a yard or other piece of land more attractive by altering the existing design, adding ornamental features, and planting trees and shrubs:"we will carry out minor repair works to the building's facade and supervise the landscaping of the extensive grounds"

People have practiced landscaping for centuries. As far back as the ancient Mayans, humans were manipulating the land for both aesthetic and practical reasons. The addition of plants, changes to the existing terrain and the construction of structures are all part of landscaping.

HEAD
School of Agriculture
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Today landscaping refers to the planning, laying out and construction of gardens that enhance the appearance and create useable space for outdoor activities around a home.

Learning outcomes of the course unit

- Construct landscape features using stone and concrete Build a range of timber structures and features Construct brick and block structures Build retaining walls Provide information about plants Collect and prepare soils for testing
- Design Thinking: We establish the design process as a holistic method for creatively addressing complex issues; *Resilience:* We foster design that responds and adapts to the dynamics of physical, biological, and social systems
- Systems Thinking: We embrace understanding the interconnectedness and balance among multiple systems
- Empathy: We cultivate compassion and affection for living systems; *Collaboration:* We are committed to team and interdisciplinary approaches to learning and research
- Imagination: We encourage wonder, awe, and fun to engage and discover possibilities

COURSE CONTENT

Unit I: Early history, principles of landscape gardening, designing landscapes, basic style, formal – informal

Unit II: Tree style- mogul garden, garden in hills, plains, botanical garden, garden, park, small home, school and industrial gardens, road side gardens – highways, dams, roof garden, balcony garden, terrariums, japanese garden

Unit III: conceptual basis, types and styles, plant and other materials

Unit IV: Conceptual basis, types and styles, plant and other materials, decoration, materials and methods of drying.

Unit V: Management of light, humidity, watering, maintenance of pot plants and indoor plants.

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 02.02.2022

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 10.02.2022. Hence, requesting all the registered students to attend the classes without fail.

DEAN

SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

Copy to;

All teaching staff members

Students

Co - Ordinator

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc., (Hons.)Agriculture

Certificate course on

"NON CHEMICAL FARMING"

HEAD
School of Agriculture
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

- Green revolution technologies such as greater use of synthetic agro chemicals like fertilizers and pesticides, adoption of nutrient responsive, high-yielding varieties of crops, greater exploitation of irrigation potentials etc., has boosted the production out put in most of cases.
- It concentrates on building up the biological fertility of the soil so that the crops take the nutrients they need from steady turnover within the soil nutrients produced in this way and are released in harmony with the need of the plants.
- Organic farmers recycle all wastes and manures within a farm, but the export of the products from the farm results in a steady drain of nutrients

What is Non chemical farming?

- Organic farming, agricultural system that uses ecologically based pest controls and biological fertilizers derived largely from animal and plant wastes and nitrogen-fixing cover crops. Modern organic farming was developed as a response to the environmental harm caused by the use of chemical pesticides and synthetic fertilizers in conventional agriculture, and it has numerous ecological benefits. Benefits of Organic Farming Organic manures produce optimal conditions in the soil for high yields and good quality crops. They supply all the nutrients required by the plant (NPK, secondary and micronutrients). They improve plant growth and physiological activities of plants. They

HEAD
School of Agriculture
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act.1956)
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act.1956)
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act.1956)
THANJAVUR - 613 403, TAMIL NADU.

improve the soil physical properties such as granulation and tilth, giving good aeration, easy root penetration and improved water holding capacity.

- Organic farming helps to avoid chain reaction in the environment from chemical sprays and dusts. Organic farming helps to prevent environmental degradation and can be used to regenerate degraded areas.

Learning outcomes of the course unit

- This course aims to update the knowledge of Organic Farming
- This process involves the use of biological materials, avoiding synthetic substances to maintain soil fertility and ecological balance thereby minimizing pollution and wastage.
- Ability to define and explain the concept, importance as well as scope of farming system.
- To study the important farming and cropping systems and their contribution in organic farming. Gaining knowledge about organic farming and precision farming with their issues and concerns for Indian agriculture

COURSE CONTENT

Unit I: Introduction (Definition of organic farming and an Overview of organic farming) Systems Concept/Theory (Components, interactions, structures, hierarchies)

Unit II: Initiatives taken by the central and state governments, NGOs and other organizations for promotion of organic agriculture in India. Organic nutrient sources and their fortification organic manures- methods of composting

Unit III: Nutrient use in organic farming-scope and limitations. Nutrient management inorganic farming. Organic ecosystem and their concepts

Unit IV: Fundamentals of insect, disease and weed management under organic mode of production-cultural-biological methods-non chemical pest & disease management. Botanicals pyrethrum, neem seed kernel extract, neem seed powder, soluble neem formulations, neem oil

Unit V: Inspection certification labelling and accreditation procedures for organic products. Processing - economic consideration and viability. Marketing and export potential of organic products-national economy.

HEAD
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
U/s 3 of the UGC Act
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 • TAMIL NADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 10.03.2022

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 16.03.2022. Hence, requesting all the registered students to attend the classes without fail.

DEAN
SCHOOL OF AGRICULTURE

Copy to,

All teaching staff members
Students
Co - Ordinator

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc.(Hons.) Agriculture

Certificate course on

"POST HARVEST TECHNOLOGY"

HEAD
School of Agriculture
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

Landscaping is the process of modifying the visible features of an area to enhance its aesthetic appeal, functionality, and overall value.

As you dive into the world of landscaping, there are a few key aspects to consider that will make your outdoor area truly shine. First of all, it's important to think about the design of your landscape.

What is post-harvest technology?

Post-harvest technology is the application of scientific and engineering principles to the handling, storage, packaging, distribution, and sale of agricultural produce after it has been harvested.

Post-harvest technology is used to improve the quality and extend the shelf life of food. It also helps to reduce wastage and improve food safety.

In agriculture, postharvest handling is the stage of crop production immediately following harvest, including cooling, cleaning, sorting and packing. The instant a crop is removed from the ground, or separated from its parent plant, it begins to deteriorate.

Postharvest treatment largely determines food quality, whether a crop is sold for fresh consumption, or used as an ingredient in a processed food product.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Learning outcomes of the course unit

- Assessing postharvest losses and quality problems for crops
- Accessing online resources on postharvest information and extension
- Identifying small-scale postharvest technologies and potential solutions which are most appropriate for local target groups
- Performing Cost / Benefit calculations for assessing economic feasibility of recommended postharvest technologies
- Designing postharvest demonstrations to show farmers, traders and marketers how to reduce losses, maintain quality and market value, increase shelf life and incomes
- Designing extension programs on postharvest technology topics
- Utilizing postharvest tools and equipment for quality evaluation
- Networking via social media and online forums with fellow "postharvest specialists"

COURSE CONTENT

Unit I: Post harvest technology of vegetable crops

Unit II: Post harvest technology of fruit crops

Unit III: Value addition flowers

Unit IV: Processing of plantation crop, spices, Medicinal plants and aromatic plants

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF AGRICULTURE

CIRCULAR

Date: 18.03.2022

This is to inform B.Sc., Agriculture & B.Sc., (HONS.) Agriculture students that the value-added course programme classes for the academic year 2021-2022 will be commenced from 23.03.2022. Hence, requesting all the registered students to attend the classes without fail.

DEAN
SCHOOL OF AGRICULTURE

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Copy to,

All teaching staff members

Students

Co - Ordinator

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF AGRICULTURE



INFORMATION BROCHURE

VALUE ADDED COURSE

B. Sc.(Hons.) Agriculture

Certificate course on

"SEED TECHNOLOGY"

HEAD
School of Agriculture
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

About the University

The Institute was founded in 1985 by Prof. P. Murugesan. It was initially known as the Institute of Computer Science and Technology. Murugesan founded the Institute to introduce computer education to the Thanjavur District. In 1988, the Institute received affiliation from Bharathidasan University to offer Postgraduate Diploma Programmes in Computer Applications.

Thereafter it expanded to include an Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, and Polytechnic College.

In 2004, Ponnaiya Ramajayam College applied for NAAC assessment and accreditation and was awarded an "A" grade, thus making it the first "A" grade awarded college in the Bharathidasan University area. The college then submitted its proposal to the Ministry of Human Resource Development, Government of India for deemed university status.

On 4 January 2008, the Institute was conferred deemed university status based on the recommendations of the UGC Expert Committee, the Ministry of HRD, and the Government of India. The Institute also received approval from the Distance Education Council (DEC) and its B.Ed. course is approved by The National Council for Teacher Education (NCTE).

In 2015, the Institute once again applied for NAAC assessment and accreditation and was awarded a "B" grade. In a letter signed by an undersecretary in the Union Health Ministry, it was stated that the Institute, which was granted conditional approval to offer 150 MBBS seats last year, was debarred from admitting students for the academic years of 2017-18 and 2018-19.

Currently, the Institute offers degrees in Medicine, Engineering, Arts & Science, Education, Pharmacy, Management, Agriculture and Technology, as well as Ph.D. programmes in some of these fields.

About the Department

The School of Agriculture under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2016.

The department has spacious laboratories such as Plant Pathology, Microbiology, Agricultural Entomology, Agricultural Botany and Genetics, Agronomy, Horticulture, Economics

HEAD
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

lab and Audio – Visual lab. All the laboratories are fully equipped with latest, modern and sophisticated equipment.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at Undergraduate (UG) levels. The staffs are from various disciplines in Doctorate like Plant Pathology, Microbiology, Soil science, Plant Genetics and Veterinary. The staffs are from various disciplines in masters like Agricultural Entomology, Agronomy, Agricultural Extension, Horticulture and Economics. Many of the staff members are encouraged to pursue their higher studies and research works.

About the Course

Introduction and Overview

The history of agricultural progress from the early days of man has been the history of seeds of new crops and crop varieties brought under cultivation. In the early days it was achieved through the cultivation of indigenous but useful plants and those taken through introductions.

Later through the well known techniques of selection, hybridization, mutation, polyploidization and plant biotechnology the scientists made available many new and better varieties. However, to the farmer all this scientific research would be of little value unless he gets seeds, which are genetically pure, high germination percentage and vigour, high purity, sound health etc.,

When the farmers do not get seeds possessing these qualities the yields they obtain may not be as expected. The pace of progress in production therefore, will largely depend upon the speed with which we are able to multiply and market good quality seeds of high yielding varieties

What is Seed technology?

The distinction between seed and grain is vital, being of seminal importance to agriculture. A seed, strictly speaking, is an "embryo" a living organism embedded in the supporting or the food storage tissue. The seed pertains to material (seed, fruit or vegetatively propagating material) meant for saving for planting purposes, the essential function being the reproduction.

HEAD
School of Agriculture
Pennaiyah Ramaiyam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Agriculture
Pennaiyah Ramaiyam Institute of

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

The seed when scientifically produced (such as under seed certification) is distinctly superior in terms of seed quality, namely, the improved variety, varietal purity, freedom from admixtures of weeds and other crop seeds, seed health, high germination and vigour, seed treatment and safe moisture content etc. A grain on the other hand, includes cereals and pulses meant for human consumption

Learning outcomes of the course unit

The major goal of seed technology is to increase agricultural production through the spread of good quality seeds of high yielding varieties.

It aims at the following: Rapid multiplication: Increase in agricultural production through quickest possible spread of new varieties developed by the plant breeders.

COURSE CONTENT

Unit 1: Seed: importance and biology

Unit II: seed production

Unit III: Post harvest handling of seeds

Unit IV: Seed storage and marketing

Eligibility: Any graduates / ongoing degree students shall be eligible for the admission to the course.

Duration of the Program: 45 hrs. Value added Certificate Course.

Lecture Hours: 4.30 p.m. to 5.30 p.m. (Monday to Saturday)

Mode of Examination: Written Exam and seminar

Award of Certificate: The candidate successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by School of Agriculture, PRIST Deemed to be University, Vallam, Thanjavur.

DEAN
School of Agriculture
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

VALUE ADDED COURSES

(2021-22)

DEPARTMENT OF PHYSICS

SCHOOL OF ARTS AND SCIENCE

PRIST DEEMED TO BE UNIVERSITY

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
THANJAVUR - 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF PHYSICS

Circular

PRIST/SAS/PHY/21-22/3 Date: 12.07.2021

This is to inform all physics students that the value added courses classes for academic year 2021-22 odd semester will be commenced from 19.07.2021. Hence requesting all registered students to attend the classes without fail.

1. Diploma course on Nano Science and Technology
2. Certificate course on Fiber Optics
3. Certificate course on Microprocessor
4. Certificate course on Communication electronic circuits
5. Certificate course on Materials Characterization Techniques

HOD

DEAN

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Copy to:

1.Hon'ble Vice Chancellor (for kind information)

2.Registrar

3.Registrar office

4.Dean

5.Department file

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMILNADU.

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____

_____

5. E-mail: _____
6. Mobile No: _____

Signature of the applicant

Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is **29.06.2021**

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

Upon successful completion of the course certificate will be provided.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

Value Added Course

Nano Science and Technology



Organized by

Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Thanjavur - 613 403.

About PRIST

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University U/s 3 of the UGC Act 1956, is one of the renowned institutes of Ponnaiyah Ramajayam Institutions, which are serving for more than 30 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About School of Arts and Sciences

School of Arts and Sciences consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology and Microbiology departments. It offers B. Sc., M.Sc., M.Phil. and Ph.D. programmes in all disciplines. It comprises well qualified and research oriented faculty members whose are experts in the frontier areas in Science. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO, and IFMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and Ph.D. programmes. The Department also offers credit based core and elective courses in basic Physics to undergraduate first year engineering students.

List of topics covered in the programme

Unit 1

Fundamentals of NANO – Historical Perspective on Nanomaterials and Nanotechnology – Classification of Nano materials – Metal and Semiconductor Nanomaterials – 2D, 1D, 0D nanostructured materials – Quantum dots – Quantum wires – Quantum wells – Surface effects of nan materials.

Unit 2

Physical properties of Nanomaterials: Melting points, specific heat capacity, and lattice constant – Mechanical behavior: Elastic properties – strength – ductility – superplastic behavior – Optical properties: – Surface Plasmon Resonance – Quantum size effects – Electrical properties – Conductivity, Ferroelectrics and dielectrics – Magnetic properties – super para magnetism – Dilated magnetic semiconductor (DMS).

Unit 3

Physical vapour deposition – Chemical vapour deposition – sol-gel – Wet deposition techniques – electrochemical deposition method – Plasma etching – Electrospinning method – ball milling technique – pulsed laser deposition – Nanolithography: photolithography – Nanomanipulator.

Unit 4

Powder X-ray diffraction – X-ray photoelectron spectroscopy (XPS) – UV-visible spectroscopy – Photoluminescence – Scanning electron microscopy (SEM) – Transmission electron microscopy (TEM) – Scanning probe microscopy (SPM) – Scanning tunneling microscope (STM) – Vibrating sample Magnetometer.

Unit 5

Sensors: Nanosensors based on optical and physical properties – Electrochemical sensors – Nano-biosensors. Nano Electronics: Nanochips – display screens – GMR read/write heads – Carbon Nanotube emitters – Photocatalytic application: Air purification, water purification –Medicine: Imaging of cancer cells – biological [illegible] delivery – photodynamic therapy – Energy: fuel cells – rechargeable batteries – supercapacitors – photovoltaics.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology
(Institution Deemed to be University U/s 3 of the UGC Act 1956)
THANJAVUR - 613 403.

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403, TAMILNADU

Department of Physics

Subject Code	Subject Name
32513N8T	Diploma course on Nano Science and Technology

Total : 30 hours

Syllabus

Course Objectives:

The main objectives of this course are to:

- Physics of Nanoscience and Technology is concerned with the study, creation, manipulation and applications at nanometer scale.
- To provide the basic knowledge about nanoscience and technology.
- To learn the structures and properties of nanomaterials.
- To acquire the knowledge about synthesis methods and characterization techniques and its applications.

Unit 1

Fundamentals of NANO – Historical Perspective on Nanomaterial and Nanotechnology – Classification of Nanomaterials – Metal and Semiconductor Nanomaterials – 2D, 1D, 0D nanostructured materials - Quantum dots – Quantum wires – Quantum wells - Surface effects of nanomaterials.

Unit 2

Physical properties of Nanomaterials: Melting points, specific heat capacity, and lattice constant - Mechanical behavior: Elastic properties – strength – ductility - superplastic behavior - Optical properties: - Surface Plasmon Resonance – Quantum size effects - Electrical properties - Conductivity, Ferroelectrics and dielectrics - Magnetic properties – super para magnetism – Diluted magnetic semiconductor (DMS).

Unit 3

Physical vapour deposition - Chemical vapour deposition - sol-gel – Wet deposition techniques - electrochemical deposition method – Plasma arching – Electrospinning method - ball milling techniques - pulsed laser deposition - Nanolithography: photolithography – Nanomanipulator.

Unit 4

Powder X-ray diffraction – X-ray photoelectron spectroscopy (XPS) - UV-visible spectroscopy – Photoluminescence – Scanning electron microscopy (SEM) – Transmission electron microscopy

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

Dean
School of Arts & Science
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

(TEM) - Scanning probe microscopy (SPM) - Scanning tunneling microscopy (STM) – Vibrating sample Magnetometer.

Unit 5

Sensors: Nanosensors based on optical and physical properties - Electrochemical sensors – Nano-biosensors. Nano Electronics: Nanobots - display screens - GMR read/write heads - Carbon Nanotube Emitters – Photocatalytic applications: Air purification, water purification - Medicine: Imaging of cancer cells – biological tags - drug delivery - photodynamic therapy - Energy: fuel cells - rechargeable batteries - supercapacitors - photovoltaics.

Course Outcomes

At the end of the course, trainees/students will be able to:

1. Understand the basic of nanoscience and explore the different types of nanomaterials and should comprehend the surface effects of the nanomaterials.

2. Explore various physical, mechanical, optical, electrical and magnetic properties nanomaterials.

3. Understand the processes and mechanism of synthesis and fabrication of nanomaterials.

4. Analyze the various characterization of Nano products through diffraction, spectroscopic, microscopic and other techniques.

5. Apply the concepts of nanoscience and technology in the field of sensors, batteries, purification of air and water and in the energy devices.

References

1. A textbook of Nanoscience and Nanotechnology, Pradeep T., Tata McGraw-Hill Publishing Co. (2012).
2. Principles of Nanoscience and Nanotechnology, M.A. Shah, Tokeer Ahmad, Narosa Publishing House Pvt Ltd., (2010).
3. Introduction to Nanoscience and Nanotechnology, K. K. Chattopadhyay and A.N. Banerjee, PHI Learning Pvt. Ltd., New Delhi, (2012).
4. Nanostructured Materials and Nanotechnology, Hari Singh Nalwa, Academic Press, (2002).
5. Nanotechnology and Nanoelectronics, D.P. Kothari, V. Ramanjan and Raja Ram Singh, Narosa Publishing House Pvt. Ltd, New Delhi (2018).

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____

_____

5. E-mail: _____
6. Mobile No: _____

Signature

PRIST
DEEMED TO BE
UNIVERSITY
(U/S 3 OF UGC ACT, 1956)
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

Value Added Course

Fiber Optics



Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is **29.06.2021**.

Head of the Department
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

Upon successful completion of the course, certificate will be provided.

HOD

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

Organized by
Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF
SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

Dean

About PRIST

Pachaiyappa's Ramajayam Institute of Science and Technology (PRIST), a Deemed University [U/s 3 of the UGC Act, 1956], is one of the renowned wings of Pachaiyappa's Ramajayam Institutions, which are working for more than 25 years in promoting quality education and research for our Indian Community, across the globe. The institution is now bringing up a more socio responsibilities, par excellence in promoting quality education through research.

About School of Arts and Science

School of Arts and Science consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology and Microbiology departments. It offers B. E., M.Sc, M.Phil. and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members whose are experts in the frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO, and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and research programmes. The Department also offers ... based core and elective courses in basic Physics to the undergraduate first year engineering (B.Tech) students.

List of topics covered in the programme

Unit 1- Introduction

Need for optical communication, salient features of optical fibers, ray theory of light guidance, numerical aperture, modes of a fiber, single and multimode fibers, step index and graded index fibers.

Transmission characteristics of optical fibers, attenuation, pulse broadening mechanism, intermodal dispersion, bit rate - length product, material dispersion.

Unit 2- Basic Optical Communications Concepts

POP System, Transmitter, Light Source, LED, Laser Diode, Detector, PIN diode, Avalanche PhotoDiode, Optical Amplifiers, EDFA, PDFA, Regeneration, ADM, OADM, Digital Cross Connect, RPR Ring.

Unit 3- Optical Fiber

Core, Cladding, Primary Buffer, Types of Fibers, Silica Core Silica Cladding, Silica Core Plastic Cladding (PCS), Plastic Core Plastic Cladding (POF), fiber fabrication techniques.

Unit 4- Cable Splicing

Fusion Splicing, Mechanical Splicing, Single Fiber Fusion Splicing, Mass Fusion Splicing, Stages of Splicing, Splicing Precautions, Misalignment, End Gap, End Angle, MA Mismatch, Core Mismatch, Wetting, Bulging, Axial Run-out, Bubble, Incomplete Fusion

Unit 5- Testing of Cables

Continuity Test, Light Source, Power Meter, OTDR, Visual Fault Locator, OTDR Testing, Measuring Cable Span, Attenuation Measurement, Connector/ Splice Loss Measurement, Distance to Fault, Trace Analysis, Optical Loss Budget.

REGISTRAR
Pachaiyappa's Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403,
TAMIL NADU.

DEAN
School of Arts & Science
Pachaiyappa's Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

Department of Physics

Subject Code	Subject Name
285138O	Certificate course on fiber optics

Total : 45 hours

Syllabus

COURSE OBJECTIVES:

1. To realize the significance of optical fiber communications.
2. To understand the construction and characteristics of optical fiber cable.
3. To develop the knowledge of optical signal sources and power launching.
4. To identify and understand the operation of various optical detectors.
5. To under the design of optical systems and WDM.

Unit 1- Introduction

Need for optical communications, salient features of optical fibers, ray theory of light guidance, numerical aperture, modes of a fiber, single and multimode fibers, step-index and graded index fibers.

Transmission characteristics of optical fibers, attenuation, pulse broadening mechanism, intermodal dispersion, bit rate – length product, material dispersion.

Unit 2- Basic Optical Communications Concepts

P2P System, Transmitter, Light Sources, LED, Laser Diode, Detectors, PIN diode, Avalanche Photo Diode, Optical Amplifiers, EDFA, PDFA, Regeneration, ADM, OADM, Digital Cross Connect, RPR Ring.

Unit 3- Optical Fiber

Core, Cladding, Primary Buffer, Types of Fibers, [illegible] Silica Core, Plastic Cladding (PCS), Plastic Core Plastic Cladding (PCP), Fabrication techniques.

Unit 4- Cable Splicing

Fusion Splicing, Mechanical Splicing, Single Fiber Fusion Splicing, Ribbon Fusion Splicing, Stripping

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

of Splicing, Splicing Precautions, Misalignment, End Gap, End Angle, NA Mismatch, Core Mismatch, Waisting, Bulging, Axial Run-out, Bubble, Incomplete Fusion

Unit 5- Testing of Cables

Continuity Test, Light Source- Power Meter, OLTS, Visual Fault Locator, OTDR Testing, Measuring Cable Span, Attenuation Coefficient, Connector/ Splice Loss Measurement, Distance to Fault, OTDR Trace Analysis, Optical Loss Budget.

TEXT BOOKS:

1.Optical Fiber Communications – Gerd Keiser, Tata Mc Graw-Hill International edition, 4th Edition, 2008.

2. Optical Fiber Communications – John M. Senior, PHI, 2nd Edition, 2002. **REFERENCE BOOKS:**

1. Fiber Optic Communications – D.K. Mynbaev , S.C. Gupta and Lowell L. Scheiner, Pearson Education, 2005.

2. Text Book on Optical Fibre Communication and its Applications – S.C.Gupta, PHI, 2005. 3. Fiber Optic Communication Systems – Govind P. Agarwal , John Wiley, 3rd Edition, 2004.

4. Fiber Optic Communications – Joseph C. Palais, 4th Edition, Pearson Education, 2004.

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand and analyze the constructional parameters of optical fibers.
2. Be able to design the optical system.
3. Determine the losses due to dispersion, absorption, scattering and bending.
4. Compare various optical detectors and choose suitable one for different applications.

Dean

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____

   _____
5. E-mail: _____
6. Mobile No: _____

Signature of the applicant

Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is 30.06.2021.

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

Upon successful completion of the course, certificate will be provided.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Pennalyah Ramajayam
Science & Technology
Deemed to be University
Vallam, Thanjavur - 613 403

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

Value Added Course

Microprocessor



Organized by

Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

DEAN
School of Arts & Science
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Dean

About PRIST

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act, 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 30 years in rendering quality education and research for our Tanjore community, since its inception. The institution is now balancing with many social responsibilities, particularly in promoting quality education through research.

About School of Arts and Sciences

School of Arts and Sciences consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology and Microbiology departments. It offers B. Sc., M.Sc, M.Phil and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members whose are experts in the frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO, and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and Ph.D. programmes. The Department also offers [illegible] based core and elective courses in basic Physics to undergraduate first year engineering students.

List of topics covered in the programme

UNIT – I: MICROPROCESSOR 8085

8085 Microprocessor – Bus Architecture – registers – Central processing unit – timing and control unit – instruction and data flow – System timings – Examples – Instruction set – Data transfer group – Logical group – Branch group – Stack and I/O control instructions – Addressing modes.

UNIT – II: ASSEMBLY LANGUAGE PROGRAMS (8085 ONLY)

Addition – subtraction – Multiplication – Division – BCD arithmetic – Searching an array for a given number – Choosing the biggest and smallest numbers from a list – Ascending and Descending order – Square root of a number – Time Delay – Square wave generator.

UNIT – III: MICROPROCESSOR 8086

Organization of the 8086 Microprocessor – Memory organization – Register structure – Addressing modes in 8086 – Minimum mode and maximum mode – Exception handling in 8086 – Assembler and Multiprocessing – Assembler – Directives and operators – Data definition and storage allocation – Assigning names and expressions – Segment definition – Program definition – Miscellaneous directives.

UNIT – IV: INTERFACING MEMORY AND I/O DEVICES

Interfacing memory and devices – I/O and memory mapped I/O – Types of interfacing devices – Data transfer schemes – Programmed and DMA data transfer schemes – Programmable Peripheral Interface (8255) – 8253 Timer Interface – DMA controller – Programmable Interrupt Controller (8259) – Programmable communication interface (8251).

UNIT – V: MICROCONTROLLER 8051

Introduction of Microprocessor and Micro controllers – Evolution of microprocessor and microcontrollers – 8051 architecture – Internal memory – Input output pins, ports external memory – Addressing modes.

Instruction set of 8051 – Data transfer instructions – Arithmetic instructions – Branch instructions – Bit manipulation instructions.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Arts & Sciences
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Thanjavur - 613 403.

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam

PRIST
DEEMED TO BE
UNIVERSITY
(U/S 3 OF THE UGC ACT 1956)
THANJAVUR - 613 403 - TAMIL NADU

Department of Physics

Subject Code	Subject Name
28S13M3*	Certificate course on Microprocessor

Total : 45 hours

Syllabus

Course Objectives:

The main objectives of this course are to:

1. To learn basic principles of architecture and functioning of microprocessor and microcontroller and programming and interfacing aspects of them.
2. To provide fundamental operating concepts of microprocessors and microcontrollers.

UNIT – I: MICROPROCESSOR 8085

8085 Microprocessor – Bus architecture – registers – Control processing unit – Instruction and Data flow – System timings – Examples – instruction set – Data transfer group – Logical group – Branch group – Stack and I/O control instructions – Addressing modes.

UNIT – II: ASSEMBLY LANGUAGE PROGRAMS (8085 ONLY)

Subroutine – Stack pointer – Manipulation – Looping – BCD arithmetic – Searching an array for a given number – Counting the biggest and smallest numbers from a list – Ascending and Descending order – Square root of a number – Time Delay – Square wave generator.

UNIT – III: MICROPROCESSOR 8086

Organization of the 8086 Microprocessor – Internal organization – Register structure – Addressing modes in 8086 – Minimum mode and maximum mode – Bus cycle – Reading in 8086 – Assembler and Multiprocessing – Assembler – Directives and operators – Data definition and storage allocation – Assigning names and operations – Segment definition – Program definition – Alignment directives.

UNIT – IV: INTERFACING MEMORY AND I/O DEVICES

Interfacing memory and devices – I/O and memory mapped I/O – Types of interfacing devices – Data transfer schemes – Programmed and DMA data transfer schemes – Programmable Peripheral Interface (8255 A) – 8253 Timer interface – DMA controller – Programmable Interrupt Controller (8259) – Programmable communication interface (8251).

UNIT – V: MICROCONTROLLER 8051

Introduction of Microprocessor and Micro controllers – Comparison of microprocessor and microcontrollers – 8051 architecture – Internal memory – Input output pins, ports external memory – Addressing modes.

Instructions of 8051 – Data transfer instructions – Arithmetic instruction – Branch instruction – Bit manipulation instruction.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Arts & Science
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

Course Outcomes

After learning the course the students should be able to:

1. Distinguish various types of processor architectures.

2. Describe architecture, memory organization of 8085, 8086 and 8051.

References

1. B. Ram, Microprocessor Architecture, programming and applications (Wiley Eastern)

2. B. Ram, Fundamentals of Microprocessor and Microcomputers (Dhanpat Rai & Sons)

3. Introduction to Microprocessor – Aditya P. Mathur.

4. Microcomputer System 8086/8088 Family – Yuchenghy and Glenn A Gibson Prentice Hall.

5. Microprocessors and Interfacing – Programming and Hardware Douglas V Hall.

6. The 8051 Microcontroller Architecture, Programming & Applications – Kenneth J. Ayala, Penram International Publishing (India).

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch _____
4. Name of value added course: _____

   _____
5. E-mail: _____
6. Mobile No: _____

Signature

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

Value Added Course

Communication electronic circuits



Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is **28.06.2021.**

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Universit...
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL ...

Upon successful completion of the course, certificate will be provided.

Organized by
Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

About PRIST

Pannaiyal Ramaiyam Institute of Science and Technology (PRIST), a Deemed University u/s 3 of the UGC Act 1956, is one of the renowned one of Pannaiyal Ramaiyam Institutions which are serving for more than 30 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with great soaring ambitions, particularly in promoting quality education through research.

About School of Arts and Science

School of Arts and Science consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology, and Microbiology departments. It offers B. Sc., M.Sc. M.Phil. and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members whose are experts in the frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO, and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and research programmes. The Department also offers a choice based credit and elective courses in basic Physics to undergraduate first year engineering (B.Tech) students.

Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

List of topics covered in the programme

UNIT – I: ANTENNAS AND WAVE PROPAGATION

Radiation field and radiation resistance of short dipole-current-grounded and ungrounded antennas-loop antenna-monopole and end fire arrays-antenna gain-directional high frequency antennas-sky wave-ionosphere- Eccles and Larmor theory-Lagrentz ionic theory- ground wave propagation

UNIT – II: MICROWAVES

Microwave generation—multi cavity Klystron-reflex Klystron-magnetron-travelling wave tubes (TWT) and other microwave tubes-MASER-Gunn diode-waveguides-rectangular wave guides-standing wave indicator and standing wave ratio(SWR)

UNIT – III: RADAR AND TELEVISION

Elements of a radar system-radar equation-radar performance factors-radar transmitting systems-radar antennas-spheres-radar receivers and indicators-pulsed systems-other radar systems- colour TV transmission and reception-colour mixing principle-colour picture tubes- Delta gun picture tube-PIL colour picture tube-cable TV, CCTV and theatre TV

UNIT – IV: FIBER OPTIC COMMUNICATION

Propagation of light in an optical fibre-acceptance angle-numerical aperture-step and graded index fibres-optical fibres as a cylindrical wave guide-wave guide equations-wave guide equations in an index fibres - fibre losses and dispersion-applications

UNIT – V: SATELLITE COMMUNICATION

Orbital satellites-geostationary satellites-orbital patterns-[illegible] system link models-satellite system parameters-satellite [illegible] equation link budgets-INSAT communication satellites

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Arts & Science
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

Department of Physics

Subject Code	Subject Name
20S13CEC	Certificate course on communication electronic circuits

Total 145 hours

Syllabus

Course Objectives:
The main objectives of this course are to:

- To comprehend the transmission of electromagnetic waves through different types of antenna and also to acquire knowledge about the propagation of waves through earth's atmosphere and along the surface of the earth
- To gain knowledge in the generation and propagation of microwaves
- To acquire knowledge about radar systems and its applications and also the working principle of colour television
- To learn the working principle of fiber optics and its use in telecommunication
- To understand the general theory and operation of satellite communication systems

UNIT – I: ANTENNAS AND WAVE PROPAGATION

Radiation field and radiation resistance of short dipole antenna-grounded antenna-ungrounded antenna-coincident arrays-broadside and end fire arrays-antenna gain-directional high frequency antennas-sky wave propagation- Eccles and Larmor theory- Magneto ionic theory-ground wave propagation

UNIT – II: MICROWAVES

Microwave generation – cloth cavity Klystron-reflex klystron-magnetron travelling wave tubes (TWT) and solid microwave tubes-MASER-Gunn diode-wave guides-rectangular wave guides-standing wave indicator and standing wave ratio(SWR)

UNIT – III: RADAR AND TELEVISION

Elements of a radar system-radar equation-radar performance factors-radar transmitting systems-radar antennas-duplexers-radar receivers and indicator-pulsed systems-other radar systems- colour TV transmission and reception-colour fundamental principle-colour picture tubes-Delta gun picture tube-PIL colour picture tube-[illegible] and Theatre TV

UNIT – IV: FIBER OPTIC COMMUNICATION

Propagation of light in an optical fiber-[illegible] numerical aperture-[illegible] and

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Deemed to be University)
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

graded index fibres-optical fibres as a cylindrical wave guide-wave guide equations-wave guide equations in step index fibres - fibre losses and dispersion-applications

UNIT – V: SATELLITE COMMUNICATION

Orbital satellites-geostationary satellites-orbital patterns-satellite system link models-satellite system parameters-satellite system link equation link budget-INSAT communication satellites

Course Outcomes

After learning the course the students should be able to:

1. Discuss and compare the propagation of electromagnetic waves through sky and on earth's surface Evaluate the energy and power radiated by the different types of antenna
2. Compare and differentiate the methods of generation of microwaves analyze the propagation of microwaves through wave guides- discuss and compare the different methods of generation of microwaves
3. Identify and compare the working of different radar systems- apply the principle of radar in detecting locating, tracking, and recognizing objects of various kinds at considerable distances – discuss the importance of radar in military- elaborate and compare the working of different picture tube
4. Classify, discuss and compare the different types of optical fiber and also to justify the need of fiber over the use of optical fiber as wave guide
5. Explain the importance of satellite communication in our daily life-distinguish between orbital and geostationary satellites elaborate the linking of satellites with ground stations on the earth

References:

1. Electronic communications – Dennis Roddy and Coolen, Prentice Hall of India, IV edition, 1995.
2. Wayne Tomasi, Advanced electronics communication systems, fourth edition, Prentice Hall of India, 1998
3. Dennis Roddy and Coolen, 1995, electronics communications, Prentice Hall of India IV Edition.
4. Wayne Tomasi, 1998, *Advanced Electronics Communication Systems*, 4th edition, Prentice Hall of India, 1998
5. S. Salivahanan, N. Suresh Kumar & A. Vallavaraj, 2009, Electronic Devices and Circuits, Tata McGraw-Hill Publishing Company Limited, New Delhi, Second Edition.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
Faculty of Arts & Science
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____

   _____
5. Email: _____
6. Mobile No: _____

Signature of the applicant

Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is 30.06.2021.

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

Upon successful completion of the course, certificate will be provided.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU

Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

PRIST
UNIVERSITY

Value Added Course

Materials Characterization Techniques



Organized by

Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

Dean

About PRIST

Pattaiyah Ramaiyam Institute of Science & Technology (PRIST), a Deemed to be University (U/s 3 of the UGC Act 1956), is one of the renowned institutions of Pattaiyah Ramaiyam Institutes, which are serving for more than 50 years in providing quality education and research for our rustic community, since its inception. The institution is now witnessing with more overall progress facilities, particularly in providing quality education through research.

About School of Arts and Science

School of Arts and Sciences consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology, and Microbiology departments, offering B.Sc., M.Sc., M.Phil. and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members who are experts in various frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, UGC, DRDO, and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme Master of Science (M.Sc.) in Physics and Ph.D. programmes. The Department also offers [illegible] based core and elective courses in basic [illegible] undergraduate first year engineering [illegible] students.

List of topics covered in the programme

Unit I

Introduction – thermogravimetric analysis (TGA) – instrumentation – determination of weight loss and decomposition products – differential thermal analysis (DTA) – cooling curves – differential scanning calorimetry (DSC) – instrumentation – specific heat capacity measurements – determination of thermomechanical parameters.

Unit II

Optical Microscopy: optical microscopy techniques – Bright field optical microscopy – Dark field optical microscopy – Dispersion staining microscopy – phase contrast microscopy – differential interference contrast microscopy – fluorescence microscopy – confocal microscopy – digital holographic microscopy – oil immersion objectives – quantitative metallography – image analysis.

Unit III

SEM, EDAX, EPMA, TEM: working principle and instrumentation – sample preparation – Data collection, processing and analysis – Scanning tunneling microscopy (STM) – Atomic force microscopy (AFM) – Scanning near field optical microscopy.

Unit IV

Four probe and four probe methods- van der Pauw method – Hall effect and measurement scattering mechanism – C-V characteristics – Schottky barrier capacitance – impurity concentration – electrochemical C-V profiling – limitations. Photoluminescence – light – matter interaction – instrumentation – electroluminescence – instrumentation – Applications.

Unit V

Principles and instrumentation for UV-Vis-IR, FTIR spectroscopy, Raman spectroscopy, ESR, NMR, NQR, XPS, AES and SIMS – proton induced X-ray Emission spectroscopy (PIXE) –Rutherford Back Scattering (RBS) analysis-application – Powder diffraction – powder diffractometer –interpretation of diffraction patterns – indexing – phase identification – residual stress analysis – Particle size [illegible] – time resolved fluorescence spectroscopy – uses.

REGISTRAR
Pattaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU

Pattaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

DEAN
School of Arts & Science
Pattaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Deemed to be University u/s 3
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

Department of Physics

Subject Code	Subject Name
20S23MCT	Certificate course on Materials Characterization Techniques

Total : 45 hours

Syllabus

COURSE OBJECTIVES:

- To make the students learn some important thermal analysis techniques namely TGA, DTA, DSC and TMA.
- To make the students understand the theory of image formation in an optical microscope and to introduce other specialized microscopic techniques.
- To make the students learn and understand the concepts of working of electron microscopes and scanning probe microscopes.
- To make the students understand some important electrical and optical characterization techniques for semiconducting materials.
- To introduce the students the basics of X-ray diffraction techniques and some important spectroscopic techniques.

Unit I

Introduction – thermogravimetric analysis (TGA) – instrumentation – determination of weight loss and decomposition products – differential thermal analysis (DTA) – cooling curves – differential scanning calorimetry (DSC) – instrumentation – specific heat capacity measurements – determination of thermomechanical parameters.

Unit II

Optical Microscopy: optical microscopy techniques – Bright field optical microscopy – Dark field optical microscopy – Dispersion staining microscopy - phase contrast microscopy -differential interference contrast microscopy - fluorescence microscopy – confocal microscopy - - digital holographic microscopy - oil immersion objectives - specimen preparation for metallography – image analyzer.

Unit III

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Arts & Science

SEM, EDAX, EPMA, TEM: working principle and Instrumentation – sample preparation –Data collection, processing and analysis- Scanning tunneling microscopy (STEM) – Atomic force microscopy (AFM) - Scanning new field optical microscopy.

Unit IV

Two probe and four probe methods- van der Pauw method – Hall probe and measurement scattering mechanism – C-V characteristics – Schottky barrier capacitance – impurity concentration – electrochemical C-V profiling – limitations. Photoluminescence – light – matter interaction – instrumentation – electroluminescence – instrumentation – Applications.

Unit V

Principle and instrumentation for UV-Vis IR, FTIR spectroscopy, Raman spectroscopy, ESR, NMR, NQR, XPS, AES and SIMS proton induced X-ray Emission spectroscopy (PIXE) – Rutherford Back Scattering (RBS) analysis-application - Powder diffraction - Powder diffractometer -Interpretation of diffraction patterns - indexing - phase identification - residual stress analysis - Particle size, texture studies - X-ray fluorescence spectroscopy - uses.

Course Outcomes

At the end of the course, student/students will be able to:

1. Describe the TGA, DTA, DSC and DMA thermal analysis techniques and make interpretation of the results.

2. The concept of image formation in Optical microscope, developments in other specialized microscopes and their applications.

3. The working principle and operation of SEM, TEM, STM and AFM.

4. Hall and Hall measurements, four probe resistivity measurements, C-V, I-V, Electrochemical, Photoluminescence and electroluminescence experimental techniques with necessary theory.

5. The theory and experimental procedure for X-ray diffraction and some important spectroscopic techniques and their applications.

REFERENCE BOOKS

1. Cullity, B.D., and Stock, R.S., "Elements of X-Ray Diffraction", Prentice-Hall, (2001).
2. Murphy, Douglas B, Fundamentals of Light Microscopy and Electronic Imaging, Wiley-Liss, Inc. USA. (2001).
3. Tyagi, A.K., Roy, Mainak, Kulshreshtha, S.K., and Banerjee, S., Advanced Techniques for Materials Characterization, Materials Science Foundations (monograph series), Volumes 49 – 51, (2009) Volumes 39 – 31, (2009)
4. Wendlandt, W.W., Thermal Analysis, John Wiley & Sons, (1986).
5. Wiedemann, H.G., Bayer, G.W., Characterization of Materials, Springer-Verlag, (1993).

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF PHYSICS

Circular

PRIST/A&S/PH/21-22/12 Date: 01.02.2022

This is to inform all Chemistry students that the value added courses classes for academic year 2021-22 even semester will be commenced from 03.02.2022. Hence requesting all registered students to attend the classes without fail.

1. Certificate course on Photovoltaics for Energy Conversion
2. Certificate course on Thin film technique

DEAN

1830

Copy to

1.Hon'ble Vice Chancellor (for your kind information)

2.Registrar

3.Registrar office

4.Dean

5.Department file

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC act 1956
THANJAVUR - 613 403, TAMIL NADU.

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____
5. E-mail: _____
6. Mobile No: _____

Signature of the applicant

Submission of application form

Filled in application form has to be submitted in person to course coordinator. Last date for registration is **25.01.2022**.

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

Upon successful completion of the course, certificate will be provided.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1958
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE UNIVERSITY
NAAC A+ GRADE
THANJAVUR - 613 403 - TAMIL NADU

Value Added Course

Photovoltaics for Energy Conversion



Organized by

Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

DEAN
School of Arts & Science
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University

About PRIST

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST , a Deemed University U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 30 years in promoting value education and research for our Indian community since its inception. The Institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About School of Arts and Science

School of Arts and Sciences consists of Tamil, English, Mathematics, Physics, Chemistry, Biochemistry, Biotechnology, and Microbiology departments. It offers B. Sc., M.Sc. M.Phil. and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members who are experts in the frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and Ph.D. programmes. The Department also offers credit based core and elective courses in basic Physics to undergraduate first year engineering students.

List of topics covered in the programme

Unit 1- Introduction

Accelerated action: Energy from the Sun-Sun Paths Diagram and Solar Radiation

Unit 2- Fundamentals of Solar Photovoltaic Systems

Components of a Solar PV System-Types of Solar Photovoltaic Systems-Technical Parameters and Performance of a Solar PV Panel- Identification and Uses of Tools and Equipment Used for Solar PV Installation.

Unit 3- Installation of Solar Photovoltaic Systems

The Importance of Accurate Load and Site Assessment-Steps for Conducting a Load Assessment-Steps for Conducting a Site Assessment-Procurement of the Solar PV System Components-Civil and Mechanical Parts of Solar PV System-Construction of Equipment

Unit 4- Components of Solar Photovoltaic Systems

Foundation-Installation of Mounting System, Photovoltaic Module and Battery Bank and Inverter stands, Installation of Electrical Components, Conduits, Cables- Installation of Grounding Systems and Battery Bank.

Unit 5- Test & Measurement and Maintenance of Solar Photovoltaic Systems

Tools and Accessories Required for PV System Testing-Overall System Inspection-Testing of Solar Array-Wire and Earthing Continuity Tests-Testing of Charge Controller-Testing of Batteries-Start-up the System-Unintentional Islanding Functionality Test-Sample Test and Commission Record Sheet-Tools Required for Maintenance-Preventive Maintenance of PV System-Troubleshooting and Maintenance.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

Department of Physics

Subject Code	Subject Name
20513NT	Certificate course on Photovoltaics For Energy Conversion

Total : 45 hours

Syllabus

Course Objectives:

The main objectives of this course are to:

1. To make student to understand the importance of solar energy and its effective utilization
2. To bring exposure to various tools and equipment used for Solar Photovoltaic installation.
3. To get hands-on training on the installation and maintenance of Solar Photovoltaic Systems.
4. To [illegible] knowledge on the possibility of Employ, Skills and Entrepreneurship avenues in the area of solar energy extraction and utilization.

Unit 1- Introduction

An Introduction Energy from the Sun-Sun Path Diagrams and Solar Radiation

Unit 2- Fundamentals of Solar Photovoltaic Systems

Components of a Solar PV System-Types of Solar Photovoltaic Systems-Technical Parameters and Performance of a Solar PV Panel Identification and Uses of Tools and Equipment Used for Solar PV Installation

Unit 3- Installation of Solar Photovoltaic Systems

The Importance of Accurate Load and Site Assessment-Steps for Conducting a Load Assessment-Steps for Conducting a Site Assessment-Procurement of the Solar PV System Components-Civil and Mechanical Parts of Solar PV System-Construction of Equipment

Unit 4- Components of Solar Photovoltaic Systems

Foundation-Installation of Mounting System Photovoltaic Module and Battery Bank and inverter stands. Installation of Electrical Components, Conduits, Cables- Installation of Grounding Systems and Battery Bank.

Unit 5- Test & Measurement and Maintenance of Photovoltaic Systems

Tools and Accessories Required for [illegible] Maintenance-Visual Inspection-Testing of Solar Array-Wire and Earthing Continuity Testing-Battery and Charge Controller-Testing of

REGISTRAR
Pennalyan Ramalyam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Dean
School of Arts & Science
Pennalyan Ramalyam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Stillness-Start-up the System-Unintentional Islanding-Functionality Tests-Sample Test and Commission Record Sheet-Tools Required for Maintenance-Preventive Maintenance of PV System-Troubleshooting and Maintenance.

Course Outcomes

At the end of the course, trainees/students will be able to:

1 Gain knowledge on renewable energy sources, solar PV systems, potential, and applications.

2 Analyse the solar geometry, system parameters, challenges, and opportunities.

3 Understand the systemsizing, sensing, installation, and operation with and without storage systems.

4 Development of solar PV systems for domestic, commercial, and industrial applications.

5 Performance analysis of a solar PV system for livelihood development.

6 Develop an understanding of the perspective on SDGs 7, 8, and 13.

References

1. Solar energy by Sukhatme, Tata McGraw-Hill Education, 1987.
2. Solar Energy Utilization Edited by Hafit Yüncü, S. Paykoç, Y. Yener, Springer Netherlands, 1983
3. Solar Energy Conversion: A Textbook for Engineering Students Eds. D. Ba Khanna Publishers, 1982.

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

Registration Form

1. Name: _____
2. Reg. No.: _____
3. Programme & Branch: _____
4. Name of value added course: _____

_____

5. E-mail: _____
6. Mobile No: _____

Signature of the applicant

Submission of application form:

Filled in application form has to be submitted in person to course coordinator. Last date for registration is **25.01.2022.**

Head of the Department,
Department of Physics,
PRIST Deemed to be University,
Vallam,
Thanjavur – 613403.

Upon successful completion of the course, certificate will be provided.

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

Value Added Course

Thin film techniques



Organized by

Department of Physics
School of Arts and Science
PONNAIYA RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
Thanjavur 613 403
Tamil Nadu

Dean
School of Arts & Scie
Ponnaiyah Ramaiyam In
Science & Technology (P
Deemed to be Univers
Thanjavur - 613 4

About PRIST

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned projects of Ponnaiyah Ramajayam Institutions which are serving for more than 30 years in promoting quality education and research for our India's community, since its inception. The institution is ever brimming with many social responsibilities, particularly in promoting quality education through research.

About School of Arts and Science

School of Arts and Sciences consists of Tamil, English, Mathematics, Physics, Chemistry, Nanoscience, Biotechnology, and Microbiology departments. It offers B.Sc., M.Sc. M.Phil. and Ph.D. programmes in all disciplines. It comprises of well qualified and research oriented faculty members who are experts in the frontier areas in Sciences. Faculty members have received research projects from various funding agencies such as DST, CSIR, DRDO, and ICMR.

About Physics Department

The Physics Department offers credit based undergraduate programme, Bachelor of Science (B.Sc.) in Physics, postgraduate programme, Master of Science (M.Sc.) in Physics and Ph.D. programmes. The Department also offers credit based optional elective courses in basic Physics to undergraduate first year engineering students.

List of topics covered in the programme

Unit 1- INTRODUCTION

Basic of Thin films and Nanostructures. Role of thin films in devices

Unit 2- FABRICATION OF THIN FILMS

Sol-gel synthesis, Spin coating, Chemical vapor deposition, Physical vapor deposition, Sputtering deposition, Ion implantation, Cathodic arc deposition, Pulsed laser deposition, Molecular beam epitaxy

Unit 3- CHARACTERIZATION OF THIN FILMS:

X-ray diffraction, UV-vis spectroscopy, SIMS, four probe resistivity, atomic probe microscopy, profilometer

Unit 4- PROPERTIES OF THIN FILMS

Structural, electrical, magnetic, optical, thermal, etc.

Unit 5- APPLICATION OF THIN FILMS

Applications of thin films in different areas such as electronics, medical, defense, sports, automobiles, etc.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

Department of Physics

Subject Code	Subject Name
20513VE	Certificate course on Thin film techniques

Total : 45 hours

Syllabus

Course Objectives:

The course objectives of this course are to:

1. To make the students understand the technique to prepare a nano thin films and devices.
2. To bring exposure to various tools and equipment used for thin films characterizations.

Unit 1- Introduction

Basic of Thin films and Nanostructures, Role of thin films in devices

Unit 2- FABRICATION OF THIN FILMS

Sol-gel synthesis, Spin coating, Chemical vapor deposition, Physical vapor deposition, Sputtering, evaporation, Ion implantation, Pulsed laser deposition, Molecular beam epitaxy

Unit 3- CHARACTERIZATION OF THIN FILMS

x-ray diffraction, UV-vis spectroscopy, squid, four probe resistivity, atomic probe microscopy, profilometer

Unit 4- PROPERTIES OF THIN FILMS

Structural, electrical, magnetic, optical, thermal, etc.

Unit 5 APPLICATION OF THIN FILMS

Application of thin films in different areas such as electronics, medical, defense, sports, automobiles, etc.

Course Outcomes

After learning the course the students should be able to:

1. To study the basics about the various techniques used in thin films

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Arts & Science
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

2. To know about the growth of nanostructured thin films.

3. To have knowledge about synthesis of nanostructured thin films

References

1. G. Cao, "Nanostructures & Nanomaterials: Synthesis, Properties & Applications" Imperial College Press, 2004.
2. W.T.S. Huck, "Nanoscale Assembly: Chemical Techniques (Nanostructure Science and Technology)".
3. Thin Film Phenomena by K. L. Chopra, McGraw Hill 1969.

Head

Pennalyah Ramajayam Institute of Science & Technology (PRIST) Deemed to be University Vallam, Thanjavur - 613 403.

Dean

DEAN
School of Arts & Science
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL [illegible]

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR- 613 403 - TAMIL NADU

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2021-22

Ref:PREC/ECE/2021-22/ODD/08 Date: 01.08.2021

CIRCULAR

It is hereby informed that the Department is offering Add on course for the students. The following courses were offered and their corresponding co-ordinators are also mentioned. The interested students are intimated to register for the same. The classes commences on 09.08.2021, detailed schedule is also provided. The registered students are informed to attend the class without fail.

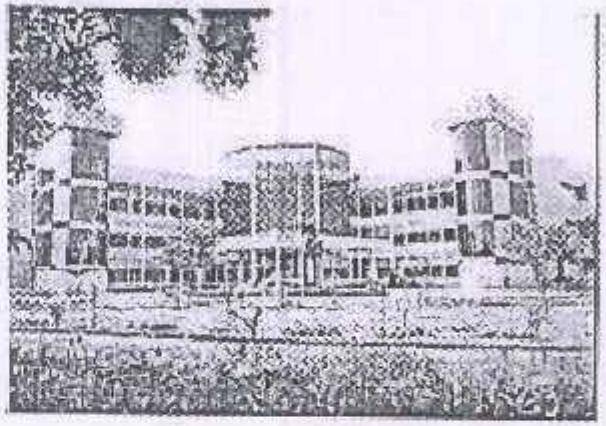
- Certificate course LORA AND LORA WAN COMMUNICATION
- Certificate course INTRODUCTION TO VISUAL BASIC LABORATORY- SCILAB PROGRAMMING
- Certificate course EMBEDDED SYSTEM INTERFACING WITH ROBOTICS
- MACHINE LEARNING TECHNIQUES
- Certificate Course on Antenna Design
- Certificate Course on PCB Design
- Certificate course PLC&SCADA

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

HOD
Head Of the Department
Department Of Electronics and
Communication Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
DEAN
School of Engineering
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INFORMATION BROCHURE

ADD ON COURSE- ANTENNA DESIGN

DIPLOMA COURSE



Module-2- DESIGN OF ANTENNA ARRAYS

General structure of phased array, linear array theory- analog beamforming matrices-Active modules, digital beam forming, MEMS technology in phased arrays-Retro directive and self-phased arrays, switched beam and adaptive arrays, Mutual Coupling in Finite Arrays.

Module-3-DESIGN OF EMC ANTENNA

Concept of EMC measuring antenna; Log periodic dipole, Biconical, Ridge guide, Multi turn loop Design, simulation and analysis of different antennas for wireless applications.

Module-4-DESIGN OF MICROSTRIP ANTENNA

Radiation Mechanism and Excitation techniques: Microstrip dipole; Patch, Rectangular patch, Circular patch, and Ring antenna – Microstrip array and feed network; Reconfiguration Mechanisms; Computer Aided Design of Microstrip Antennas, Microstrip Reflectarray Antennas.

Module-5- DESIGN OF MODERN ANTENNAS

PIFA – Vivaldi Antennas - UWB Antennas - Leaky Wave Antennas – Plasma Antennas – Wearable Antennas – RFID Antennas – Automotive antennas, Reconfigurable antennas.

SOFTWARE TOOL USED: CST Microwave Studio

ELIGIBILITY

ECE students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAN...

DEAN
School of Engineering and Tech...
Pennaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Electronics and Communication Engineering came into existence in 2008 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well-designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

The Department has state-of-the-art laboratories, such as VLSI lab, Digital Image Processing Lab, Circuit Simulation Lab, Communication Lab, and higher end software like MATLAB, PSPICE,, Xilinx, IAR,L-Sim & N-Sim .

The Department runs an undergraduate course in B. Tech - Electronics and Communication Engineering and postgraduate programme like M. Tech in Communication Systems Department also offers part time programmes in B. Tech - Electronics and Communication Engineering and M.Tech-Communication systems.

ABOUT THE COURSE

Examine and analyze some of the most popular antennas using relevant antenna theories, to see why they have become popular, what their major features and properties (including advantages and disadvantages) are, and how they should be designed.

COURSE OBJECTIVES

1. To enhance the students knowledge in the area of various antenna design to make them understand their radiation mechanism.
2. To impart knowledge about the state of art in antenna technology.

PRE-REQUISITES

Understand and design antenna systems for a variety of wireless communication, radar, and power transfer systems.



COURSE CONTENT

Module-1-DESIGN OF BASIC ANTENNAS

Antenna fundamental parameters - dipole, monopole, loop antenna; Mobile phone antenna- base station, handset antenna; Image; Induction ,reciprocity theorem, Balance to unbalance transformer.

Head
Department of Electronics and Communication Engineering
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Engineering and Tech.
Ponnaiyah Ramajayam Institute of Science and Technology (PRIST)
(Deemed to be University)
Vallam, Thanjavur - 613 403.

Head of the Department
Department of Electronics and Communication Engineering
Pannaiyan Ramaiyan Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC act, 1956
THANJAVUR - 613 403, Tamil Nadu, India.

REGISTRAR
Pannaiyan Ramaiyan Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Principal
School of Engineering and Technology
Pannaiyan Ramaiyan Institute of Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

ABOUT THE COURSE

In the highly competitive electronics industry, the knowledge and skills of students directly responsible for schematic capture and design documentation can have a direct impact on successful design implementation and time to market.

PCB (Printed Circuit Board) designing is an integral part of each Electronics products and should known to each electronics engineering students and who are working in electronics industry

PCB Design training course helps all the engineering students to design and develop an electronics prototype accurately. A high-quality PCB eliminates the risk of loose solder joints.

This program is designed to make students and professionals capable of designing PCB up to Industrial grade.

After the completion of Training, Students will be able to design and print their own PCB (Printed Circuit Board).

COURSE OBJECTIVES



- Understanding of Electronics Project Design Flow
- Knowledge of Schematic Design techniques
- Knowledge of PCB Design techniques
- Personal Experience of working with PCB

Pre-requisites

Knowledge of Electronics Components

Head Of the Department
Department Of Electronics and Communication Engineering
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMILNADU, INDIA

REGISTRAR
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMILNADU, INDIA

DEAN
School of Engineering and Technology
Pannaiyah Ramajayam Institute of Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403



COURSE CONTENT –PCB FUNDAMENTALS SCHEMATIC CAPTURE

Module 1 – Introduction to PCB Design

Program overview outlining class schedule and options for accessing class material and assignments. An overview of the fundamentals of PCB Design and review of passive components. Lecture 1 will focus on passive components and basic electrical engineering equations.

Module 2 – Component Library Concepts

Creation of library components, including schematic symbol and PCB footprint generation, component parameters, and simulation models.

Module 3 – Basic Schematic Concepts

Proper structure and layout of a good schematic.
Key concepts include:

- Page sequencing
- Symbol placement
- Net naming
- Power / ground symbols
- IPC standards

Module 4 – Advanced Schematic Concepts

Head Of the Department
Department Of Electronics and Communication Engineering
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Engineering and Tech.
Pennaiyah Ramajayam Institute of Science and Technology (PRIST)
Deemed to be University
Thanjavur-613 403

- Port / off-sheet connections
- Circuit reuse
- Design hierarchy
- Circuit simulation
- Net classes
- Design rules
- Multi-channel design
- Differential nets
- Busses / wire harnesses

Module 5 – Schematic Documentation

Proper documentation of schematics and review application of IPC-26xx standards

Key concepts include:

- Use of standard title blocks
- Standard page sequencing
- Readability
- Standard notes
- ECO and revision history
- Annotation methodology
- Design rules
- Parts lists

SOFTWARE USED : ORCAD SOFTWARE

ELIGIBILITY : ECE & EEE students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours

REGISTRAR
Thanjavur Ramalingam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR – 613 403, TAMIL NADU

Head of the Department
Department of Electronics and Communication Engineering
Pannai Engineering College

8/1/19
DEAN
School of Engineering and Technology

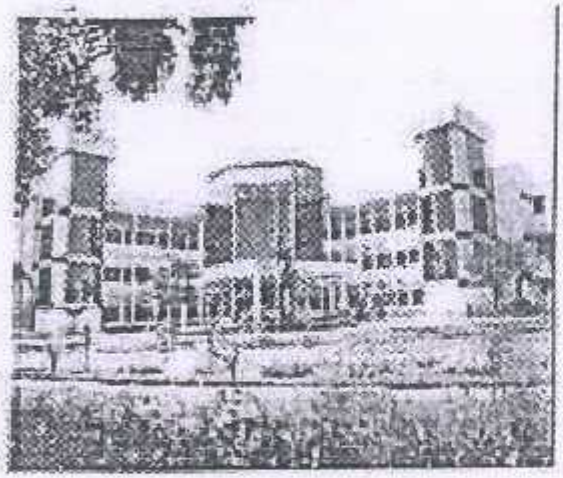
PCB DESIGN

Course Outcomes

Upon the completion of this course, students will demonstrate the ability to:

1. Understand basics of PCB designing.
2. Apply advance techniques, skills and modern tools for designing and fabrication of PCBs.
3. Apply the knowledge and techniquesto fabricate Multilayer, SMT and HDI PCB.
4. Understand concepts of Packaging.

REGISTRAR
Pennalyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INFORMATION BROCHURE

ADD ON COURSE

LORA AND LORAWAN COMMUNICATION

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Electronics and Communication Engineering came into existence in 2008 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a virtuous learning environment to the students in order to help them excel. To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

The Department has state-of-the-art laboratories, such as VLSI lab, Digital Image Processing Lab, Circuit Simulation Lab, Communication Lab, and higher end software like MATLAB, PSPICE, Xilinx, IAR, L-Sim & N-Sim.

The Department runs an undergraduate course in B. Tech Electronics and Communication Engineering and postgraduate programme like M. Tech in Communication Systems. Department also offers part time programmes in B. Tech – Electronics and Communication Engineering and M. Tech - Communication Systems.

ABOUT THE COURSE

LoRa is an RF modulation technology for low power wide area networks (LPWANs). The name, LoRa, is a reference to the essentially long-range data links that this technology enables. Created by Semtech to standardize LPWANs, LoRa provides for long-range communications: up to three miles (five kilometers) in urban areas and up to 10 miles (15 kilometers) or more in rural areas (line of sight). A key characteristic of the LoRa-based solutions is ultra-low power requirements, which allows for the creation of battery-operated devices that can last for up to 10 years. Deployed in a star topology, a network based on the open LoRaWAN protocol is perfect for applications that require long- range or deep indoor communication among a large number of devices that have low power requirements and that collect small amounts of data.

Consider the differences between LoRa and other network technologies that are typically used in IoT or traditional machine-to-machine (M2M) connectivity solutions.

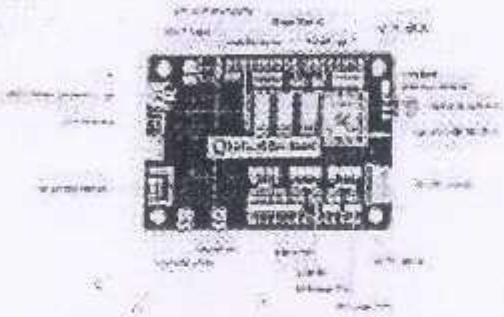
LoRa®

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Established as Deemed to be University)
Under Sec. 3 of the UGC Act, 1956
Thanjavur - 613 403, TAMIL NADU

(HOD/ECE)

Director
School of Engineering and Technology
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403

Hardware Specification



COURSE OBJECTIVES

- Introduction & Overview of IoT Traditional Communication Networks
- Existing IoT Protocols
- LoRa over IoT
- LoRa Network Design-Backend Design
- LoRa Gateway
- LoRa Point-to-Point Communication
- LoRa WAN

COURSE CONTENT –LORA AND LORAWAN COMMUNICATION USING IOT

IoT Training

Syllabus Module 1 –

IOT Introduction

- Concepts and Definitions of TheInternet of Things (IoT)
- History of IOT
- Requirements, Functionalists, and structure of IOT
- IoT enabling technologies
- IoT Architecture
- The major components of IOT (Hardware & Software)
- IoT communication andnetworking protocols, Role of wired and wireless communication
- IoT services and applications.
- IoT Standards, Connectivity

Module 2 – IOT Case Studies

- Project Case Study Project Requirements (hardware &software)
- How to Design IOT Applications(Web, Mobile, Device)
- Projects on every technology (Atleast 4 Projects)
- Data Generator

Module 3 – IOT Data Acquisition &Platforms

- Micro Controllers (Arduino uno/mega2500, Rasberry-Pi, ARM), Real-time systems, and embedded software
- OS and Drivers (End Device Program)
- Hardware & Software Requirements

Module 4 – IOT Data Communication

- How to transfer data by Wireless / Wired connectivity
- Ipv4/Ipv6, Ethernet/GigE
- MIPI, M-PHY, UniPro, SPMI, RIF, SuperSpeed USB Inter-Chip (SSIC), Mobile PCIe (M- PCIe) and SPI
- GSM , 2g ,3g ,4g & 5g
- IEEE 802.15.4, IEEE 802.15.4e, 802.11ah
- Relay Access Point (AP)
- Grouping of station
- Target Wake Time (TWT) .

Module 5 – IOT Data Storage & Retrieval

- Overview and Role of Storage in Cloud / Server /Inhouse Storage
- Databases Connectivity with IOTand uses
- Case Study over Mysql / NoSql / NewSql
- Case Study over Cloud ServicesAnd Administration
- Case Study Of Big Data & HadoopPlatforms

Module 6 – IOT Data Analytics &Visualization

- Analysis Of data using the IpythonModule
- Visualization and interpretation ofData
- Data Cleaning in IoT

Module 7 – IOT Security

- Attack, Defense, and NetworkRobustness of Internet of Things
- Malware Propagation and Controlin the Internet of Things
- Privacy Preservation DataDissemination
- Trust and Trust Models for the IoT
- Authentication in IoT
- Computational Security for the IoT
- Security Protocols for IoT AccessNetworks
- Security Testing

Module 8 – IOT Product Development &Testing with

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN

COURSE OUT COMES

- Identify the Components that forms part of IOT Architecture.
- Determine the most appropriate IOT Devices and Sensors based onCase Studies. Setup the connections between the Devices and Sensors.
- The future of Lora has the potentialto be limitless. Advances to the industrial internet will be accelerated through increased network agility, integrated artificial intelligence (AI) and the capacity to deploy, automate, orchestrate and secure diverse use cases at hyperscale.

SOFTWARE USED : SYMBIOT SOFTWARE

ELIGIBILITY : ECE students shall be eligible for the admissionto the course.

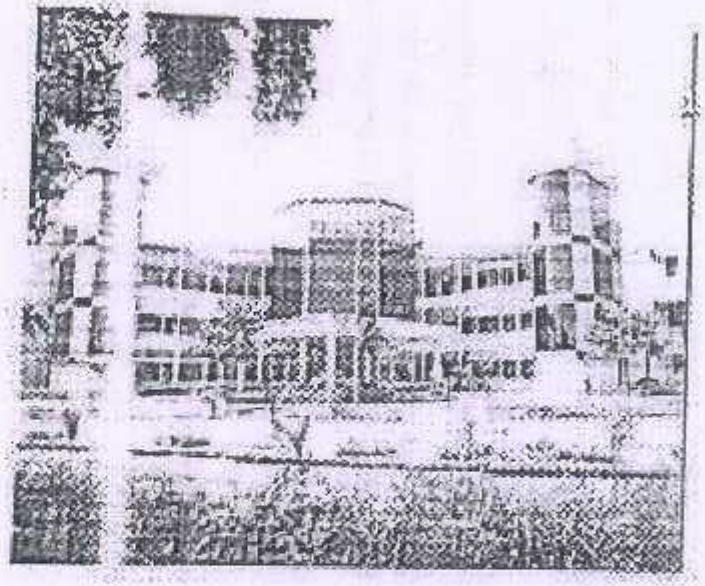
COURSE DURATION: 45 Hours

Sruthi
(HOD/ECE)

DEAN
School of Engineering and Tech.
Pennaiyah Ramaiayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be U...
u/s 3 of the UGC A...
THANJAVUR - 613 ...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU



DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING

INFORMATION BROCHURE

ADD ON COURSE- SCI LAB PROGRAM

Head Of the Department
Department Of Electronics and
Communication Engineering
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAN...

Scilab

ABOUT THE INSTITUTION

Pannaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University U/s 3 of the UGC Act 1956), is one of the renowned units of Pannaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Electronics and Communication Engineering came into existence in 2008 with an objective to impart quality education to meet today's competitive environment.

School of Engineering & Texh...
Pannaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Department has well experienced and dedicated faculty with strong commitment to provide vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

The Department has state-of-the-art laboratories, such as VLSI lab, Digital Image Processing Lab, Circuit Simulation Lab, Communication Lab, and higher end software like MATLAB, PSPICE, Xilinx, IAR, Sim & N-Sim.

The Department runs an undergraduate course in B. Tech – Electronics and Communication Engineering and three postgraduate programmes like M. Tech in Communication Systems, Applied Electronics and Embedded systems.

ABOUT THE COURSE

Scilab is an open source, cross-platform numerical computational package and a high-level, numerically oriented programming language. As the syntax of Scilab is similar to MATLAB(R), Scilab includes a source code translator for assisting the conversion of code from MATLAB(R) to Scilab. Scilab is available free of cost under an open source license and is one of several open source alternatives to MATLAB(R). Scilab has been widely exploited for different applications in signal processing, statistical analysis, image processing, fluid dynamics simulations, numerical optimization and modeling, simulation of explicit and implicit dynamical systems and symbolic manipulations. The Course is intended to provide basic understanding about the Scilab platform and to exploit its integration in the field of signal and image processingScilab is an open source, cross-platform numerical computational package and a high-level, numerically oriented programming language. As the syntax of Scilab is similar to MATLAB(R), Scilab includes a source code translator for assisting the conversion of code from MATLAB(R) to Scilab. Scilab is available free of cost under an open source license and is one of several open source alternatives to MATLAB(R). Scilab has been widely exploited for different applications in signal processing, statistical analysis, image processing, fluid dynamics simulations, numerical optimization, and modeling, simulation of explicit and implicit dynamical systems and symbolic manipulations. The workshop is intended to provide basic understanding about the Scilab platform and its exploit it integration in the field of signal and image processing.

COURSE OBJECTIVES

1.Numerical Analysis Data visualization Algorithm development Application development.

2.Model Customization & Modelica blocks creation Model building & edition Simulation Standard Palettes & Blocks.

3.It can be used for signal processing, statistical analysis, image enhancement, fluid dynamics simulations, numerical optimization, and modeling, simulation of explicit and implicit dynamical systems and (if the corresponding toolbox is installed) symbolic manipulations.

PRE-REQUISITES

Scilab is free and open source software for numerical computation providing a

REGISTRAR
Pannaiyah Ramaiyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

powerful computing environment for engineering and scientific applications. Scilab is released as open source under the GPL License, and is available for download free of charge.

COURSE CONTENT

Module-1-A Learning fundamentals of Scilab

Scilab is an interpreted language, which implies that there is no need to declare a variable before using it. Variables are created at the moment where they are first set. In the following example, we create and set the real variable x to 1 and perform a multiplication on this variable.

Module-2-SIGNAL PROCESSING WITH SCILAB

Signal processing involves converting or transforming data in a way that allows us to see things in it that are not possible via direct observation. Signal processing allows engineers and scientists to analyze, optimize, and correct signals, including scientific data, audio streams, images, and video.Further features:

Data windowing.
Power spectral density estimation.
Digital FIR and IIR filter design.
Analog filter design.
Signal transforms including fftw

Module-3-IMAGE PROCESSING USING SCILAB

SIP is a toolbox for processing images in Scilab. SIP is meant to be a free, complete, and useful image toolbox for Scilab. Its goals include tasks such as filtering, blurring, edge detection, thresholding, histogram manipulation, segmentation, mathematical morphology, and color image processing.

Module-4-PRATICAL EXAMPLES ON IMAGE & SIGNAL PROCESSING WITH SCILAB

SIP is a toolbox for processing images in Scilab. SIP is meant to be a free, complete, and useful image toolbox for Scilab. Its goals include tasks such as filtering, blurring, edge detection, thresholding, histogram manipulation, segmentation, mathematical morphology, and color image processing.There are several ways of using Scilab and the following paragraphs present three methods: • using the console in the interactive mode, • using the exec function against a file, • using batch processing. We also present the management of the graphical windows with the docking system.

Module-5-INTERFACING MATLAB® AND SCILAB

Scilab is one of the two major open-source alternatives to MATLAB, the other one being GNU Octave. Scilab puts less emphasis on syntactic compatibility with MATLAB than Octave does, but it is similar enough that some authors suggest that it is easy to transfer skills between the two systems.

SOFTWARE TOOL USED:

Scilab,Xcos. Motof Customization & Modelica blocks creation Model building & edition Simulation Standard Palettes & Blocks.

Atoms.

ELIGIBILITY

ECE students shall be eligible for the admission to the course.

COURSE DURATION: 45 Hours

Monday:	4.00-5.30 P.M
Wednesday:	4.00-5.30P.M
Friday:	4.00-5.30 P.M

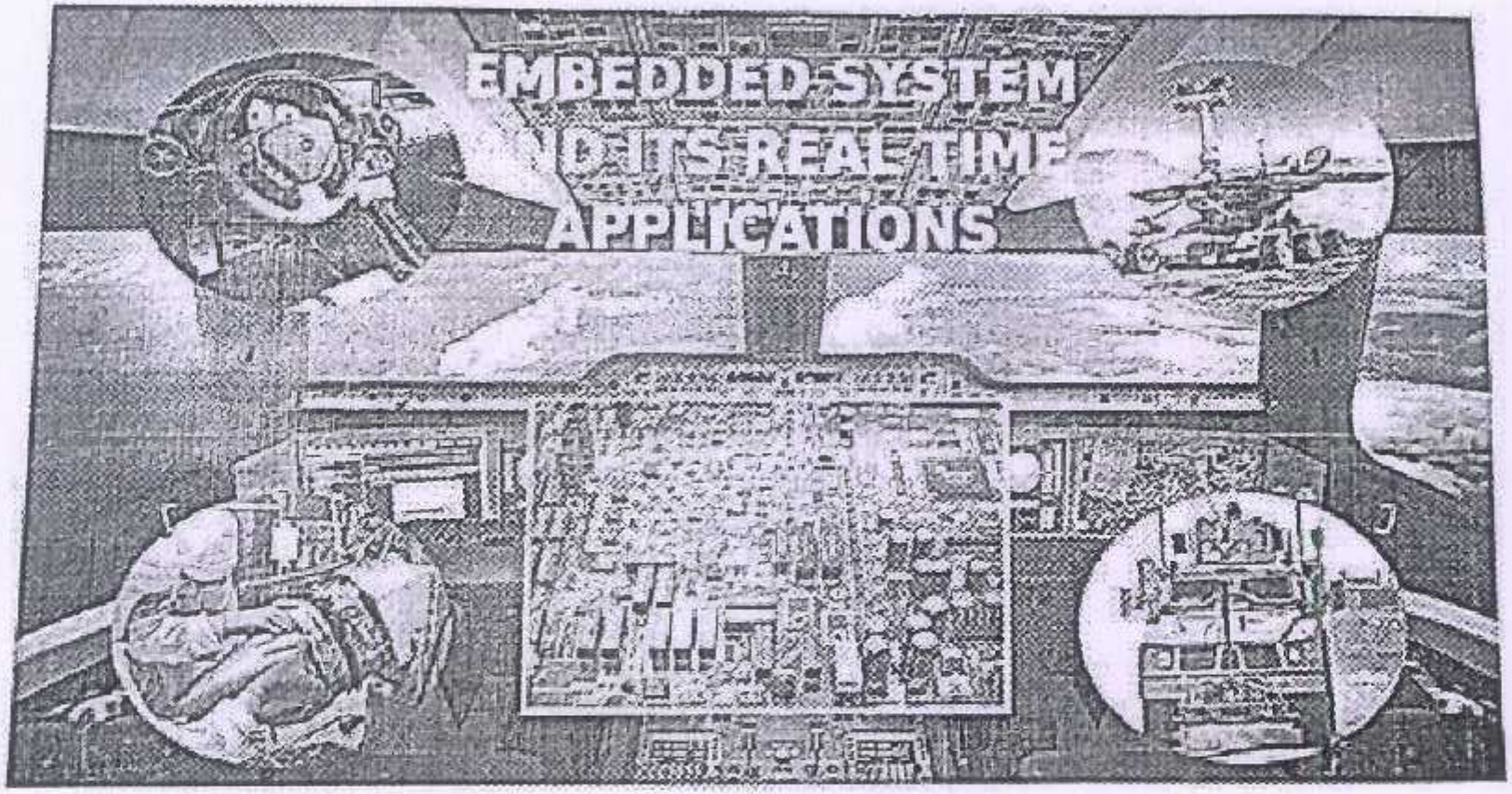
LEARNING OUTCOMES:

Scilab environment and programming language.
Use decision making control statements like if , if else and loops (for while) to develop programs.
Use data structures like lists, struct and cell arrays available in scilab to manage and work with data .

Head of the Department
Department of Electronics and Communication Engineering
Pannaiyan Ramajayam Institute of Science and Technology (PRIST)
Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
Pannaiyan Ramajayam Institute of Science and Technology (PRIST)



(HOD/ECE)

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TN.

DEAN
School of Engineering and Tech...
Pennalyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.



COURSE OBJECTIVES

Real time / embedded systems are designed to provide a timely response to real world events. Events occurring in the real world can have deadlines before which the real time / embedded system must respond and the RTOS scheduling policy must ensure these deadlines are met.

1. Students have knowledge about the basic functions, structure, concepts and applications of embedded systems.
2. Develop familiarity with 8051 Microcontrollers and their applications in an embedded environment.
3. To learn the method of designing and program an Embedded Systems for real time applications.
4. To understand operating system concepts, types and choosing RTOS.
5. Students have knowledge about the development of embedded software using RTOS and implement small programsto solve well-defined problems on an embedded platform.
6. Develop familiarity with tools used to develop in an embedded environment.

Pre-requisites

[HOD/ECE]

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

DEAN
School of Engineering and Tech.
Pennalyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur-613 403.



COURSE CONTENT –PCB FUNDAMENTALS SCHEMATIC CAPTURE

Module 1 – INTRODUCTION TO EMBEDDED SYSTEM, ASICS AND ASIPS

An embedded system is a combination of computer hardware and software designed for a specific function. Embedded systems may also function within a larger system. The systems can be programmable or have a fixed functionality.

Module 2 – EMBEDDED SYSTEM DESIGN USING ARDUINO

Embedded system basically is a computer system that is designed to gaill off a few or one specific function, more often than not in real-time computing constraints. "ARDUNIO" most widely used technique of embedded systems. An Arduino is an assembled board of Atmel 8-bit AVR microcontroller with additional components to facilitate programming. An important aspect of the Arduino is the standardized way in which the connectors are exposed, providing a facility to the CPU board to get connected to a variety of interchangeable add-on modules known as shields. The hardware consists of an open-source hardware board designed around an 8-bit Atmel AVR microcontroller. The software consists of a standard programming language compiler and a boot loader that executes on the microcontroller.

Module 3 – EMBEDDED SYSTEM DESIGN USING RASPBERRY PI

The Raspberry Pi has received a lot of attention since its release in early 2012. It was designed to be a simple, low cost device for use in schools to encourage interest in computers and computing. Whether that goal has been

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (Institution Deemed to be University U/s 3 of the UGC Act, 1956) THANJAVUR - 613 403, TAMIL NADU.

Deemed to be University
Vallam, Thanjavur - 613 403.

ABOUT THE INSTITUTION

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

ABOUT THE DEPARTMENT

The department of Electronics and Communication Engineering came into existence in 2008 with an objective to impart quality education to meet today's competitive environment.

Department has well experienced and dedicated faculty with strong commitment to provide a vibrant learning environment to the students in order to help them excel.

To keep pace with the current technological trends, the department has a well-designed, constantly revised syllabus to incorporate all advancements in existing and emerging technologies which gives the students a holistic and pragmatic view of the present scenario of industry.

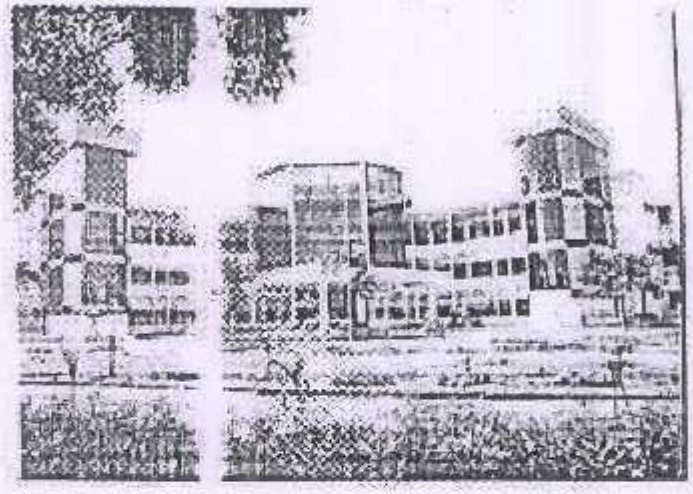
The Department has state-of-the-art laboratories, such as VLSI lab, Digital Image Processing Lab, Circuit Simulation Lab, Communication Lab, and higher end software like MATLAB, PSPICE,, Xilinx, IAR,L-Sim & N-Sim

The Department runs an undergraduate course in Electronics and Communication Engineering and postgraduate programme like M.Tech in Communication Systems. Department also offers part time programmes in Electronics and Communication Engineering and Communication systems.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (P.R.I.S.T.)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

Head of the Department
Department of Electronics and Communication Engineering
Pennaiyah Ramajayam Institute of
Science & Technology (P.R.I.S.T.)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMILNADU



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE

TRAINING PROGRAMME ON PLC AND SCADA



School of Engineering and Tech.
Pennaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 6

COURSE OBJECTIVE

The main objective of PLC & SCADA training programme is to make aspiring engineers acquainted with the conceptual and practical knowledge of the industrial automation and latest them with a platform to work on, in the near future. make aspiring engineers acquainted with the conceptual and practical knowledge of the industrial automation and latest them with a platform to work on, in the near future.

COURSE OUTCOME

PLC or Programmable Logic Controller is a computing system used to control electromechanical processes.

SCADA stands for supervisory control and data acquisition. It is a type of industrial control system that is used to monitor and control facilities and infrastructure in industries.

The automation is an ever evolving domain, which requires constant innovation and technology advancement with the aim to instill a love and passion for electronic and automation in the youth and provide them with a platform to reach great heights.

COURSE CONTENT

- Introduction to automation.
- Why we need automation?
- Introduction to PLCs.
- PLC fundamentals
- PLC hardware and operation
- PLC programming Basics
- PLC implementation
- PLC advantage over microcontroller.
- Hands-on with 2 or more major PLC brands
- Upload, download to PLC
- Modify existing programs
- Sensor introduction and their need.
- HMI introduction and their need.
- Introduction to SCADA.
- Detail study of PLC & SCADA.
- Programming of PLC through SCADA.
- PLCs IOs basics, burning and interfacing concepts(Ladder logic,RSLogix)
- Downloading a ladder program in PLC using RSLinx.
- Hands on PLC training kit and SCADA softwares.

PRE-REQUISITE

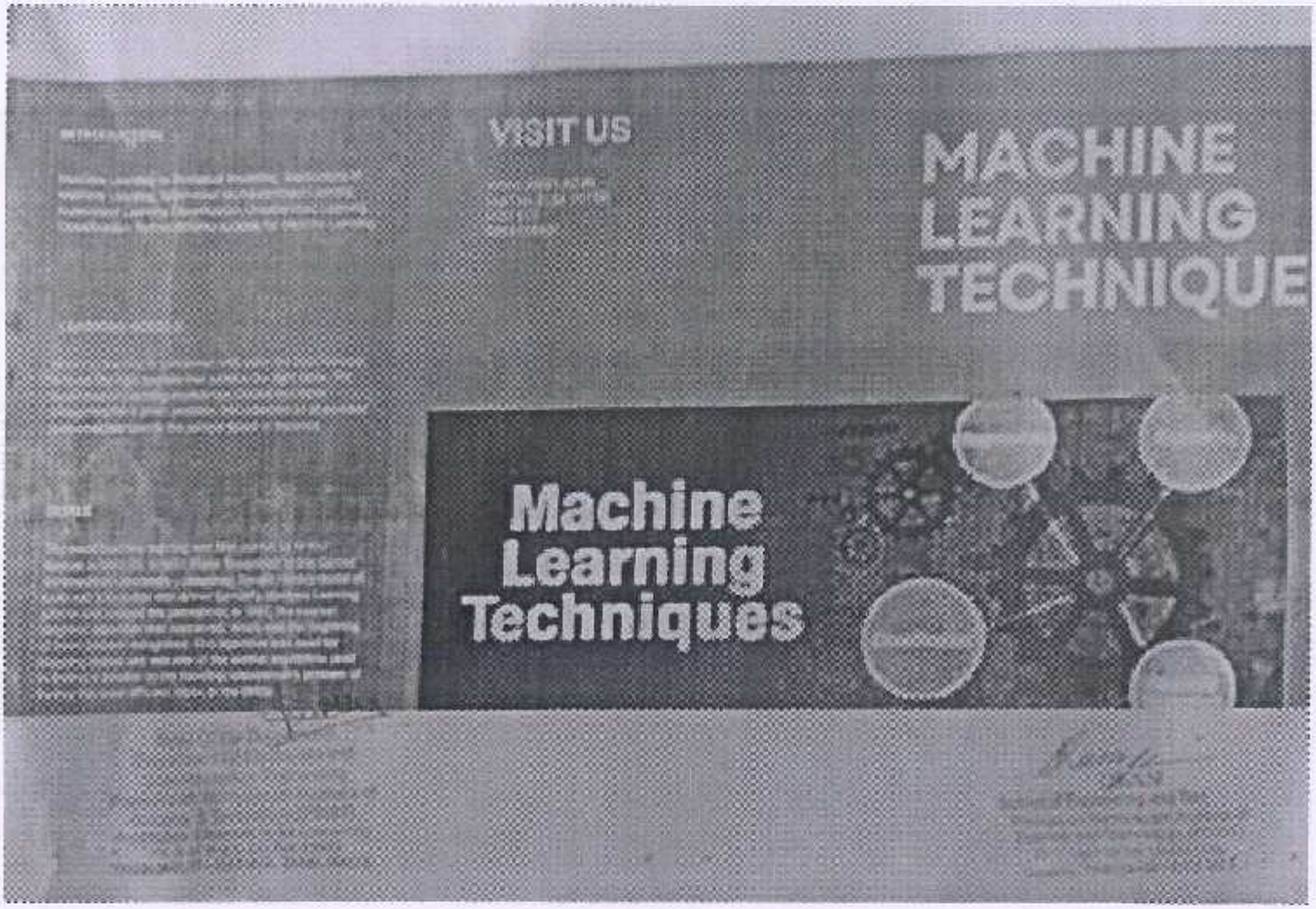
- Electrical and Electronics basics
- Industrial control

COURSE DURATION : 45 Hours.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Engineering and Tech.
Ponnaiyah Ramajayam Institute of
Science and Technology (PRIST)
Deemed to be
Vallam, T



REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, T.N.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR- 613 403 - TAMIL NADU

ACADEMIC YEAR
2021-2022

SCHOOL OF COMMERCE AND MANAGEMENT

DEPARTMENT OF COMMERCE

PRIST/C&M/21-22/3.2

The following is the list of certificate and diploma courses offered by us our students ,and students of other disciplines are hereby requested to avail of the opportunities and get benefited.

COURSE OFFERED:

- Diploma in Digital business model
- Certificate course in Banking & Finance
- Diploma in Leadership Skills
- Certificate in Business accounting and taxation
- Certification in GST
- Certificate course in Online Trading
- Certificate course in Knowledge management

HOD
HOD
Department of Commerce
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

Dean
DEAN
School of Commerce and Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

Copy To:

Hon'ble Vice Chancellor (for your kind information)
Registrar
Registrar office
Dean
Department file

REGISTRAR
Pennalyah Ramajayam Institu
Science & Technology (
(Institution Deemed to be
U/s 3 of the UGC A
THANJAVUR - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR- 613 403, TAMIL NADU

Academic year: 2021-2022
Course: Banking & Finance
Subject Code: 20618F

Aim:

Banking and Finance is to provide an outlet for the increasing flow of scholarly research concerning financial institutions and the money and capital markets within which they function

OBJECTIVE:

- To support other objectives of the Government's economic policy, especially growth, employment, and supporting the stability of the financial system.

UNIT:1

introduction. Understanding what is banking history, types of banks in India- Appreciate role of banks in the economy and the importance of - Understanding the trends and challenges in banking

UNIT:2

Understanding the types of Deposits and explain features- benefits- variants of Savings,- Current, Fixed and recurring deposit - Types of Loans- Retail lending, secured and unsecured

UNIT :3

Structure- institution and operating mechanism and its role in Economic Development. Developed and Underdeveloped Markets - Money Market in India: Importance, features instruments.- Measures to strengthen money market in India

UNIT:4

New issue market and stock exchange- Importance of stock exchanges- National stock exchange.- Methods of floating new issues, types of shares and debentures.

UNIT:5

Recommendations of the working group on money market.- Report of the task force on money market and mutual funds.25% The Securities and Exchange Board of India (SEBI), need for - establishment of SEBI. Objectives and role of SEBI, Capital Market Reforms.

Outcome

Prepare the students to deal with the issue of management of various financing activities in the banks and financial institutions.

Reference Books:

- Banking and Finance - N.K.SINHA
- Corporate Finance - PRASANNA CHANDRA

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
U/s 3 of the UGC Act 1956
Deemed to be University
Vallam, THANJAVUR - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Dean
School of Commerce & Business Management
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 - TAMIL NADU

Course: DIGITAL BUSINESS MODEL
Subject Code: 2061DBM

AIM

To emphasis the Development of Customer benefits using Digital benefits.

OBJECTIVES

i. To gain expert knowledge of Brand awareness.
ii. To know the High return on investment and Decrease cost.

UNIT – I

Meaning -Definition-Characteristics-Digital Business Strategy-The Concept and Framework of Digital business Model.

UNIT – II

Drivers and Challenges of DBM-Business model Canvas-Benefits.

UNIT – III

IOT Technologies-IOT Connectivity-IOT Devices-Building the Next generation Enterprise.

UNIT – IV

Digital Threat and Opportunity- Four Business Models.

UNIT – V

Development of Digital Business-Basics of Digital business-Digital business model innovation.

OUTCOME

The Students helped to the Adoption of Digital process and tools to achieve strategic business goals.

REFERENCE BOOKS

1. Weill Peter- What's Your Digital Business Model.
2. Venkat-Venkatraman-The Digital Matrix
3. David L.Rogers-The Digital Transformation Playbook

Pennaiyah Ramajayam Institute of Science & Technology (PRIST) (u/s 3 of the UGC Act 1956) Deemed to be University Vallam, THANJAVUR - 613 403.

DEAN

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU



ADD -ON COURSES B.COM, PROGRAMME

CERTIFICATE COURSE IN DIGITAL BUSINESS MODEL
2021-2022



ABOUT UNIVERSITY:

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1965. Over time, various institutions of higher learning such as Arts and Science College, commerce and business Management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added feathers to the PRIST crown.

DEPARTMENT OF COMMERCE

The department of commerce and business management was established in the year 2008, with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M.Phil and Ph.D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor

The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

APPLICATION FORM:

1. *Full Name* _____
2. *Programme*_____
3. *Discipline*_____
4. *Institution name*_____
5. *Date-ofBirth*_____
6. *Sex(F/M)*_____
7. *E-Mail*_____
8. *Mobile No*_____
9. *Address*_____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinators, school of commerce and Business and Management. PRIST University Thanjavur, vallam,-613403.

APPLICATION MAY BE SEND TO COURSE CO-ORDINATOR:
Dr.S.Rajendran
Head of the department
PRIST
University,Thanjavur, Thanjavur.

COURSE OBJECTIVE:

- Understand the nuances of Digital Business Model
- Understand that DBM like any other tool helps the firm only when aligned with its strategy.

COURSE DURATION: 200HRS
COURSE CONTENTS MODULE:

- Evolution of DBM

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC Act,1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Commerce & Business Management
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
Vallam - 613 403, Tamil Nadu

- DBM is the law of Business models Digitalized
- DBM expectations in rich and in poor societies

COURSE CONTENT (MODULE 2)

- The role of business in society
- Globalization and DBM
- Different Business ,different perspectives
- Success and failure with DBM initiatives
- Corporate response to citizen demands via DBM

COURSE CONTENT(MODULE 3)

- DBM as a balance between organizational means and ends
- The strategic lens: vision ,mission, strategy, and tactics
- Impact of globalization and communications technologies
- The strategic DBM model
- The business – level DBM threshold
- Implementing DBM
- DBM as competitive advantage

COURSE CONTENTS (MODULE 4)

- Organizational issues
- Economic / business issues
- Social issues

EXAMINATION

There shall be an annual university examination at the end of academic years.

ELIGIBILITY CRITERIA FOR APPEARING IN THE IN THE FINAL EXAMINATION

Minimum Attendance - 80%
Minimum Internal Assessment marks - 40%

- It will be done through the whole year.
- Candidate must obtain at least 35% marks in theory and practical separately in internal
- assessment to be eligible for the annual university examination.
- Internal assessment (Theory) will be done as follows :

➢ Mid-term and term examinations – 10 marks
➢ Assignments/Projects/Class test = 05 marks
➢ Attendance = 05 marks

Total – 20 marks

CRITERIA FOR A PASS IN THE SUBJECT

Minimum marks in theory – 45

SCHEME OF EXAMINATION:
Duration of written examination-3Hrs
Maximum marks-100

COURSE PROGRAMME OUTCOME:

- The role and importance of DBM in 21st Century organizations
- The changing role and expectations of business in society
- The extent to which business can meet the challenges of sustainable development;
- How DBM is being practiced in various Business .

ELIGIBILITY CRITERIA:

Any graduate shall be eligible for the admission to the course intake capacity 15 seats on first cum first basis (Additional admission to the course is prerogative of the school.).

COURSE STRUCTURE AND DURATION

Course is 12 months duration and will be of 96 hrs imparted training programme covering theoretical and practical aspects of technology.

DIPLOMA

The candidates successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by school of Commerce and Business Management,Department of Commerce,PRIST University ,Thanjavur,Vallam.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (Institution Deemed to be U/s 3 of the UGC Act, 1956) THANJAVUR - 613 403.

DEAN
School of Commerce & Business Management Pennaiyah Ramajayam Institute of Science & Technology (Institution Deemed to be U/s 3 of the UGC Act, 1956) THANJAVUR - 613 403, TAMIL NADU

PRIST
UNIVERSITY



Pennalyah Ramajeyam Institute of Science & Technology (PRIST)
(u/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Pennalyah Ramajeyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

[illegible]

- The legal liability of an auditor

[illegible]

- Objectives of an auditor and his/her responsibility

[illegible]

- Audit evidence

[illegible]

- Aspects of audit work

[illegible]

- Planning the work and preparing the audit programme
- Review of accounting system and Internal Control

[illegible]

- Audit reports

EXAMINATION

There shall be an end of semester examination at the end of each course.

ELIGIBILITY CRITERIA FOR APPEARING IN THE FINAL EXAMINATION

Minimum Attendance - 80%

Minimum Internal Assessment Marks - 40%

- It will be fixed by the respective course teacher.
- Candidate must obtain at least 50% marks in theory and practical separately in internal

- assignment to be eligible for the annual university examination.
- Internal assessment (3 theory will be awarded as follows:

➢ Mid-semester test (two tests) = 10 marks
➢ Assignment/ Seminar/ Class test = 05 marks
➢ Attendance = 05 marks

Total = 20 marks

CRITERIA FOR A PASS IN THE SUBJECT

Minimum marks in theory - 45

SCHEME OF EXAMINATION:

Question of written examination - Five
Maximum marks 100

COURSE PROGRAMME OUTCOME:

- Demonstrate an understanding of the nature and scope of auditing and internal control.
- Show understanding and apply the ethical standards of the auditor.
- Explain the stages of audit and methods of gathering audit evidence.
- Show understanding of the skills to prepare different reports for audit purpose.

ELIGIBILITY CRITERIA:

Any graduate shall be eligible for the admission to the course which requires 10 years of school education and 2 years of higher secondary education in the relevant prerequisite of the course.

COURSE STRUCTURE AND DURATION

Course is 12 months duration and will be of 300 hrs supervised training programme covering theoretical and practical aspects of technology

CRITERIA FOR

The candidate successfully completing the course shall be awarded a certificate in the appropriate faculty of commerce and finance Management Department of Commerce, PRIST University Thanjavur, Tamilnadu.

Pennaiyah Ramaiayem Institute of Science & Technology (PRIST) (Institution Deemed to be University) U/s 3 of the UGC Act 1956 THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayem Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST UNIVERSITY

Academic year: 2021-2022

Course: DIPLOMA IN . EADERSHIP SKILL

Subject Code: 20PLS

AIMS: To emphasis Better performance than the Overal Leadership skill

Objectives:

Help students to develop essential skills to influence and motivate others

Increase emotional and social intelligence and improve thinking for effective leadership

Create and maintain an effective and productive team to work for the mission

Nurture a creative and entrepreneurial mindset

Make students understand the personal values and apply ethical principles in professional and social contexts

OUTCOME

1. Students will assess potential leadership philosophy, traits, skills, behaviors, and develop a leadership portfolio.

Students will exercise an understanding of the fundamental ways leadership is practiced in not-for-profit organizations.

2.Students will evaluate fundamental leadership practices relevant to contemporary organizations.

3. Students will enhance their writing skills by comparing and contrasting different leadership approach

UNIT-1

Understanding Leadership

Lecture, Readings, & Videos: Defining Leadership, Global Leadership Attributes, Profound Leadership.

UNIT-2

Recognizing Your Traits

Lecture, Readings, & Videos: Historical Leaders: What Traits Do These Leaders Possess? Leadership Studies

UNIT-3

Engaging People's Strength

Lecture, Readings, & Videos: Explore how strengths can make one a better leader. Understand the concept of strength. Describe the historical background of strengths. Install leaders tips. Examine how to identify strengths. Review necessary steps to develop strengths. Develop strengths based leadership practices.

UNIT-4

Understanding Philosophy and styles

Lecture, Readings, & Videos: Leadership Established Theory Natural Theory Y Leadership Styles Optimal Leadership Styles & Practices

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University) U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

DEAN

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST) U/s 3 of the UGC Act,1956 Deemed to be University Vallam, THANJAVUR – 613 403.

UNIT-5

Developing Leadership Skills

Lecture, Readings, & Videos: Understanding administrative skills and their use in practice; Understanding interpersonal skills and their use in practice; Understanding conceptual skills and their use in practice

Pennaiyah Ramajayam Institute of Science & Technology (PRIST) (U/s 3 of the UGC Act,1956) Deemed to be University Vallam, THANJAVUR-613 403

DEAN

REGISTRAR Pennaiyah Ramajayam Institute of Science & Technology (PRIST) (Institution Deemed to be University) U/s 3 of the UGC Act 1956 THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY

Course: CERTIFICATE IN GST

Subject Code: 2061GST

AIMS: To emphasis Better performance than the Overall GST

Objectives:

The Goods and Services Tax (GST) in India is to create a unified and simplified tax system by replacing multiple indirect taxes levied by the central and state governments with a single comprehensive tax.

OUTCOMES:

From all over study, I concluded that GST has certain positive impacts like GST will also help to build a transparent and corruption free tax administration. GST also has an options scheme of lower taxes for small businesses with turnover between INR 20 to 50 lakhs. It is called the composition scheme.

Unit –I

CGST/SGST - Important terms and definitions under Central Goods and Service Tax Act, 2017 and State Goods and Service Tax Act, 2017. Basic of GST, Meaning and scope of supply. Levy and collection of tax.

Unit – II

CGST/SGST - Time and Value of Supply of goods and / or services. Input Tax Credit, Transitional Provisions, Registration under CGST/SGST Act, Filing of Returns and Assessment, Payment of Tax including Payment of tax on reverse charge basis, Refund under the Act.

Unit – III

CGST/SGST - Maintenance of Accounts and Records, Composition scheme, Job work and its procedure, Various Exemptions under GST, Demand and recovery under GST, Miscellaneous provisions under GST.

Unit – IV

IGST - Scope of IGST, Important terms and definitions under Integrated Goods and Service Tax Act, 2017, Levy and collection of IGST, Principles for determining the place of supply and Place of supply of goods and services, Zero rated Supply.

Unit – V

Customs - Role of Customs in International Trade, Important terms & definitions under the Customs Act, 1962: Assessable Value, Baggage, Bill of entry, Dutiable Goods, Duty Exporter, Foreign going vessel, Aircraft goods, Import, Import Manifest, Importer, Prohibited Goods, Shipping Bill, Store, Bill of Lading, Export Manifest, Letter of Credit, Kind of Duties- Basic, auxiliary, additional or counter vailing, basis of levy- advalorem specific duties, Prohibition of Export and Import of Goods and Provisions regarding notified & specified goods, Import of Goods- Free import and Restricted import, Type of Import, Import of Cargo, Import of Personal Baggage, Imports of Stores.

Suggested readings:

Custom Act 1962 and Rules

Commercial's GST, Commercial law publisher (India) Pvt Ltd, New Delhi

Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(u/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR-613 403.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403.

PRIST UNIVERSITY

Course: CERTIFICATE IN BUSINESS ACCOUNTING & TAXATION

Subject Code: 2061BAT

AIMS: To emphasis Better performance in Business Accounting & Taxation **Objectives:** To understand the basic principles of accounts and its application in Business. (Theory & Problem)& To enable the students to know the provisions of income tax.

OUTCOMES:

- Identify and interpret accounting information to inform users and make decisions.
- Apply critical thinking skills by identifying and analysing accounting issues using relevant accounting frameworks.
- Ability to learn, Save and Invest. Importance of taxes and applicable taxes, Components, benefits of the given system, their policies, Eligibility and ability to acquire necessities, comforts and luxuries.
- This reduces cost consumption and therefore the ability to wash and save

UNIT -1

Introduction – Accounting concepts and conventions – Accounting Standards – Meaning - Double entry system – Journal, Ledger, Subsidiary books, Trial Balance- Bank Reconciliation Statement

UNIT -2

Final Accounts of sole traders with adjustment entries - Rectification of Errors.

UNIT- 3

Accounts of Non-profit organization – Bills of exchange – Average due date – Account Current.

UNIT-4

Profits and gains of business and profession – basis of charge – methods of accounting – deductions – disallowances. Computation of taxable income

UNIT -5

Capital gains – basis of charge – short and long term capital gains – Indexed cost of acquisition and improvement – exceptions – chargeability of short and long term capital gains – computation of taxable capital gains – income from other sources – interest on securities – deduction under Sec 80C – Introduction to direct taxes code.

Theory 25% Problem: 75%

Text and Reference Books

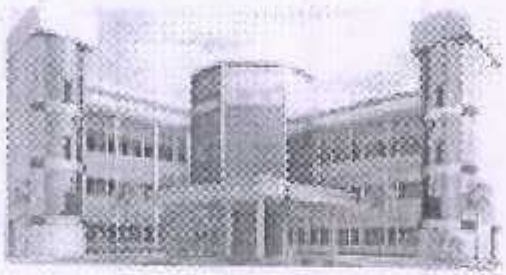
1. Student's Guide to Income Tax by Vinodh K. Singhania, Taxmann Publications, New Delhi
2. Income tax by T.T.Gour&Narang, Kalyani publishers, Chennai
3. Income Tax Law and Practice by A. Murthy – Vijay Nicole Imprints (P) Ltd. Chennai

Pennaiyah Ramaiyam Institute of Science & Technology (PRIST) (U/S 3 of the UGC Act 1956) Deemed to be University Vallam, THANJAVUR -613 403

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403

DEAN
School of Commerce
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, Tamil Nadu

PRIST UNIVERSITY



ADD -ON COURSES

CERTIFICATE COURSE IN BUSINESS ACCOUNTING AND TAXATION
CERTIFICATION IN GST
DIPLOMA COURSE IN LEADERSHIP SKILL
2021-2022



Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
Vallam, THANJAVUR - 613 403.

ABOUT UNIVERSITY:

PRIST University, Pennalyah Ramajayam Institutions made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added feathers to the PRIST crown.

DEPARTMENT OF MANAGEMENT

The department of commerce and business management was established in the year 2008. with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M.Phil and Ph.D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF-BIRTH _____
6. SEX(F/M) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinators, school of commerce and Business and Management, PRIST University Thanjavur, Vallam,-613403

APPLICATION MAY BE SEND TO
COURSE CO-ORDINATOR:
Dr.T.L.Jayashelan
Head of the department
PRIST University,Thanjavur,Thanjavur.

DEAN

tasks according to a schedule. Leadership is not just one skill but rather a combination of several different skills working together

IMPORTANCE OF LEADERSHIP SKILL

They are important skills to have because a good leader is able to bring out the best abilities in his/her team members and motivate them to work together in achieving a shared goal. A good leader is also organized and keeps the team on track and focused to avoid delays.



OBJECTIVES OF PROGRAM

Using a computer-based leadership simulation, participants will apply competencies and skills acquired in the leadership program, and understand the consequences on performance and reflect on the implications of daily decisions made as managers and leaders. The simulation is a tool for participants to more fully understand the implications and consequences of daily actions and decisions.

DURATION OF PROGRAM

90 Hours add on certificate course

PROGRAM OUTCOME

Apply leadership theory and practice to decision-making and actions as a manager2. Recognize the implications of leadership style and its impact on team and organization performance 3. Identify and critically assess assumptions that influence decisions and actions on management, leadership, teamwork and relationship building 4. Receive and integrate feedback on decision-making practices, conflict resolution skills, and teamwork behaviors with the support of a team-based coach.

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course .

CERTIFICATION:

The candidates successfully qualificating the course shall be awarded a certificate to that effect in the appropriate form by schoolof commerce and Business Management, Department

Pennalyah Ramajayam Institute of Science & Technology (PRIST) Deemed to be University u/s 3 of the UGC Act 1956 THANJAVUR

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Commerce & Business Management
Pennalyah Ramajayam Institute of Science & Technology (PRIST)

INTRODUCTION

Business Accounting and Taxation is a certification course that helps the candidates to develop multi-level skills and gain a deep understanding of accounting and taxation. This course covers industry-relevant topics like direct taxes, indirect taxes, financial reporting, etc.

IMPORTANCE OF BUSINESS ACCOUNTING AND TAXATION

Accounting plays an important role in running a business because it helps track income and expenditure and analyses actions, which helps investors, management, and stakeholders make business decisions

OBJECTIVES OF PROGRAM

Business Accounting and Taxation course aims to instill in students the fundamental understanding of Accounting concepts, payroll policies, taxation, and the integral specialized topics of Economics

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

PO 1 Build a strong foundation in accounting, management and business subjects

PO 2- Seek variety of career options in accounting, management and business related fields

PO 3- Equip with skills and knowledge to excel in their future careers

PO 4- Develop critical thinking skills in students

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course .

CERTIFICATION:

The candidates successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by school of commerce and Business Management, Department of Commerce, PRIST University ,Thanjavur,Vallam.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(u/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

DEAN
School of Commerce & Business Management
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

INTRODUCTION

Goods and Services (GST) tax is a "value-added tax" that is exacted upon certain domestically sold goods and services and is typically set by the highest levels of government

Customers paying a Goods and Services Tax will do so at the point of sale and will find it included within the total cost of the item itself. Sort of like an alternative form of a sales tax.

IMPORTANCE OF GST

The cascading effects of taxes are eliminated. As competitiveness improved across the markets, transaction costs were reduced. Due to easy tax compliance processes, conducting business improved. Due to the uniformity in tax rates and structures, corporations can make better business decisions and investments.



OBJECTIVES OF PROGRAM

This course is designed to enhance the economic literacy and understanding of basic economic concepts. Emphasis is on understanding of core economic principles and how they apply to a wide range of real-world issue. Upon completion, students can apply economic analysis to evaluate everyday problem.

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

To help the students form a clear idea of Managerial Economics. To enable the students, understand determination of price under different market forms. To enable the students, understand the situation of consumer and producer equilibrium. To describe the concept of inflation and its consequences in an economy. To illustrate the calculation of national income.

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course .

CERTIFICATION:

The candidates successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by schoolof commerce and Business Management ,Department of Commerce,PRIST University ,Thanjavur,Vallam.

REGISTRAR
Pennalyah Ramajeyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL

Pottiliyah Ramajeyam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC Act, 1956)
Deemed to be University

INTRODUCTION

Leadership skills are skills you use when organising other people to reach a shared goal. Whether you're in a management position or leading a project, leadership skills enable you to motivate others to complete tasks effectively.

Pennalyah Ramajeyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

PRIST UNIVERSITY

Academic year: 2021-2022
Course: Certificate course in Online Trading
Subject Code: 21610OT

AIM:

It allows investors to buy and sell financial instruments from the comfort of their homes or offices, offering convenience and flexibility.

OBJECTIVES:

- To familiarize the students to the concept of Online Trading
- To emphasis the concept of efficient market
- To understand the latest developments in online trading

OUTCOMES:

- Online trading often has lower brokerage fees and commissions compared to traditional offline trading methods.
- This can result in cost savings for investors.
- Online traders have access to real-time market information, research tools, and historical data.

UNIT-I

Primary Market

Initial Public Offer (IPO) – Introduction

UNIT-II

Secondary Market

Role and Functions of:

- Securities and Exchange Board of India (SEBI),
- Stock Exchanges,
- Stock Price Indices,

UNIT-III

Trading

- Logging on
- Log Off/Exit from the Application
- Invoking An Inquiry Screen
- Market Watch
- Previous Trades
- Outstanding Orders
- Activity Log
- Order Status
- Market Movement

HOD
Department of Commerce
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be U-
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAM.

DEAN
School of Commerce and Management
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403

PRIST UNIVERSITY

UNIT- IV

Methodology

- Fundamental Analysis
- Technical Analysis

UNIT- V

Strategies

- Investment Strategies
- Swing Trading Strategies
- Day Trading Strategies

REFERENCE:

Cadot, O., Didier, A.-C. and Fontagné, L. (2010), "North-South Standards Harmonization and International Trade", Centre for Economic Policy Research, London, Discussion Paper 8767. Cadot, O., Malouche, M. and Saez, S. (2012), Streamlining Non-Tariff Measures
A Toolkit for Policymakers, Washington, D.C., World Bank. Cafaggi, F. and Janczuk, A. (2008), "Private Regulation and Legal Integration:
The European Example", Business and Politics 12(3): 1-40. Carpenter, D. P. (2004), "Protection without Capture: Product Approval by a Politically Responsive, Learning Regulator", American Political Science Review 98(04): 613-631.
Casella, A. (2001), "Product Standards and International Trade: Harmonization through Private Coalitions?", Kyklos 54(2-3): 243-264. Cashore, B. (2002),
"Legitimacy and the Privatization of Environmental Governance: How Non-State Market-Driven (NSMD) Governance Systems Gain Rule-Making Authority", Governance: An International Journal of Policy, Administration,

HOD
Department of Commerce
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Commerce and Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

PRIST UNIVERSITY

Academic year: 2021-2022
Course: Certificate course in Knowledge Management
Subject Code: 216ICKM

Aims:
The purpose of the Knowledge Management process is to share perspectives, ideas, experience and information.

COURSE OBJECTIVES:

- To provide basic knowledge about the Growth and Role of knowledge management
- To provide knowledge on understanding managing human resources in organization
- and to provide an exposure on the knowledge management tools

OUTCOMES:

- Intellectual Skills.
- Cognitive Skills Development.
- Knowledge Sharing.
- Motor Skill Development.
- Individual's Personal Growth.

UNIT- I

Knowledge Economy – Technology and Knowledge Management – Knowledge Management Matrix – Knowledge Management Strategy – Prioritizing knowledge strategies – knowledge as a strategic asset.

UNIT -II

Knowledge Attributes – Fundamentals of knowledge formation – Tacit and Explicit knowledge Knowledge sourcing, abstraction, conversion and diffusion

UNIT- III

Knowledge Management and organizational learning, architecture – important considerations – collection and codification of knowledge – Repositories, structure and life cycle – Knowledge Management infrastructure – Knowledge Management applications – Collaborative platforms

UNIT- IV

Developing and sustaining knowledge culture – Knowledge culture enablers – implementing knowledge culture enhancement programs – Communities of practice – Developing organizational memory

HOD
Department of Commerce
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

DEAN
School of Commerce and Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

PRIST UNIVERSITY

UNIT -V

Knowledge Management tools, techniques Knowledge Management and measurements – Knowledge audit – Knowledge careers – Practical implementation of Knowledge management systems – Case studies

Book References:

1. Joseph M. Firestone and Mark W. McElroy, Buzzwords – Hierarchies, Key issues in the New Knowledge Management, KMCI Press
2. Daryl Morey & others Knowledge Management – Classic and contemporary works (Edited) Universities Press India Limited
3. Sheila Debowski, Knowledge Management, , John Wiley & Sons
4. Sudhir Warier, Knowledge Management, Vikas Publishing House Private Limited
5. Stuart Barnes Knowledge Management System-Theory and practice (Edited) Thomson Learning
6. Hot-Sapple Springer C W, Handbook on knowledge management (Edited

Web References:

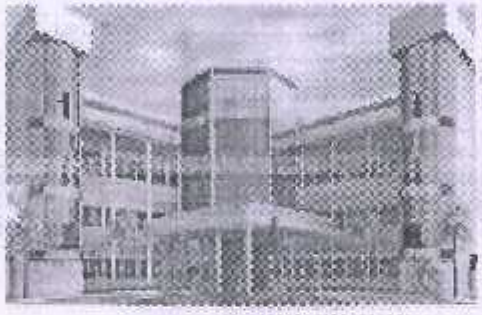
www.knowledge-management-tools.net
www.systems-thinking.org www.kmworld.com
www.knowledge-management-tools.net

HOD
Department of Commerce
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

DEAN
School of Commerce and Management
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403. TN.

PRIST UNIVERSITY



ADD -ON COURSES

Certificate course in Online Trading

2021-2022

HOD
Department of Commerce
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR -613 403.

ABOUT UNIVERSITY:

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology. College of Education, Research Institution, Polytechnic college are added features to the PRIST crown.

DEPARTMENT OF COMMERCE

The department of commerce and Business management was established in the year 2008, with commerce Department focused on research and education different courses like Undergraduate/Postgraduate/M. Phil and Ph. D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor. The faculty offers B.Com, BBA, M.Com, MBA and research programmers in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...

APPLICATION FORM

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF-BIRTH _____
6. SEX (F/M) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinators, school of commerce and Business and Management. PRIST University, vallam, Thanjavur - 613403.

APPLICATION MAY BE SEND TO COURSE CO- ORDINATOR:

Dr. T. J. Jayachelian
Head of the department
PRIST University, Thanjavur.

DEAN
School of Commerce and Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU



ADD - ON COURSES CERTIFICATE

COURSE IN
BUSINESS ACCOUNTING AND
TAXATION
CERTIFICATION IN GST
DIPLOMA COURSE
IN LEADERSHIP SKILL
2021-2022



ABOUT UNIVERSITY:

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added Feathers to the PRIST crown.

DEPARTMENT OF COMMERCE

The department of commerce and business management was established in the year 2008, with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M. Phil and Ph. D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor. The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF BIRTH _____
6. SEX(F/M) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person in the coordinators, school of commerce and Business and Management, PRIST University Thanjavur, Vallam-613403.

APPLICATION MAY BE SEND TO
COURSE CO-ORDINATOR:

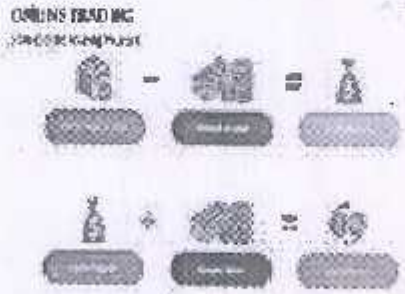
Dr.T.J.Jayashelan
Head of the department
PRIST University,Thanjavur,Thanjavur.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMILNADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

ADD -ON COURSES

Certificate course in Online Trading



INTRODUCTION

Online Trading is a method that facilitates buying and selling of financial instruments such as mutual funds, equities, bonds, Sovereign gold bonds, derivatives, stocks, ETFs and commodities through an electronic interface. Online Trading has simplified a complex process into a few clicks.

IMPORTANCE OF ONLINE TRADING

Traders need research and analytical skills to , through broad economic factors and day-to-day chart patterns that impact financial markets. The ability to focus and concentrate, particularly in a chaotic, fast-moving environment, is an underappreciated but crucial skill for traders.

OBJECTIVES OF PROGRAM

- Online trading allows you to trade independently, without a broker's interference
- Apart from reducing the overall trading cost, this also makes the trading hassle-free, making this service much more lucrative.
- An investor has greater control while using an online trading accoun

DURATION OF PROGRAM

45 Hours add-on certificate course

PROGRAM OUTCOME

PO1-With the help of online trading, you get complete control on your own portfolio hence, giving you greater control over your investments. PO2-Now, you can trade anytime during market hours and take decisions on your own without any interference from the broker.

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible

for the admission to the course.

CERTIFICATION:

The candidates successfully qualification

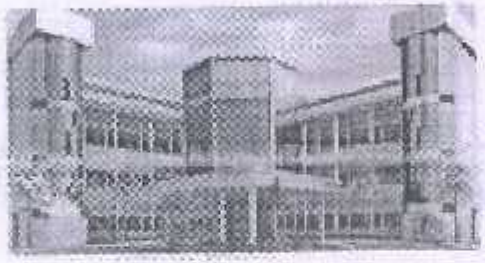
The course shall be awarded a certificate to that effect in the appropriate form by School of Commerce and Business Management, Department of Commerce, PRIST University, Thanjavur- Vallam.

HOD
Department of Commerce
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL

DEAN
School of Commerce and Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

PRIST UNIVERSITY



ADD-ON COURSES

Certificate course In Knowledge Management

2021-2022

ABOUT UNIVERSITY:

PRIST University, Ponnaiyah Ramajeyam institutions, made a foray into the Academic Domain, with the establishment of S-I Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic colleges are added feathers to the PRIST crown.

DEPARTMENT OF COMMERCE

The department of commerce and business management was established in the year 2008, with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M. Phil and Ph. D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor The faculty offers B.Com, BBA, M.Com, MBA and research programs in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME_____
3. DISCIPLINE_____
4. INSTITUTION NAME_____
5. DATE-OFBIRTH_____
6. SEX(M/F)_____
7. E-MAIL_____
8. MOBILE NO_____
9. ADDRESS_____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinator, school of commerce and Business and Management PRIST University Thanjavur, vallam-613403.

APPLICATION MAY BE SEND TO COURSE CO- ORDINATOR:

Dr. T. J. Jayashalini
Head of the department
PRIST University, Thanjavur.

HOD
Department of Commerce
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL ...

DEAN
School of Commerce and Management
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403.

PRIST UNIVERSITY

DEEMED TO BE UNIVERSITY

NAAC A++ GRADE

ADD-ON COURSES

Certificate course In Knowledge Management

2021-2022



INTRODUCTION

Knowledge management (KM) is the process of organizing, creating, using, and sharing collective knowledge within an organization. Successful knowledge management includes maintaining inform easy to access, like a wiki or employee intranet.

IMPORTANCE OF KNOWLEDGE MANAGEMENT

An effective knowledge management system streamlines company knowledge while making it accessible to everyone. Knowledge management means that employees can quickly access best practices, information on past projects and other key information that informs their work. 15 Nov 2021

OBJECTIVES OF PROGRAM

The purpose of the Knowledge Management process is to share perspectives, ideas, experience and information; to ensure that these are available in the right place at the right time to enable informed decisions, and to improve efficiency by reducing the need to redi cover knowledge..

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

PO-1To enable employees to mutually collaborate for effective & quick problem solving.

PO-2To create & share knowledge as a product through systemic data analysis, to be able to further acquire core knowledge and enhance governance.

ELIGIBILITY CRITERIA AND STRUCTURE

Any graduate shall be eligible for the admission to the course.

CERTIFICATION:

The candidates successfully qualification

The course shall be awarded a certificate to that effect in the appropriate form by School of Commerce and Business Management, Department of Commerce, PRIST University, Thanjavur-Vallam.

HOD
Department of Commerce
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN
School of Commerce and Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR 613 403 - TAMIL NADU

: 2021-2022

SCHOOL OF COMMERCE AND MANAGEMENT

DEPARTMENT OF MANAGEMENT

PRIST/C&M/21-22/3.2

This is to inform all Management and commerce students that the value added diploma and certificate courses classes for the academic year 2021-2022. Hence requesting all registered students to attend the classes without fails.

COURSE OFFERED:

- Certificate course in Personality development
- Diploma course in Tourism management
- Certificate course in Management of organization and people
- Certificate course in Business writing
- Certificate course in Wealth management
- Certificate course in Business journalism
- Certificate course in Entrepreneurs and innovation

HOD

Dean

Copy To:

Hon'ble Vice Chancellor (for your kind information)
Registrar
Registrar office
Dean
Department file

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be U/
u/s 3 of the UGC Act, 195
THANJAVUR - 613 403, TAMIL

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 - TAMIL NADU

CERTIFICATE COURSES

PERSONALITY DEVELOPMENT

COURSE OBJECTIVES:

The course intents to develop talent, facilitate employability enabling the incumbent to excel and sustain in a highly competitive world of business .The programme aims to bring about personality development with regard to the different behavioural dimensions that have far reaching significance in the direction of organisational effectiveness .To make students know about self -awareness , life skills, soft skill, need for personal development etc.

COURSE OUTCOMES:

The students will be able to understand ,analyse develop and exhibit accurate sense of self, Think critically, demonstrate knowledge of personal beliefs and values and a commitment to continuing personal reflection and reassessment .learn to balance confidence with humility and overcome problems associated with personality.

UNIT I

Introduction to Personality Development

The concept of personality - Dimensions of personality - Theories of Freud & Erickson-Significance of personality development The concept of success and failure. What is success? - Hurdles in achieving success - Overcoming hurdles - Factors responsible for success - What is failure - Causes of failure.

SWOT analysis.

UNIT II

Attitude & Motivation

Attitude - Concept - Significance Factors affecting attitudes - Positive attitude - Advantages -Negative attitude- Disadvantages - Ways to develop positive attitude - Differences between personalities having positive and negative attitude. Concept of motivation - Significance - Internal and external motives - Importance of self- motivation- Factors leading to de-motivation

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, THANJAVUR - 613 403.

DEAN

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Ur
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403. TAMIL

UNIT III

Self-esteem

Term self-esteem - Symptoms - Advantages - Do's and Don'ts to develop positive self-esteem – Low self esteem- Symptoms - Personality having low self esteem - Positive and negative self esteem. Interpersonal Relationships – Defining the difference between aggressive, submissive and assertive behaviours - Lateral Thinking.

UNIT IV

Other Aspects of Personality Development

Body language - Problem-solving - Conflict and Stress Management - Decision-making skills -

Leadership and qualities of a successful leader – Character building -Team-work – Time management -

Work ethics - Good manners and etiquette.

UNIT V

Employability Quotient

Resume building- The art of participating in Group Discussion – Facing the Personal (HR & Technical)

Interview -Frequently Asked Questions - Psychometric Analysis - Mock Interview Sessions.

Text Books:

1. Hurlock, E.B (2006). Personality Development, 28th Reprint. New Delhi: Tata McGraw Hill.

2. Stephen P. Robbins and Timothy A. Judge(2014), *Organizational Behavior 16th Edition* Prentice Hall.

Reference Books:

1. Andrews, Sudhir. How to Succeed at Interviews. 21st (rep.) New Delhi. Tata McGraw-Hill 1988.

2. Heller, Robert.Effective leadership. Essential Manager series. Dk Publishing, 2002

3. Hindle, Tim. Reducing Stress. Essential Manager series. Dk Publishing, 2003

4. Lucas, Stephen. Art of Public Speaking New Delhi. Tata - Mc-Graw Hill, 2001

5. Mile, D.J Power of positive thinking. Delhi. Rohan Book Company, (2004).

6. Pravesh Kumar All about Self- Motivation. New Delhi. Goodwill Publishing House. 2005.

7. Smith, B . Body Language. Delhi: Rohan Book Company, 2004

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC act 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

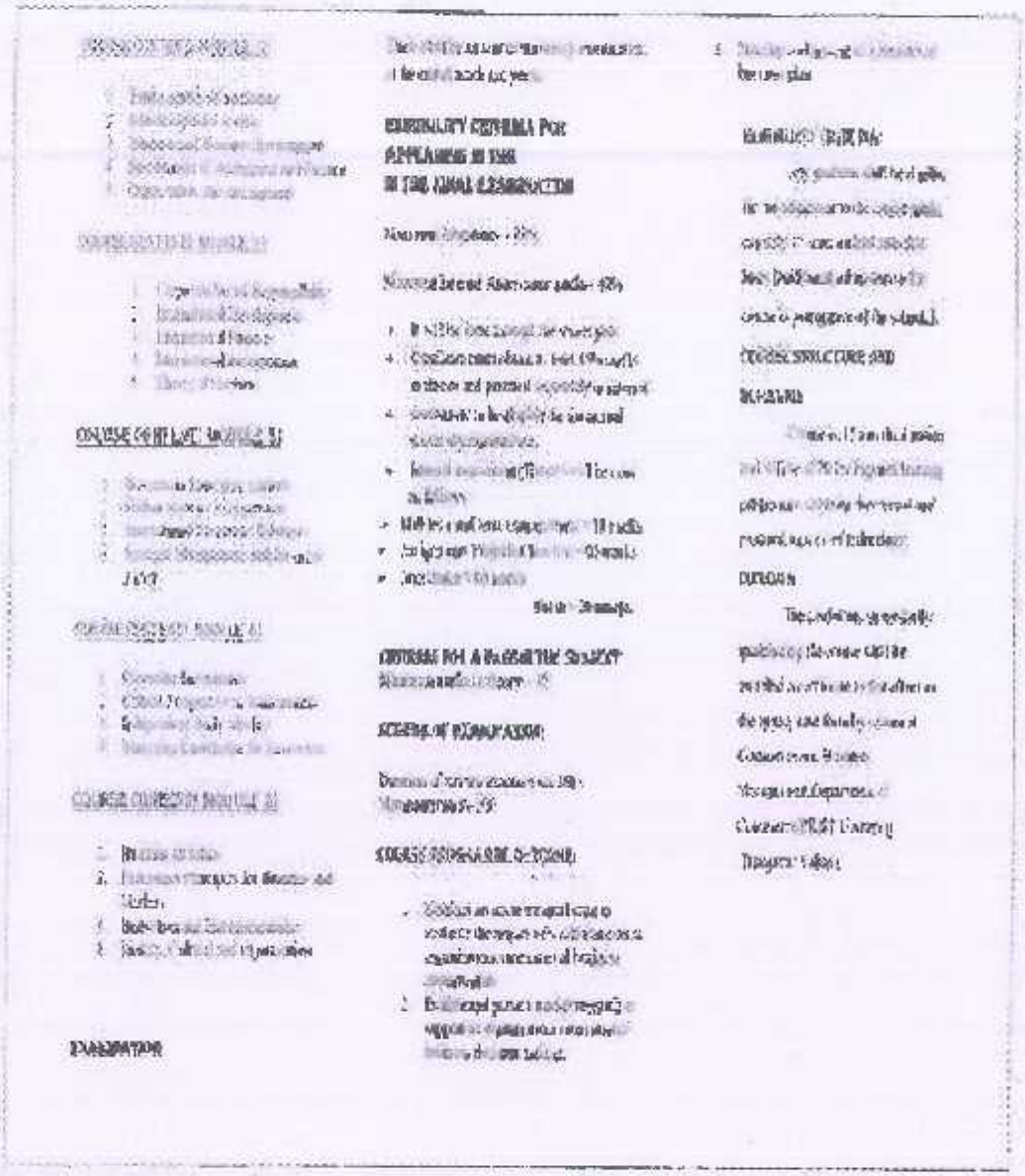
PRIST UNIVERSITY



Ponnaiyah Ramaiyam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC Act 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramaiyam Institute of
Science & Technology
(Institution Deemed to
U/s 3 of the
THANJAVUR -

DEAN
School of Commerce &
Ponnaiyah Ramaiyam Institute of
Science & Technology (PRIST)



Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(U/s 3 of the UGC Act 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Un
U/s 3 of the UGC Act
THANJAVUR - 613 403.

BEAN
School of Commerce & Allied Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(U/s 3 of the UGC Act 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 • TAMIL NADU

DIPLOMA COURSE
Tourism Management

COURSE OBJECTIVE:

To offer wide exposure to the students to handle issues in tourism related businesses professionally.

To develop students to be a explorer.

COURSE OUTCOME:

CO1: Understand the concept of tourism, basic about tourism industry.

CO2: access and appropriately disseminate accurate and detailed product knowledge and destination information about different types of tourist.

CO3: develop ongoing professional development strategies and plans to enhance industry knowledge and leadership skills for tourism industry sectors.

CO4: Evaluate about the different stakeholders and relevant agencies in the tourism industry and how these stakeholder plays their functions.

Unit- I Tourism; an overview: Elements, Nature and Characteristics - Typology of Tourism - Classification of Tourists - Tourism network - Interdisciplinary approaches to tourism - Historical Development of Tourism - Major motivations and deterrents to travel.

Unit-II Tourism Industry: Structure and Components: Attractions - Accommodation - Activities - Transportation - F&B - Shopping - Entertainment - Infrastructure and Hospitality - Emerging areas of tourism - Rural, Eco, Medical, MICE, Literary, Indigenous, Wellness, Film, Golf, etc., - Ideals of Responsible Tourism - Alternate Tourism - Case Studies on International Tourism.

Unit-III Tourism Impacts - Tourism Area Life Cycle (TALC) - Doxey's Index - Demonstration Effect - Push and Pull Theory - Tourism System - Mathieson and Wall Model & Leiper's Model - Stanley Plog's Model of Destination Preferences - Demand and Supply in tourism - Tourism regulations - Present trends in Domestic and Global tourism - MNC's in Tourism Industry.

Unit-IV Tourism Organizations: Role and Functions of World Tourism Organization (WTO), Pacific Asia Travel Association(PATA) , World Tourism &Travel Council (WTTC) – Ministry of Tourism, Govt. of India, ITDC, Department of Tourism, Govt. of Puducherry, FHRAI, IHA, IATA, TAAI, IATO.

TEXT BOOKS

1. Charles R. Goeldner & Brent Ritchie, J.R. (2006), Tourism, Principles, Practices, Philosophies, John Wiley and Sons, New Jersey.

2. Bhatia A.K. (2001), International Tourism Management, Sterling Publishers, New Delhi.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

DEAN
Faculty of Commerce & Business Management
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403

INTRODUCTION

[illegible]

IMPORTANCE OF TOURISM/HOSPITALITY

[illegible]



OBJECTIVES OF PROGRAM

- Provide [illegible]

- [illegible]
- To make aware and develop the unique places of tourist interest, parks, lakes, museums, beaches and recreational areas, etc.
- To promote tourism by all possible means and take up such other incidental and ancillary activities as the growth of the industry may call for and undertake or assist institutions, individuals, companies, bodies etc. for any purpose conducive to the growth of tourism, etc.

ADMISSION PROCESS

[illegible] level of Qualification course

PROGRAM OUTCOME:

- To develop entrepreneurial skills among the students to develop personality development.
- To provide avenues for seeking suitable careers in various industry.
- To enhance communication practices for their implementations locally and globally.
- To develop quality, technical, communication and analytical skills.
- To assess the leadership, supervisory and human relation skills in the hospitality industry.
- To Provide skills and experiences relating to the core business and good culture of [illegible] organizational setup.
- Develop strategic leadership skills and critical analysis in solving ethical, [illegible] challenges, understanding conflicts.
- To demonstrate professional behavior and responsibilities in customer service.
- Develop and evaluate basic marketing and planning activities.
- Apply principles of sustainability in the practice of management in the hospitality and tourism context.
- Determine the significance and nature of the Hospitality industry.
- Develop leadership skills and human relations skills.
- To recognize the challenges and opportunities to manage efficiently and people in a diverse environment.

ELIGIBILITY CRITERIA AND FEE STRUCTURE:

Any graduate shall be eligible for the admission to the course.

CERTIFICATION:

The candidates successfully [illegible] shall be awarded certificate by the office of the appropriate forms by school of commerce and Business Management, Department of Business Management, PRIST University, [illegible] Thanjavur.

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(U/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

DEAN
School of Commerce & Business Management
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
University Deemed to be University U/s 3 of the UGC Act, 1956
VALLAM, THANJAVUR - 613 403. TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY

Academic year: 2021-2022

COURSE: DIPLOMA IN MANAGEMENT OF ORGANIZATION AND PEOPLE

Subject Code: 21DMOP

Aims: to equip students to take performance from the overall management of organization and people

Objective :

- The course is intended to make the participating officers aware of the fundamentals of management and their significance in managing the organization
- It also aims to make the officers know what affects human (employee) behaviour at work so that they can make their subordinates to work more and better

OUTCOMES:

- Organizational outcome is the impact upon an organization that is solely or partially attributable to an accident (e.g. adverse publicity or additional use of resources). Organizational outcome to improve the management services of growth for

Unit - I

Management: Meaning and Definition, Scope, Importance, Principles, Functions of Management, Social Responsibilities of Management, Evolution of Management Thought.

Unit - II

O.B.: Introduction: Definition, Nature and Perspectives, Contributing Disciplines to O.B. and Process Models of O.B.

Unit - III

Individual Perspective: Personality, Attitudes, Values and Job Satisfaction, Learning, Motivation

Unit - IV:

Group Dynamics: Group Behaviour, Organizational Conflicts, Job Stress, Communication, Leadership, Power and Politics

Unit - V

Organizational Perspectives: Organizational Structure, Organizational Culture, Organizational Effectiveness and Development, Quality of Working Life (QWL), International Organizational Behaviour

Recommended Books

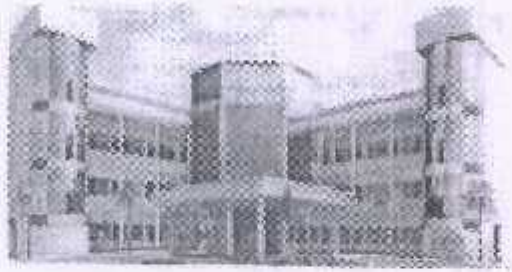
1. Govindarajan & Natarajan: Principles of Management, Prentice-Hall of India Private Limited, New Delhi
2. Stoner, Freeman & Gilbert, Jr.: Management, Prentice-Hall of India Private Limited, New Delhi
3. Tripathi & Reddy: Principles of Management, Tata McGraw-Hill Publishing, New Delhi

DEAN
School of Commerce & Business Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU

Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(u/s 3 of the UGC Act, 1956)
Deemed to be University
Vallam, THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST UNIVERSITY



ADD -ON COURSES

CERTIFICATE COURSE IN
ENTREPRENEURSHIP AND INNOVATION
BUSINESS WRITING
DIPLOMA COURSE
IN
MANAGEMENT OF ORGANIZATION AND PEOPLE
2021-2022



Pennalyah Ramajayam Institute of Science & Technology (PRIST)
u/s 3 of the UGC Act, 1956
Deemed to be University
Vallam, THANJAVUR-613 403.

ABOUT UNIVERSITY:

PRIST University, Pennalyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added feathers to the PRIST crown

DEPARTMENT OF MANAGEMENT

The department of commerce and business management was established in the year 2006, with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M.Phil and Ph.D programs offered. in this department there are 19 faculty members (Professor, Associate and Assistant Professor The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF-BIRTH _____
6. SEX(F/M) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinators, school of commerce and Business and Management. PRIST University Thanjavur, vallam-613403

APPLICATION MAY BE SEND TO
COURSE CO-ORDINATOR:
Dr.T.J.Jayashalan
Head of the department
PRIST University,Thanjavur.Thanjavur.

DEAN
School of Commerce, Business Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

INTRODUCTION

The Managing People in Organizations Department helps managers understand the interplay between management action.

The Department focuses its teaching and research on the creative perspectives in the fields of organizational dynamics.

IMPORTANCE OF MANAGEMENT OF ORGANIZATION OF PEOPLE

- Achieving goals: Management helps the organisation in achieving its goals. The role of a manager is to provide common guidance and direction to the individual efforts for the fulfillment of organisational goals.
- Increasing the efficiency: Management helps in increasing the efficiency of the business by increasing productivity through efficient planning, organising, controlling and directing.
- Helps in creating a dynamic organisation: Management helps in providing the required impetus for an organisation to transition from one phase of development to another and also in adjusting to the changing dynamics of the business environment.
- Helps in achieving individual objectives: Management helps in guiding the individuals towards attaining personal objectives, which has a direct impact on attaining the organisational objectives.
- Development of society: By developing the organisation, management helps in its growth. A developed organisation has some moral responsibilities towards society and it does so by creating employment opportunities, providing good quality products and services.



OBJECTIVES OF PROGRAM

- Describe and implement different theories and philosophies to manage people at work.
- Understand how individuals and teams work in an organisation.
- Examining individuals' personality and behaviours to resulting in better management of people.

DURATION OF PROGRAM

90 Hours add on certificate course

PROGRAM OUTCOME

- understand what is meant by management and managerial effectiveness
- identify the roles which are fulfilled while working as a manager
- identify managerial activities that contribute to managerial effectiveness
- identify a cause of stress in managerial life from a range possible mismatches between capabilities and role requirements
- manager tension and [illegible]

Pennalyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Vallam, THANJAVUR - 613 403

- understand time pressures and the need for time management.

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course.

CERTIFICATION:

The candidates successfully qualifying the course shall be awarded a certificate to that effect in the appropriate form by school of commerce and Business Management Department of Commerce, PRIST University, Thanjavur, Vallam.

REGISTRAR
Pennalyah Ramajayam Institute
Science & Technology (PRIST
(Institution Deemed to be Univ
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TA..

HEAD
School of Commerce & Business Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

CERTIFICATE COURSE IN BUSINESS WRITING

Subject Code: 19ENRM

AIMS: To emphasis better performance from the overall Business writing

Objectives:

- After successfully completing this week's activities, you should be able to Apply knowledge of sentence grammar to produce effective, correct, and rhetorically appropriate sentence constructions.
- Identify personal areas for improvement in common grammar, punctuation, and syntax errors.

OUTCOMES:

- The ability to compile the writing in a logical sequence. A guide to help recognize and eliminate common errors in business writing
- The ability to focus on the main purpose of the communication. The skills to maintain clarity in preparing business communication.

UNIT-I

Business Writing Fundamentals

- What is business English?
- Selective attention and presentation
- Sentence Context

UNIT-2

Genres of Office Communication

- You-attitude and the rhetorical situation
- Basic document design

UNIT-3

Workplace Communication Case Study: Research Set-up

- Proposals in business writing
- Ethics in professional research

UNIT-4

Workplace Communication Case Study: Written Report

- Features, purposes, and design of short reports

UNIT-5

- Short Reports: Features, Purposes, and Design prerecorded/mini lecture

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TN.

Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)

DEAN
School of Commerce & Business Management
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)

PRIST UNIVERSITY

Academic year: 2021-2022
Course: certificate course in wealth management
Subject Code: 2260WM

AIM: To emphasis Better performance in wealth management

OBJECTIVES:

- The objective is to provide students with a conceptual framework of Event Management, Event Services, Conducting Event and Managing Public Relations.
- To make the students aware about the different events.

OUTCOMES:

- To learn the concepts related to various events.
- Awareness on the process of conducting events.
- Planning and Budgeting of the events.

Wealth Management

Unit I:

Introduction to Wealth Management

Meaning of Wealth Management, Scope, Process and Needs of Wealth Management; Wealth Manager- Meaning, Duties of Wealth Manager.

Unit II:
Insurance Planning

Meaning, Basic Principles of Insurance, Functions and Characteristics, Different Types of Insurance Policies.

Unit III:
Investment Planning

Investment – Meaning, Types of Investment, Risks related to investments, Features and importance of Investment, Investment alternatives.

Unit IV:
Retirement Planning

Understanding of Different Salary Components, Introduction to Retirement Planning, Purpose and Need of Retirement Planning, Retirement Benefits plans.

UnitV:
Tax Savings Schemes

Tax saving schemes – Meaning and concepts, Importance and benefits of tax saving, Various Income Tax Savings Schemes.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

HOD
Department of Business Management
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
THANJAVUR-613 403.

DEAN
School of Commerce and Management
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
THANJAVUR-613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC A++ ACCREDITED



ADD –ON COURSES

CERTIFICATE COURSE IN

WEALTH MANAGEMENT

2021-2022

HOD
Department of Business Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR -613 403.

ABOUT UNIVERSITY:

PRIST University, Pennalyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added features to the PRIST group.

DEPARTMENT OF MANAGEMENT

The department of commerce and business management was established in the year 2008, with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M.Phil and Ph. D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF BIRTH _____
6. SEX(M/F) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinator, school of commerce and Business and Management PRIST University Thanjavur, vallam,-613403.

APPLICATION MAY BE SEND TO COURSE CO-ORDINATOR:
Dr.T.J.Jayasudan
Head of the department
PRIST University, Thanjavur, Thiruvarur.

DEAN
School of Commerce and Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)

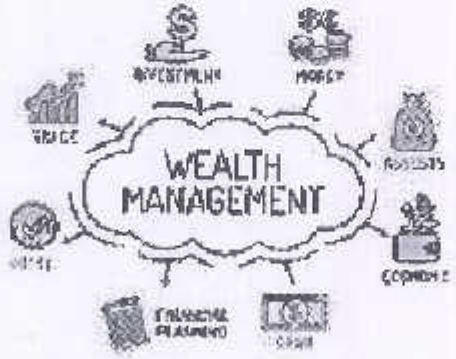
PRIST
DEEMED TO BE UNIVERSITY

ADD –ON COURSES

CERTIFICATE COURSE IN

WEALTH MANAGEMENT

2021-2021



INTRODUCTION

Introduction. Wealth management is a branch of financial services dealing with the investment needs of affluent clients. These are specialised advisory services catering to the investment management needs of affluent clients.

IMPORTANCE OF WEALTH MANAGEMENT

Help you grow and protect your wealth while minimizing risk. Set and develop strategies to meet your financial goals. Manage your investments based on your risk tolerance and time horizon. Use tax-efficient strategies to reduce the impact of local, state, and federal taxes over time.

OBJECTIVES OF PROGRAM

Wealth planning is about creating unique goals for your financial life. At the end of the day, everyone has different priorities. Some prioritize their retirement, others prioritize their legacy planning, others their investments, others their taxes, and the list goes on and on.

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

PO 1 To learn the concepts related to various events.

PO2- Awareness on the process of conducting events.

PO3 -Planning and Budgeting of the events.

PO 4- Develop critical thinking skills in students

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course.

CERTIFICATION:

The candidates successfully qualification

The course shall be awarded a certificate to that effect in the appropriate form by School of Commerce and Business Management, Department of Commerce. PRIST University, Thanjavur- Vallam.

HOD
Department of Business Management
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403.

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN
School of Commerce and Management
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403.

PRIST UNIVERSITY

Academic year: 2021-2022

Course- Certificate Course in Business Journalism

Subject Code: 2260B3

AIMS: To emphasis Better performance in Business Journalism

COURSE OBJECTIVES

- To help students understand the intricacies of business journalism.
- To familiarize them with financial concepts and economic issues.
- To train students in the techniques of business reporting.

OUTCOMES:

- Students will be able to develop an appropriate portfolio for a given investor and market conditions.
- Students will be able to use adjusted financial statements to produce a sound valuation of a company.

UNIT I

Basics of business and economic reporting

a. Different types of stories: Analytical, news, in depth, interviews and data (with examples);
b. Where and how to get stories (press conferences, meetings, analyst con-calls),
c. Building and maintaining sources;
d. Connecting with the PR agencies and Corp Communications team;

UNIT II

Numbers are your best friend - studying companies' financial statements

a. Understand the basic components of financial statements - Balance sheet (Assets & liabilities), Profit & loss statement (Income & expenditure), Cash flows, Notes to accounts.
b. Difference between consolidated / standalone financial statements;
c. Reporting of financial statements under various standards (India - Indian GAAP, International – US GAAP / IFRS);
d. Key financial metrics typically used from a business journalism perspective with few exam

UNIT III

Covering specific sectors – automobile, technology and telecommunications, finance and insurance, education, health, transportation and logistics, infrastructure and power

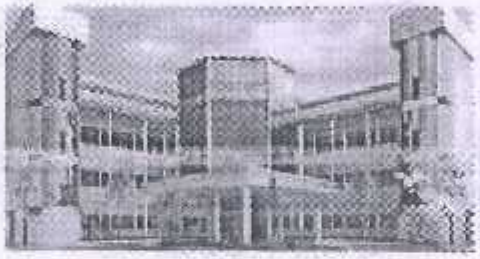
a. Key industries that are considered as growth drivers of Indian economy;
b. Industry analysis. Reading of various reports published by industry analysts through primary research. Insights into growth drivers for each industry;
c. Understanding the dynamics of macro-economic factors that can influence each sector (with a cursory review; to be taken in detail during the session on covering the broad economy;

REGISTRAR
Ramajayam Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

HOD
Department of Business Management
Ramajayam Ramajayam Institute of Science & Technology (PRIST)
THANJAVUR - 613 403

DEAN
School of Commerce and Management
Ramajayam Ramajayam Institute of Science & Technology (PRIST)
THANJAVUR - 613 403

PRIST
UNIVERSITY



ADD –ON COURSES

CERTIFICATE COURSE IN BUSINESS JOURNALISM

2021-2022

HOD
Department of Business Management
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR -613 403.

ABOUT UNIVERSITY:

PRIST University, Pannaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, commerce and business management College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added feathers to the PRIST crown.

DEPARTMENT OF MANAGEMENT

The department of commerce and business management was established in the year 2008. with commerce Dept focused on research and education different courses like Undergraduate/Postgraduate/M.Phil. and Ph.D programs offered. In this department there are 19 faculty members (Professor, Associate and Assistant Professor The faculty offers B.Com, BBA, M.Com, MBA and research programmes in Accountancy, Finance, Business administration, Banking & Business Economics, Human Resource Management, Marketing Management, Retail Management, Family Business & Entrepreneurship etc.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

APPLICATION FORM:
APPLICATION FORM:

1. FULL NAME _____
2. PROGRAMME _____
3. DISCIPLINE _____
4. INSTITUTION NAME _____
5. DATE-OF-BIRTH _____
6. SEX(M/F) _____
7. E-MAIL _____
8. MOBILE NO _____
9. ADDRESS _____

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your application form in person to the coordinators, school of commerce and Business and Management, PRIST University Thanjavur, vallam,-613403.

APPLICATION MAY BE SEND TO COURSE CO-ORDINATOR:
Dr.T.J.Jayasholan
Head of the department
PRIST University, Thanjavur, Thanjavur

DEAN
School of Commerce and Management
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

ADD –ON COURSES

CERTIFICATE COURSE IN BUSINESS JOURNALISM

2021-2022



HOD
Department of Business Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
THANJAVUR-613 403.

INTRODUCTION

Business journalism refers to reporting, analyzing, and distributing information relating to business and economic matters. Sometimes referred to as financial journalism, journalism includes everything from personal finance news to the latest public interest stories concern

IMPORTANCE OF BUSINESS JOURNALISM:

The best journalism informs about events, issues, and people that impact society or affect daily life. In a democratic society, journalism takes on the additional role of ensuring that citizens have the information they need to understand their government and vote in their best interests.

OBJECTIVES OF PROGRAM

Journalists who work in this branch are classed as "business journalists". Their main task is to gather information about current events as they related to business. They may also cover processes, trends, consequences, and important people, in business and disseminate their work through all types of mass media.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

PO-1 This course covers all essential topics that will enhance the knowledge of students in business journalism .

PO-2 It covers topics related to the basics of information their role and structure, different kinds of Schemes and their features

PO-3 This course discusses the various services offered to present and prospective investors

ELIGIBILITY CRITERIA AND STRUCTURE

Any graduate shall be eligible for the admission to the course.

CERTIFICATION:

The candidates successfully qualification

The course shall be awarded a certificate to that effect in the appropriate form by School of Commerce and Business Management, Department of Commerce, PRIST University, Thanjavur-Vallam.

DEAN
School of Commerce and Management
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)

PRIST UNIVERSITY

COURSE: CERTIFICATES IN ENTREPRENEURSHIP & INNOVATION

Subject Code: 256063

AIMS: To emphasis better performance than the overall entrepreneurship & Innovation.

Objectives:
To enable the students to understand the conceptual and applied knowledge about Entrepreneurship.

OUTCOMES:

- Business success is the outcome of an entrepreneur starting a business endeavour through to profitability and sustainability.
- The success of entrepreneurship paves the ways which have realized small and startup businesses and industries for the benefit of the industry as a whole.

Unit – I
Entrepreneurship – Definition, Concept, Nature, Characteristics, functions, types and phases of EDP. Development of women and rural entrepreneurs – Women Oriented schemes.

Unit – II
The startup process: Project identification – selection of the project – project formulation and evaluation – feasibility analysis, Project Report.

Unit – III
Institutions in the development of entrepreneurs – DIC, SIDO, NSIC, MSME-DI – SSIC, SIDCO – ITCOT, IK – KVIC.

Unit – IV
Institutions finance to entrepreneurs, IFCI, SFC, TIIC, LIC and GIC, SFC(T) – SIDBI, Commercial banks – Venture capital.

Unit – V
Incentives and subsidies – Subsidised services – seed capital assistance – Taxation benefits – SSI.
Role of entrepreneur in export promotion and import substitutions.

Text and Reference Books
1. Dynamics of Entrepreneurial Development by Vasant Desai – Himalaya Publishing House, New Delhi.
2. Entrepreneurship & Small Business Management by D.K. Singhania, Dr. S.S. Khanka, S. Chand & Sons, New Delhi.
3. Fundamentals of Entrepreneurship and Small Business by Rajiv Arora & S.K. Sood, Kalyani Publishers, Chennai.
4. Entrepreneurial Development by Dr.S.S. Khanka – S.Chand& Co. New Delhi.
5. Entrepreneurial Development by Dr. P. Saravanavel, Learntech Press Trichy.
6. Entrepreneurial Development by Dr S.G. Bhanushali, Himalaya Publishing House, New

Pennalyah Ramajayam Institute of Science & Technology (PRIST) (U/s 3 of the UGC Act, 1956) Deemed to be University Vallam, THANJAVUR - 613 403.

DEAN
School of Commerce & Business Management, Pennalyah Ramajayam Institute of Science & Technology (PRIST) (Institution Deemed to be University) U/s 3 of the UGC Act, 1956 THANJAVUR - 613 403, TAMIL NADU.

REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

INTRODUCTION

Innovation and entrepreneurship are two different concepts having entirely different meanings. However, there is a strong relationship between innovation and entrepreneurship which sometimes causes confusion.

The main difference between innovation and entrepreneurship is that innovation involves introducing something new. This can be a new business model, product, idea, or service. On the other hand, entrepreneurship involves turning a great idea into a business opportunity.

IMPORTANCE OF ENTREPRENEURSHIP AND INNOVATION

Developing a novel method of producing a good or a solution demonstrates the significance of innovation in entrepreneurship. To meet the constantly shifting needs of its customers, a service sector might grow by offering a different kind of service. The use of hyproducts and raw materials allows producers to create new goods.

OBJECTIVES OF PROGRAM

The objectives of entrepreneurship development programmes are to increase the knowledge and skill of existing entrepreneurs and encourage others to become one

DURATION OF PROGRAM

45 Hours add on certificate course

PROGRAM OUTCOME

- will have generated innovation/business ideas
- understand the difference between low and high potential ideas
- prepare an inventory of resources at hand
- identify market and customer segments
- learn techniques to test and prove solutions
- identify team roles and responsibilities
- prepare an idea presentation and solution video
- navigate in the startup ecosystem
- make judgment about financing options

ELIGIBILITY CRITERIA AND FEE STRUCTURE

Any graduate shall be eligible for the admission to the course

CERTIFICATION:

The candidates successfully qualificating the course shall be awarded a certificate to that effect in the appropriate form by school of commerce and Business Management,Department of Commerce,PRIST University ,Thanjavur,Vallam.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
U/s 3 of the UGC Act.1956
Deemed to be University
Vallam, THANJAVUR - 613 403.

DEAN
School of Commerce & Business Management
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY Date: 28.07.2021

CIRCULAR

This is to inform all students that the value added programme classes for academic year 2021-2022 semester IV will be commenced from 02.07.2021. Hence requesting all the registered students to attend the classes without fail

Branch name	Name of the course	Course offered
Biotechnology	CERTIFICATE COURSE ON AQUACULTURE TECHNOLOGY	Biotechnology Mathematic Computer Science Computer Application

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Pnst Deemed to be University, Thanjavur

Dean

Dean of Arts and Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

APPLICATION Format

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Reference No. .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No. .....
9. Permanent Address .....

Signature of the Applicant

SUBMISSION OF APPLICATION FORM

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

APPLICATION MAY BE SENT TO

The Co-Ordinator

The Head
Department of Biotechnology
PRIST University, Vallam
Email: prist@gmail.com

ABOUT THE UNIVERSITY

PRIST - Deemed to be University (Pennalyah Ramajayam Institute of Science and Technology), is a forty fifth Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1980. Over years, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added features to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses rich in Proficiency. Today, Kumbakonam, Chennai and Madurai, the Academic cocktail extends right from school education up to the level of the Ph.D. Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management and Technology etc.

FACILITIES AVAILABLE

The University is blessed to an infrastructure, ended having building with state of art equipment, excellent Laboratories and infrastructure to help complete the course. Majority of scientist have been acting as coordinating the research projects. Computer Library with internet facilities for students, Hostel facilities, Bank, canteen, Sports complex etc.

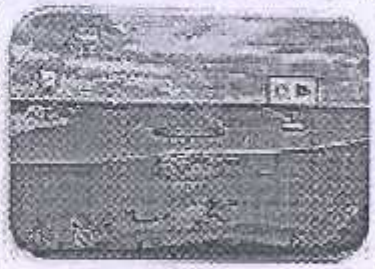
DEPARTMENT OF LIFE SCIENCE

Life science course is very recent where one get in touch and know about all the major areas of biotechnological sciences.

The Microbiology/Biotechnology/Biochemistry is flanking on some major areas like genetics, biochemistry, cell biology, molecular biology. So this course will provide much future trend on fermented products.

ADD-ON COURSES, B.Sc PROGRAMME
CERTIFICATE COURSE ON AQUACULTURE TECHNOLOGY

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU



2021 - 22

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
PRIST Deemed to be UNIVERSITY
VALLAM, THANJAVUR – 613 403

ABOUT FACULTY OF LIFE SCIENCE-BIOTECHNOLOGY

The department of Life Science was established in the year 2008, with Biotechnology, Biochemistry and Microbiology. Department focused on research and education different courses like Undergraduate (UG) and Post Graduate (PG) programs offered. In the department there are 10 faculty members (Professor, Associate and Assistant Professor) and they having Post-Doctoral Research experience from Israel, Malaysia, China, Korea and South Africa. The Research areas of research of the department Molecular diagnostics, Stem biotechnology, Metabolic Engineering, Bioinformatics, Nanotechnology, Agro animal technologies. The department has published nearly research paper in leading scientific publishers such as Elsevier, Springer, RSC, etc.

COURSE OBJECTIVE

To know the basis of technologies of fisheries and aquaculture, to understand the principles of its importance, purpose and application.

To know the fisheries and aquaculture schemes apart of breeding, culture and feeding technologies in focus, their purpose and principles of application, to aware of fisheries and aquaculture farms and construction principles, rising and renewal for legislative and directions.

ELIGIBILITY CRITERIA

It shall be required for the students of other B.Sc Faculties of the full-time bachelor courses to pursue the certificate course.

COURSE CONTENT (Module 1)

World aquaculture

COURSE CONTENT (Module 2)

Marine fishery resources in India

COURSE CONTENT (Module 3)

Fin fishes- species selection for culture

COURSE CONTENT (Module 4)

Each possession governing and marketing

COURSE CONTENT (Module 5)

Systems of feed- feed making, feed composition

EXAMINATION

There shall be an annual university examination at the end of academic year.

ELIGIBILITY CRITERIA FOR APPEARING IN THE FINAL EXAMINATION

Minimum attendance - 80%
Minimum internal assessment marks - 40%
- It will be done through the whole year.

- Candidate must obtain at least 50% marks in theory and practical separately in internal assessment to be eligible for the annual university examination.

- Internal assessment (Theory) will be done as follows

a) Mid-term and term examinations - 30 marks
b) Assignment/Project/Class seminar/Viva-voce - 10 marks
c) Attendance - 10 marks

Total - 50 marks

Criteria for award of the subject
Minimum marks for theory - 50

Scheme of Examination:

Duration of each examination - 3 hrs
Maximum marks - 100

Course Program Outcome

1. To know the basis of technologies of fisheries and aquaculture, to understand the principles of its importance, purpose and application.
2. To know the conditions of development of aquaculture and fish in coastlines, fisheries and change patterns of fishing in relation with the environmental changes and management influences.
3. To know the fisheries and aquaculture schemes apart of breeding, culture and feeding technologies in focus, their purpose and principles of application, to aware of fisheries and aquaculture farms and construction principles, rising with renewal for legislative and directions.
4. Develop the fishery and aquaculture systems, management, training methods, and analysis for aquaculture business development, marketing, finance and aquaculture production economics and marketing issues and problems.
5. Apply traditional research methods, scientific literature, laboratory technologies and statistical methods of evaluation to perform and summarize the research and analyze the results of analysis by principles of the fish stock and self-sufficiency.
6. Apply methods and techniques used in fisheries and aquaculture design and construction, field management methods and species management plans.
7. Utilize the technological techniques related to management of fisheries and aquaculture farms, capture activities to ensure fish conservation and sustainability.

Course Structure and Duration

Course is 6 month duration and able to or to be imparted training programme covering theoretical and practical aspects of fisheries science technology.

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect by the appropriate form by School of Arts and Science, Department of Biotechnology, PRIST University, Thanjavur, Vallam.

Head of the Department
Department of Biotechnology
School of Arts & Science
PRIST Deemed to Be University, Thanjavur

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFCATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

AQUACULTURE TECHNOLOGY

Subject code: 17S17AQT

Course Outcomes:

By the completion of the course the graduate should able to

1. Describe the concept of blue revolution and different aqua culture systems
2. Explain the pond ecosystem
3. Describe the different types of fish ponds
4. Explain the steps of pond preparation
5. Describe the pond management practices

Unit:1

Introduction, Plan and implement environmentally sustainable aquacultural practices, Pond preparation.

Unit:2

Plan and Implementation Aquaculture Biosecurity Plan, Feeding, Culture activity, Nutrient Cycles in Culture Ponds -- Phosphorus, Carbon and Nitrogen, Importance of Plankton and Benthos in culture ponds, nutrient dynamics and algal blooms

Unit:3

Develop a stock nutrition program, Plan stock health management, Monitoring, Functional classification of ponds -rearing, production, stocking and quarantine ponds

Unit:4

Manage an aquaculture research trial, Plan an design water supply and disposal systems, Plan and design stock culture or holding systems and structures.

Unit:5

Develop stock production plan, Design are circulating aquaculture system, Develop export markets for produce, Collect and manage data, Develop work place policy and procedures for sustainability.

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

AnyScanner

References

1. Froehlich H E, Gentry R R, Costello C, Gelcich S, Halpern B S (2017) Public perceptions of marine aquaculture. Nature Ecology & Evolution, 1: 1517–1524.
2. FAO (2013) The 2030 Agenda and the Sustainable Development Goals. Background for aquaculture development and management, by John Hoodless. FAO Fisheries and Aquaculture Circular No. 1141. FAO, Rome.
3. Froehlich H E, Gentry R R, Rust M B, Cottrell R, Halpern B S (2017) Public perceptions of aquaculture: Evaluating spatiotemporal patterns of sentiment around the world. PLoS ONE 12(1): e0169281.
4. Knapp G, Rubino M C (2016) The political economics of marine aquaculture in the United States. Reviews in Fisheries Science & Aquaculture, 24(3): 213–229.
5. Power C N, & Morris, S.N., Jr. (2013) Marine cage culture and the environment: Twenty-first century science informing a sustainable industry. NOAA Technical Memorandum NOS NCCOS 164.
6. Lester S E, Stevens J M, Gentry R R, Kappel C V, Bell T W, Costello C J, Gaines
7. S D, Kiefer D A, Maue C C, Rensel J E, Simons R D, Washburn L, & White C (2018) Marine spatial planning makes room for offshore aquaculture in crowded coastal waters. Nature Communications, 9: 945.
8. Gentry R R, Lester S E, Kappel C V, White C, Bell T W, Stevens J, Gaines S D (2017) Offshore aquaculture: Spatial planning principles for sustainable development. Ecology and Evolution, 7: 733–743.

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
[illegible]

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Anyscan

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

ADD ON COURSE

CERTIFICATE COURSE IN ENVIRONMENTAL STUDIES

Course code: 21517EVS

Students Enrolled List

Academic Year 2021-22

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for Academic year 2021-2022 semester V will be commenced from 12.07.2021. Hence requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Biotechnology	III B.Sc.,	Certificate course in Environmental Studies

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
PRIST Deemed to be University

Dean

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

1000

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Submit your Application Form in person in the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Co-ordinator

The Head
Department of Biotechnology
PRIST University

About the University

Pennaiyar Ramajayam Institute of Science and Technology (PRIST) is a deemed university in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, Medicine, Law and Research programmes.

Facilities Available

The University is located in an independent, wide area holding with state of art equipment, excellent Laboratories and infrastructure to help complete the course. Library of scientific have been acting as mentoring the research programs. Computer Library with internet facilities for students, Hostel facilities, Health centre, Sports complex, etc...

Department of Biotechnology

Biotechnology courses in very broad where one get to learn and know about all the major areas of life (biological) sciences.

The Biotechnology is focusing on some major areas like genetics, biochemistry, cell biology, molecular biology. In the course can provide hands-on-hand on Biotechnology practicals.

Certificate course in Environmental studies For admission to the Academic Year 2021-2022

ENVIRONMENTAL STUDIES

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
VALLAM, THANJAVUR – 613 403

REGISTRAR
Pennaiyar Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

COURSE OBJECTIVE

Each graduate will demonstrate knowledge of industrial process, value orientation and entrepreneurship, including collaboration, communication, troubleshooting and ethical values with implementation.

Each graduate will demonstrate knowledge of basic fundamentals, terms, and units of DC and AC electrical theory. Graduates will have the ability to use test equipment, hand tools and techniques of soldering.

COURSE CONTENT (Module 1)
Introduction to environmental studies

COURSE CONTENT (Module 2)
Ecosystems, ecosystem, structure and function of ecosystem

COURSE CONTENT (Module 3)
Natural Resources, Renewable and Non-renewable resources

COURSE CONTENT (Module 4)
Biodiversity and it's conservation levels of biological diversity

COURSE CONTENT (Module 5)
Environmental Pollution, Environmental pollution

EXAMINATION
There will be an university examination at the end of academic years.

Eligibility will rest for appearing in the in the final examination
Minimum Attendance - 70%
Minimum internal assessment marks - 40%
All will be done through the whole year.
• Candidate must obtain at least 50 % marks in theory
Internal assessment to be eligible for the university examination.

Internal assessment (Theory will be done as follows:)
a) Mid-term and term examinations - 10 marks
b) Assignment/Projects/Class test/Seminar Presentations - 05 marks
c) Attendance - 05 marks

Total - 20 marks

Criteria for a pass in the subject
Theory - 40 marks in theory - 45

Scheme of Examination -
Duration of written examination - 3 hrs
Maximum marks — 100

Level of Knowledge Expected
Working knowledge with practical technological value

Details of the program
Objectives & Outcomes

Course Progress Outcome

1. Discuss basic knowledge on the different aspects and roles of environment, fundamental, and significant contemporary issues and be able to suggest their remedies. comprehension and understanding of the world's environment and its implications of human activities.
2. Categorize different types of pollutants and their interactions. Discuss basic methods of waste

Eligibility criteria
Any graduate shall be eligible for the above course the course has Capacity 15 Seats on first cum first basis (Additional admissions are necessary permission of the school)

Course Structure and Duration
Course is 6 months duration with the of 90 hrs. Integrated training programme covering theoretical and practical aspects of biomedical instrumentation

Certification
The candidate successfully completing the course will be awarded a certificate from the school of Arts and Science, Department of Biotechnology, PRIST University, Thanjavur.

Head of the Department
Department of Biotechnology
School of Arts & Science
PRIST Deemed to be University, Thanjavur

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

ENVIRONMENTAL STUDIES

Subject code: 20S17EVS

Course outcome

1. Discover knowledge in ecological perspective and value of environment.
2. Understand the significance of various natural resources and its management. Demonstrates comprehensive understanding of the world's biodiversity and the importance of its conservation.
3. Categorize different types of pollutions and their control measures. Discover effective methods of waste Management.
4. Analyze global environmental problems and come out with best possible solutions. Understand environmental laws and sustainable development.
5. Demonstrate an integrative approach to environmental issues with a focus on sustainability; Use critical thinking, problem-solving, and the methodological approaches of the social sciences, natural sciences, and humanities in environmental problem solving.
6. Communicate complex environmental information to both technical and non-technical audiences; Understand and evaluate the global scale of environmental problems; and Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

UNIT-I

Introduction to environmental studies Multidisciplinary nature of environmental studies Scope and importance; Concept of sustainable development.

UNIT-II

Ecosystems: What is an ecosystem? Structure And function of ecosystem; Energy Flow in an ecosystem; Food chains, food webs and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries.

UNIT-III

Natural Resources: Renewable and Non---renewable Resources and resources and land use change: Land degradation, soil erosion and desertification. Deforestation: Causes and impacts due to mining, dam building on environment,

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

Scanned with CamScanner

forests and biodiversity. Water: Use and overexploitation of surface and ground water. Energy resources: Renewable and non-renewable energy sources, Use of alternate energy sources.

UNIT-IV

Biodiversity and Conservation levels of biological diversity :genetic, species and ecosystem diversity; Biogeography zones of India; Biodiversity patterns and global biodiversity hotspots. endangered and endemic species of India. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity.
Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and informational value.

UNIT-V

Environmental Pollution - Environmental pollution: types, causes, effects and controls: Air, water, soil and noise pollution etc. Nuclear hazards and human health risks, Solid waste management: Control Measures of urban and industrial waste, Pollution case studies.

UNIT-VI

Environmental Policies & Practices: Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture - Environment Laws : Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution).

References:

1. Benny Joseph, "Environmental Studies", Tata Mc Graw Hill Publishing Co. Ltd. New Delhi, 1stEdition, 2006.
2.Erach Bharucha, "Textbook of Environmental Studies for Under Graduate Courses", Orient Black Swan, 2ndEdition, 2013.
3.Dr. P. D Sharma, "Ecology and Environment", Rastogi Publications, New Delhi, 12thEdition, 2015.
4. Tyler Miller, Scott Spoolman, "Environmental Science", Cengage Learning, 14thEdition, 2012.
5.Anubha Kaushik, "Perspectives in Environmental Science", New Age International, New Delhi, 4thEdition 2006.3.Gilbert M. Masters,Wendell P. Ela, "Introduction to Environmental Engineering and Science, Pearson, 3rdEdition, 2007.

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Post Deemed to be University, Thanjavur

Dr. L. CHINNAPPA

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

AnyScanner

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

ADD ON COURSE

DIPLOMA COURSE IN BIOINFORMATICS

Course code: 21517BIF

Students Enrolled List

Academic Year 2021-22

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for Academic year 2021-2022 semester IV will be commenced from 12.07.2021. Hence requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Biotechnology	III B.Sc.,	Diploma course in Bioinformatics

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur.

Dean

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL...

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex(M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Submit your Application Form in person to the Registrar, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Coordinator

The Head
Department of Biotechnology
PRIST University

About the University

Pondicherry Ramajayam Institute of Science and Technology (PRIST) is a deemed university in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

Facilities Available

The University is housed in an independent, multi storey building with state of art equipment, excellent Laboratories and infrastructure to help complete this course. Majority of scientist have been acting as mentors for research program. Computer Library with internet facilities for students, Hostel facilities, Health centre, Sports complex, etc.,

Department of Biotechnology

Biotechnology course is very broad where one get to learn and know about all the major areas of life (biological) sciences.

The Biotechnology is focusing on some major areas like genetics, biochemistry, cell biology, molecular biology. So this course can provide much future based on Bioscience profession.

Diploma course in Bioinformatics For admission to the Academic Year 2021-2022

Bioinformatics



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF
BIOTECHNOLOGY
VALLAM, THANJAVUR - 613403

COURSE OBJECTIVE

1. Discuss creative solves the following problems and put more emphasis on understanding the programs related problems at molecular level.

2. Predict sequencing, Predict with sequencing and other analysis. Find proteins like interaction, activity, modification and functions.

COURSE CONTENT (Module 1)
Microbial Genomics Databases and Analysis, Goals of the Human Genome Project

COURSE CONTENT (Module 2)
Database formats - Retrieval from DNA Technology

COURSE CONTENT (Module 3)
Proteomics classification, tools and technologies in proteomics

COURSE CONTENT (Module 4)
Biodiversity Informatics Definition, genetic diversity, species diversity

COURSE CONTENT (Module 5)
Applications of Bioinformatics in various Fields

EXAMINATION
There shall be a University examination at the end of each year.

Eligibility criteria for appearing for the for the final examination
Minimum attendance = 80%
Minimum internal assessment marks = 40%
- It will be done through the whole year.
- Candidate must obtain at least 50 % marks in theory

Internal assessment to be eligible for the university examination.

Internal assessment (Theory) will be done as follows:-
a) Mid-term and term examinations = 10 marks
b) Assignments/Projects/Class test/Seminar Presentations = 05 marks
c) Attendance = 05 marks

Total = 20 marks

Criteria for a pass in the subject
Minimum marks in theory = 40

Scheme of Examination:-
Duration of University examination = 3 hrs
Maximum marks = 100

Level of Knowledge Expected
Working knowledge with excellent technological skills

Duration of the program
One year Diploma course

Course Program Outcome

1. Students acquire the essential knowledge and competency of database, software, computer science and statistical techniques and theories to be successful in programming and data management and analysis of biological data
2. Students understand the complexities of biology - A synthesis-based investigation of a specific biological problem using computer, carried out with experimental or simulated data, with the primary goal of discovery and understanding of biological knowledge

Eligibility criteria
Any graduate shall be eligible for the admission into the course. Intake Capacity 15 Seats on first come first basis (Additional admission into the course is purely at the discretion of the school)

Course Structure and Duration
Course is 12 months duration and will be of 90 hrs supervised training programme covering Basic Biological principles and Bioinformatics

Certificate
The candidate successfully completing the course be conferred the awarded certificate to that effect in the appropriate manner by School of Arts and Science, Department of Biotechnology PRIST University, Thanjavur.

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

Principal
School of Arts & Science
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFCATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

BIOINFORMATICS

Subject code: 21517BIF

Course outcome

1. Students know the creation and advancement of databses, softwares, computational and statistical techniques and theory to solve problems generated from the management and analysis of biological data.
2. Student to understand the computational biology - hypothesis based investigation of a specific biological problem using computers, carried out with experimental or simulated data, with the primary goal of discovery and the advancement of biological knowledge.
3. Bioinformatics solves the following problems and put more emphasis on understanding the disease related problems at molecular level.
4. Protein sequencing, Nucleic acid sequencing and their analysis. Find proteins their interaction, activity, modification and function.
5. Elucidation of function of a molecule based on its structure. Gene expression, analysis, prediction and establish genomic library. Find homology for studying evolutionary relationship among different species. Molecular modeling and molecular dynamics methods to study structure from sequence.

UNIT I:

Nucleotide Sequence Databases And Analysis, Goals of the Human Genomic Project, cloning vectors, concept of maps, physical maps, shotgun libraries, DNA polymorphism, nucleotides, DNA sequences, Sequence databases: GenBank, EMBL Nucleotide sequence databank.

Unit-II

Database formats - Recombinant DNA technology, restriction enzymes, resource for restriction enzyme (REBASE), similarity search, Polymerase chain reaction, primer selection for PCR, BLASTn, application of Biofidn.

Unit-III

Proteomics classification, Tools and techniques in proteomics: 2-D gel electrophoresis, gel filtration, PAGE, isoelectrick focusing, affinity chromatography, HPLC, ICAT, fixing and spot visualization, Mass spectroscopy for protein analysis, MALDI-TOF, Electrospray ionization (EST), Tandem mass spectroscopy (MS/MS) analysis, tryptic digestion and peptide fingerprinting (PMF).

UNIT-IV

Biodiversity Informatics- Definition, genetic diversity, species diversity, ecosystem

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

CamScanner

diversity. Biodiversity over geographic scales, α-diversity, β-diversity, γ-diversity. Distribution of biodiversity, hotspots of biodiversity, ecological and economic role of biodiversity, scientificrole and environmental economics.

UNIT-V

Applications Of Bioinformatics In Various Fields: Environment, biotechnology, molecular biology, neurobiology, agriculture, drug designing, biomedical genome medicines, medicalmicrobiology.

References:

1. Introduction to Bioinformatics. (Attwood, T. K. and Parry-Smith, D. J).
2. An introduction to Computational Biochemistry. (C. Stain Tsai. A. John Wiley and Sons, Inc., publications).
3. Bioinformatics: Methods and applications; Genomics, Proteomics and Drug Discovery; (Rastogi, S. C. and Mendiratta and Rastogi, P.
4. Bioinformatics: A practical guide to the analysis of genes and proteins.; Edited by, Andreas D. Baxevanis and Francis Oulelette

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
First Deemed to be University, Thanjavur

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be Unive...
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...

AnyScanner

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY Date: 28.07.2021

CIRCULAR

This is to inform all students that the value added programme classes for academic year 2021-2022 semester V will be commenced from 04.08.2021. Hence requesting all the registered students to attend the classes without fail.

Branch name	Name of course	Course offered
Biotechnology	DIPLOMA COURSE ON FERMENTATION TECHNOLOGY	Biotechnology Computer Science

HOD
Head of the Department
Department of Biotechnology
School of Arts & Science
PRIST Deemed to be University, Thanjavur.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

Dean
Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Submit your Application Form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Applications may be send to

Course Co Ordinator

The Head
Department of Biotechnology
PRIST University
Email, phone&address

About the University

Pennalyh Ramajayam Institute of Science and Technology (PRIST) is a deemed University in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

Facilities Available

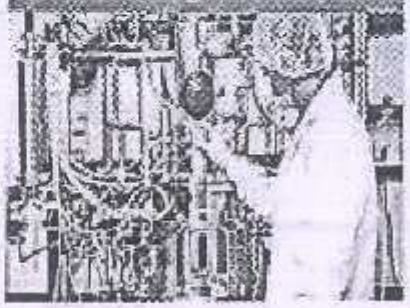
The University is housed in an independent multi storey building with state of art equipment, excellent Laboratories and infrastructure to help complete the course. Majority of students have been using it maximum for research purpose. Computer Library with internet facilities for students, Hostel facilities, Health centre, Sports complex etc.

Requirement of Eligibility

Life science course is very broad where one can be good for those class at the upper most of the biological sciences.

The Biotechnology, biotechnology/technology is focused on some major areas like genetics, biochemistry, cell biology, molecular biology. So this course can provide many career base for successful graduates.

School of Arts and Science
Department of Biotechnology



2021-2022

PRIST Deemed to be University
Thanjavur, Vallam-613 403

INTRODUCTION

>Historical development of Industrial Biotechnology, Isolation of microorganisms for the production of primary and secondary metabolites. Major classes of products and processes. Improvement of industrially important microbial strains Design of a fermentor, types of fermentors and basic features. Fermentation media. Fermentation strategies, economical means of providing energy, carbon, nitrogen, vitamins and mineral sources. role of buffers, precursors, inhibitors, inducers and antifoams, types of fermentations.

>Microbial products of pharmaceutical value – raw materials, organisms and industrial processes involved in the production of penicillin, Vitamin B12 and other vitamins. Microbial products of industrial value – raw materials, organisms and industrial processes involved in the production of ethanol, vinegar, acetone, glycerol, glutamic acid. Recycling and safe disposal of industrial wastes through microbes. The recovery and purification of large scale animal and plant cell cultivation and biotransformation. Enzyme processing - media formulation.

>Basic principles of bioprocess including sterilization of fermentation equipment and air, types of bioreactors (batch and continuous bioreactor and its application). Basic, CSTR, RCF,MF,UF,NF etc. Inoculum and culture keep.

Objective of the Programme

•This course is planned to give adequate knowledge on fermentation technology to make the students for self-employment.

•It shall be compulsory for the students of other B.Sc (Life Sci) or BSc (Allied) Bacteria courses to join the one year Diploma in Fermentation course.

Theory and Practicals

•Principal elements

•Microbial products of pharmaceutical

•Fermenter products

•Purification of fermenter products

•Microbial Growth and Preservation

•Upstream process

•Downstream processing

• Examples of basic steps of fermentation processes

•Application of Biotechnological processing and production

Level of Knowledge Required

Working knowledge with standard undergraduate science

Duration of the program

One year

Course Program Outcome

Students enrolled for the diploma course in Fermented product will following the opportunities. Students will demonstrate knowledge of scientific principles related to agriculture.

•Students will demonstrate knowledge of bioprocess Production including upstream production practices, and downstream principles.

•Students will demonstrate effective application of upstream and downstream processing.

•Students will demonstrate knowledge and packaging of fermented products main products.

Eligibility criteria

Any graduate shall be eligible for the admission to the course under Counselling Seats as first come first basis (Additional admission to the course is prerogative of the School)

Course Duration and Timetable

Course is 12 months duration and will be of 30 hrs lectures training programme covering theoretical and practical aspects of fermentation technology.

Certification

The candidate successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Science, Department of Biotechnology, PRIST University, Thanjavur, Vallam.

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

REGISTRAR
Pennalyan Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

DEPARTMENT OF BIOTECHNOLOGY

DIPLOMA COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

FERMENTATION TECHNOLOGY

Course outcome **Subject code: 18517FMT**

Students enrolled for the certificate course is Fermentation Technology will follow the opportunities. Students will demonstrate knowledge of scientific principles related to agriculture.

- Appreciate the importance of embarking on self- employment and has developed the confidence and personal skills for the same
- Identify business opportunities in chosen sector/sub-sector and plan and market and sell products/services

UNIT I: Major types of organisms used in fermentation. Microbial growth kinetics, Batch culture, Continuous Culture, Test – Batch – Types, applications, fermentation strategies.

UNIT II: Isolation, preservation and improvement of industrially important microorganisms, media for industrial fermentations – media formulation. Development of inoculum for industrial fermentations.

UNIT III: Fermentor design and types-basic functions of a fermentor for microbial and animal cell culture – alternative vessel design, common measurements and control systems. Sensors – solutions to common problems in fermentation, anaerobic fermentation.

UNIT IV: Control of fermentation – requirements for control, design of a fermentation control systems, sensors and controllers, control of incubation, & aeration and agitation.

UNIT V: Computers in fermentation, modeling, software sensors, control and supervision of fermentation processes.

Books:

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

AnyScanner

1. Arnold L. Demain & Julian E. Davis. Industrial Microbiology & Biotechnology, ASM Press. (2004).

2. Coulson, J.M. and J.F. Richardson; 6th Edition, Chemical Engineering Elsevier.

References:

1. Tom el-Mansi & CFA. Bryce Fermentation Microbiology & Biotechnology, Taylor & Francis Ltd. (2004). 2. Stanbury, P.F., A. Whitaker & S.J. Hall. Principles of fermentation technology Oxford Press. (1997).

HOD
Head of the Department
Department of Biotechnology
School of Arts & Science
Periyar Maniammai University, Thanjavur

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

ADD ON COURSE

DIPLOMA COURSE IN BIOMEDICAL INSTRUMENTATION

Course code: 21517BIM

Students Enrolled List

Academic Year 2021-22

This is to inform all III B.Sc., Physics students that the value added programme classes for Academic year 2021-2022 semester V will be commenced from 05.07.2021. Hence requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Physics	III B.Sc.,	Diploma course in Biomedical instrumentation

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University

REGISTRAR
Pennaivah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

Dean

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form :

Submit your Application Form in person to the Programme Coordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be sent to

Course Coordinator
The Head
Department of Biotechnology
PRIST University

About the University

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) is a private university in Vallam, India. The courses offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts and Law, as well as research programmes.

Facilities Available

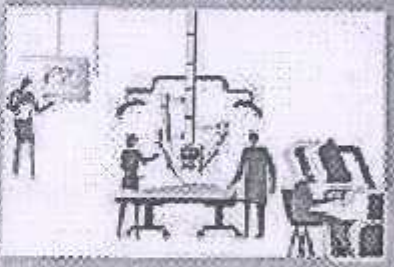
The University is located in an independent, multi storey building with state of art equipment, separate laboratories and classrooms to help complete the course. Majority of students have been selected for outstanding performance. Computer Library with internet facilities for students, Hostel facilities, Health center, Sports complex etc.

Department of Biotechnology

Biotechnology course is very broad where one will be taught and learn about all the major areas of life (biological) sciences.

The Biotechnology is focusing on some major areas like genetics, biochemistry, cell biology, molecular biology. So the course can provide much career based on bioscience production.

Diploma course in Biomedical Instrumentation For admission to the Academic Year 2021-2022



PRIST DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF
BIOTECHNOLOGY
VALLAM, THANJAVUR - 613403

COURSE OBJECTIVE

Study of medical will be complete to a variety of biomedical process value maintenance and troubleshooting, including calibration configuration, troubleshooting, and use of safety with its implementation.

Participants will be introduced to biological fundamentals, terms, and units of DC and AC, explained in easy. Graduates will have the ability to use test equipment, hand tools and techniques of soldering.

COURSE CONTENT (Module 2)
Fundamentals of medical instrumentation

COURSE CONTENT (Module 3)
Electrocardiograph, Electroencephalograph

COURSE CONTENT (Module 3)
Electrodes - Used electrodes - Recording electrodes

COURSE CONTENT (Module 4)
Principles of image analysing system- Image
INTRODUCTION TO Analysis

COURSE CONTENT (Module 5)
Basic principle and theoretical concepts of computer tomography

EXAMINATION
There will be an University examination at the end of academic years.

Eligibility criteria for appearing in the in the final examination
Minimum Attendance - 80%
Minimum 2 Internal Assessment marks - 40/60
+ 8 OAP to be done through the whole years.
+ Candidate must obtain at least 55% marks in theory

Internal assessment is compulsory for the University examination

Internal assessment (Theory) will be done as follows :
a) Unit tests and term examinations - 30 marks
b) Assignments/Projects/Class tests/Clinical Presentations - 05 marks
c) Attendance - 05 marks

Total = 20 marks

Options for a paper in the subject
Minimum pass mark in theory - 40

Scheme of Examination :
Two hours of written examination - 3 hrs
Maximum marks - 100

Level of Knowledge Expected
Working knowledge upon successful completion of course

Duration of the program
1 year and as Diploma course

Course Prerequisites

1. Ability to read and write English and the basic knowledge of mathematics and science subjects
2. Ability to gain knowledge by understanding and comprehending the concepts
3. Ability to understand the analysis system of various organ types. Ability to bring out the different and various methods of carrying working principles and analysis

Eligibility criteria

Any graduate shall be eligible for the admission into the course. Capacity 15 seats (10 first come first basis / Additional 5 seats from other than the sponsored candidates)

Course Structure and Duration

Course 12 months duration and of the of 90 hrs. supervised training programme covering theoretical and practical aspects of biomedical instrumentation.

Certificates

The candidates passing the qualifying examination successfully and fulfilling other conditions will be awarded a certificate by School of Arts and Science, Department of Biotechnology, PRIST University, Thanjavur, Vallam.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

Head of the Department
Department of Biotechnology
School of Arts and Science
PRIST University, Thanjavur

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

BIOMEDICAL – INSTRUMENTATION

Subject code: 19S17BIM

UNIT – I:

Fundamentals of medical instrumentation – Sources of biomedical signals – basic medical instrumentation – Intelligent medical instrumentation system – Origin of Bio electric signals – ECG – Electrodes for EEG – Electrodes for EMG.

UNIT – II:

Electrocardiograph, Electroencephalograph. Measurement of blood pressure - Cardiac output - Heart rate - Heart sound - Pulmonary function measurements.

UNIT – III

Electrodes – Limb electrodes –floating electrodes – pregelled disposability electrodes – Micro, needle and surface electrodes – Amplifiers, Preamplifiers, differential amplifiers, chopper amplifiers.

UNIT – IV:

Principles of NMR Imaging system – Image reconstruction Techniques – Basic NMR components – Biological effects of NMR Imaging – Advantages of NMR Imaging System – Diagnostic ultra Sound – Physics of ultrasonic waves.

UNIT – IV:

Radio graphic and fluoroscopic techniques – Computer tomography – MRI – Ultrasonography – Endoscopy – Thermography –Different types of biotelemetry systems - Retinal Imaging - Imaging application in Biometric systems.

Course outcome

1. Ability to understand the philosophy of the heart, lung, blood circulation and ability to provide latest ideas on devices of non-electrical devices.

2. Ability to gain knowledge on various sensing and measurement devices of electrical origin.

3. Ability to understand the analysis systems of various organ types. Ability to bring out the important and modern methods of imaging techniques and their analysis.

4. Ability to explain the medical assistance/techniques, robotic and therapeutic equipments.

5. The Instrumentation Technology certificate will develop entry-level skills in industrial instrumentation, maintenance and calibration.

REGISTRAR
Pennalyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Scanned with AnyScanner

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

AnyScanner

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

Date: 28.07.2021

CIRCULAR

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for academic year 2021-2022 Semester V will be commenced from 08.07.2021. Hence, requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Biotechnology	III B.Sc.,	Certificate Course on Cell Culture Techniques

HOD

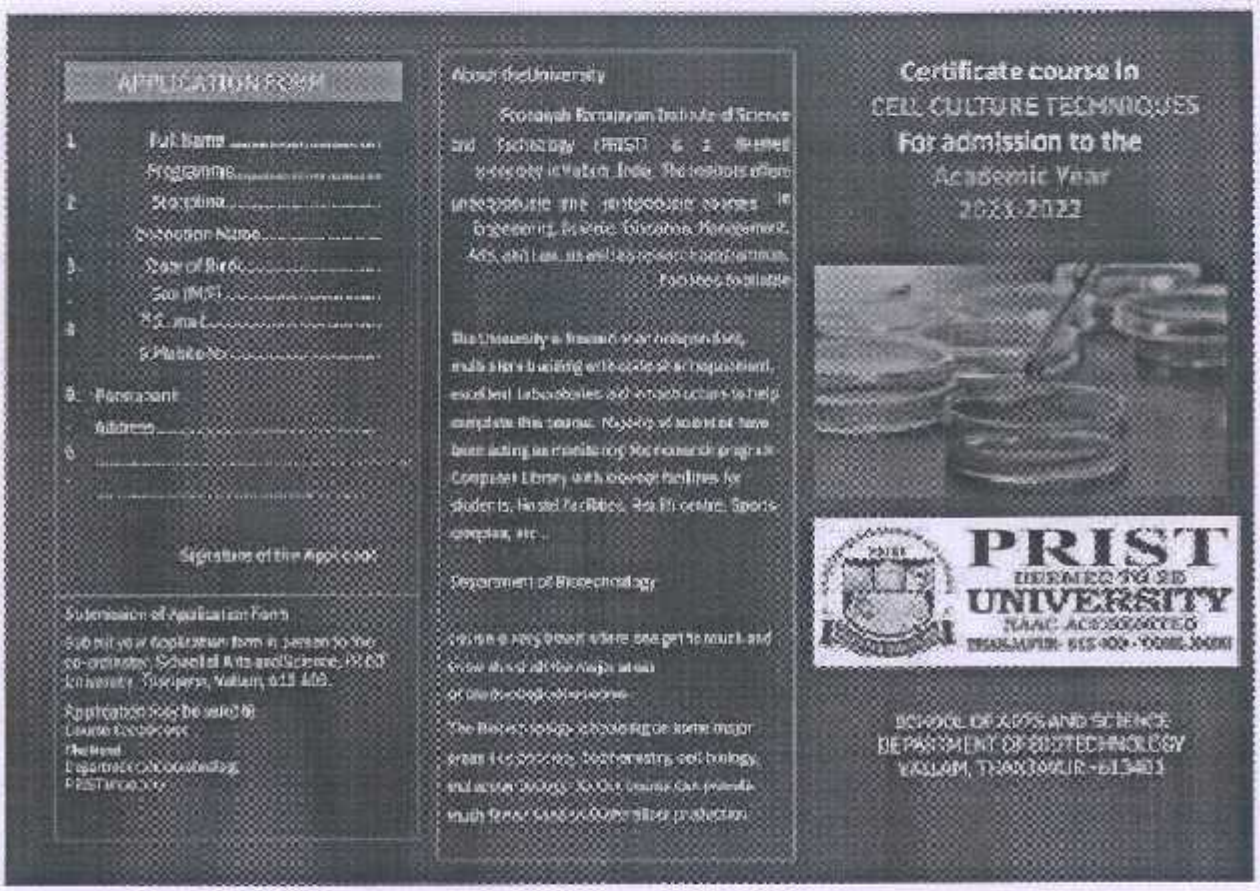
Head of the Department
Department of Biotechnology
School of Arts & Science
PRIST Deemed to be University, Thanjavur

Dean

Dr. L.CHINNAPPA
Dean of Arts and Sciences
PRIST Deemed to be University,
THANJAVUR-613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU, I.

1024



APPLICATION FORM

1. Full Name .....
   Programme .....
2. Specialisation .....
   Institution Name .....
3. Date of Birth .....
   Sex (M/F) .....
4. Nationality .....
5. Mobile No .....
6. Permanent
   Address .....
7. .....
   .....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

The Head
Department of Biotechnology
PRIST University

About the University

Pondicherry Perunthalaivar Kamarajar Institute of Science and Technology (PRIST) is a deemed university in Tamil Nadu, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research and diploma. Facilities available

The University is housed over a sprawling, multi-storied building with state-of-the-art equipment, excellent Laboratories and research centers to help complete this course. Nearby of scientist have been acting as mentors for the research projects. Computer Library with internet facilities for students, Hostel Facilities, Health centre, Sports complex, etc.,

Department of Biotechnology

Biotechnology is a very broad science and can get to touch and know about all the major areas of biology and chemistry.

The Biotechnology course is one major stream that provides Biochemistry, cell biology, and some botany. So this course can provide much fewer sand opportunities production

Certificate course in

CELL CULTURE TECHNIQUES

For admission to the

Academic Year

2021-2022

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
VALLAM, THANJAVUR-613403

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dean

Dr. L.CHINNAPPA
M.Sc.,M.Phil.,M.C.A.,M.Ed.,M.Tech.,Ph.D.,PGDCA.,PGDBA
Dean of Arts and Science
PRIST Deemed to be University
THANJAVUR-613 403

REGISTRAR
Pondicherry Perunthalaivar Kamarajar Institute of Science & Technology (PRIST)
Deemed to be University
(U/S 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

CELL CULTURE TECHNIQUE

Subject Code: 19517CCT

COURSE OUTCOME

- The students learnt to maintain cultures of plant and animal cell with good viability.
- Gained knowledge about preparation, storage of cultures and developed their ideas to carry the research work.

UNIT-1: Biology of cultured cells techniques and safety protocols

Introduction of cell culture technology-philosophy and complexity in cell culture-to grow the cell outside the body-cell cycle concept-dividing cells. Biology of cell culture-layouts &designs of cell culture facility-Precautions during designing the lab layout.

UNIT-2: Culture vessels & media development

State of art facility in cell culture lab-specialized facility in cell culture lab-interaction of cell and polycarbonate surface. Poly D lysine deposition-surface chemical analysis- cell growth process-cell surface interface-cell culture substrate patterning.

UNIT-3: Primary culture, secondary culture, cloning & selection

Introduction to define system-mechanical dissociation of hippocampal tissue-rules for mechanical dissociation of tissue-down molecule testing-adult hippocampal neuron dissociation

UNIT-4: Cell separation and culture mode

Cell separation, characterization, differentiation & transformation of cells, In vitro myelination cell culture mode. Contamination, cryo-preservation & cyto-toxicity.

UNIT-5: Organo-typic culture & specialized techniques

Fluorescent assisted cell sorting-condition for regenerated cells-introduction of skeletal muscle cell culture and cardiac muscle cell culture. Organo-typic culture & specialized techniques. Advance cell culture technique.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

AnyScanner

REFERENCE

1. Animal Cell Culture: Concept and Application. Sheeleeta M. Bhatt,2011.

2. General Techniques of Cell Culture. Ian F. Rae and Maureen A. Harrison,1997.

3. Atlas of Living Cell Cultures. Rosemarie Steubing and Toni Lind,2013.

4. Animal Cell and Tissue Culture. Shivangi Mathur,2009.

5. Animal Cell Culture: A Practical Approach. John Masters,2000.

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dr. L CHIDAMBARAM

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

Date: 28.07.2021

CIRCULAR

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for academic year 2021-2022 Semester III will be commenced from 08.07.2021. Hence, requesting all the registered students to attend the classes without fail.

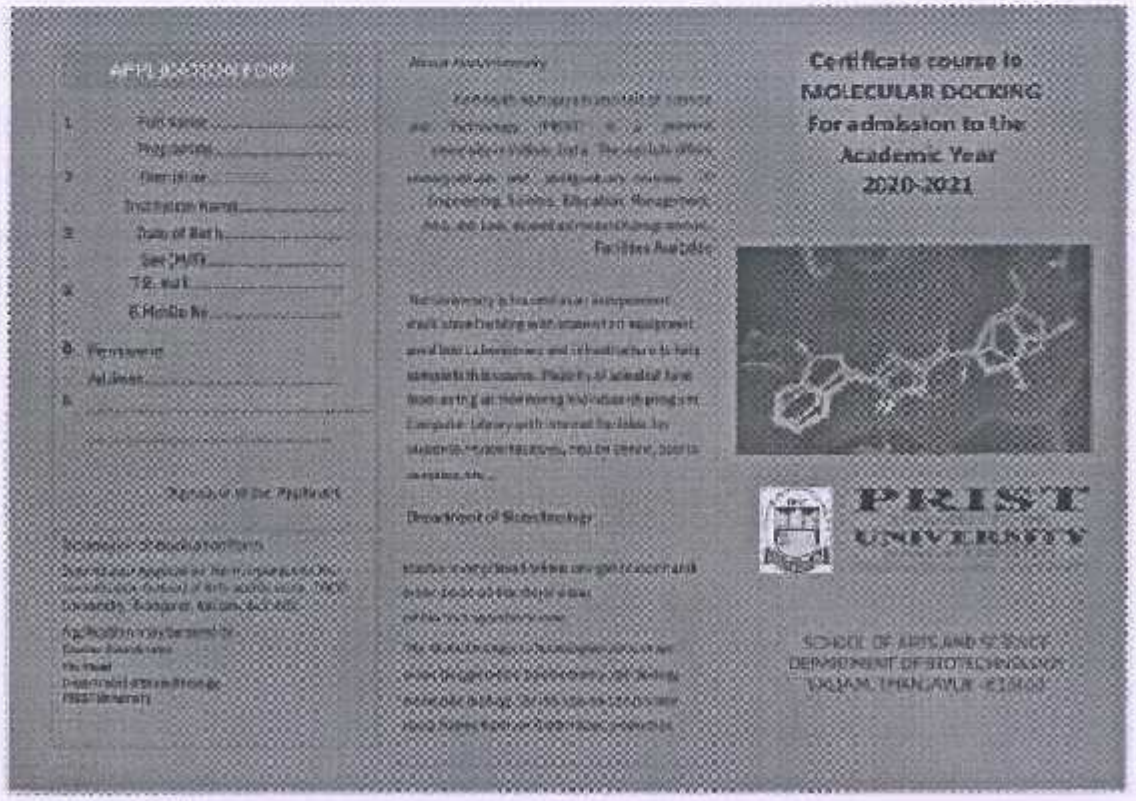
Branch name	Year	Course offered
Biotechnology	II B.Sc.,	Certificate Course on Molecular Docking

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Dr. L.CHINNAPPA
Dean of Arts and Sciences
PRIST Deemed to be University,
THANJAVUR 613 403.



Certificate course to
MOLECULAR DOCKING
For admission to the
Academic Year
2020-2021

PRIST
UNIVERSITY

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dr. L.CHINNAPPA

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMILNADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

MOLECULAR DOCKING

Subject code: 20517MDG

COURSE OBJECTIVE

- To learn various software and tools for computer-aided drug designing.
- To make students understand the essential features of the interdisciplinary field of science

UNIT I: Drug Discovery

Historic development of drug discovery, Modern drug discovery, Molecular modelling drug targets discovery-target identification, Hits and lead identification, lead optimization, principles of drug ability, Role of Bioinformatics in drug design

UNIT II: Molecular Mechanics

Basic Chemistry Review & Drug Discovery - Bio-molecular Structure & their Molecular Interactions and Recognition – Introduction to Methods in 3-D Structure Determination and Molecular modeling – Molecular Conformations & Primary Sampling Methods for Computer Simulations

UNIT III: Drug – Receptor interactions

Molecular basis of drug action: Drug Receptor Interaction: Basic ligand concept, agonist, antagonist, partial agonist, inverse agonist, Drug receptor concepts Enzyme Inhibition – enzyme Inhibitors - reversible, irreversible, enzyme inhibitors as drugs

UNIT IV: Drug design

Prediction of binding site and virtual screening, Drug design -Structure-based drug design, Ligand based drug design, De novo ligand design, Molecular docking-search algorithm, scoring functions, ADMET properties.

UNIT V: Molecular Docking

Methods and Tools in Computer-aided molecular design, Molecular Docking: searching Methods – Scoring functions-Protein ligand interactions- Docking using AUTODOCK- Pitfalls in docking

COURSE OUTCOME

- Apply basic bioinformatics tools for various needs in biotechnology
- Identify the drug targets and understand the mode of action
- To know software and tools for computer-aided drug designing

REFERENCES

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
THANJAVUR - 613 403

1. D. Baxevanis and Foulette - Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins, Wiely Indian Edition, 2001.
2. T K Attwood, D J parry-Smith, Introduction to Bioinformatics, Pearson Education, 1st Edition, 31th Reprint 2005.
3. A. R Leach - Molecular Modeling Principles and Applications, 2nd edition, Longman Publications, 1996.
4. Gene M, Jagiap, *Computational Drug Discovery and Design*, Humana Press , ISBN: 978-1493977550.

HOD
Head of the Department
Department of Biotechnology
School of Arts & Science
Post Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

Date: 28.07.2021

CIRCULAR

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for academic year 2021-2022 Semester III will be commenced from 08.07.2021. Hence, requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Biotechnology	II B.Sc.,	Certificate Course on Enzyme Production

HOD

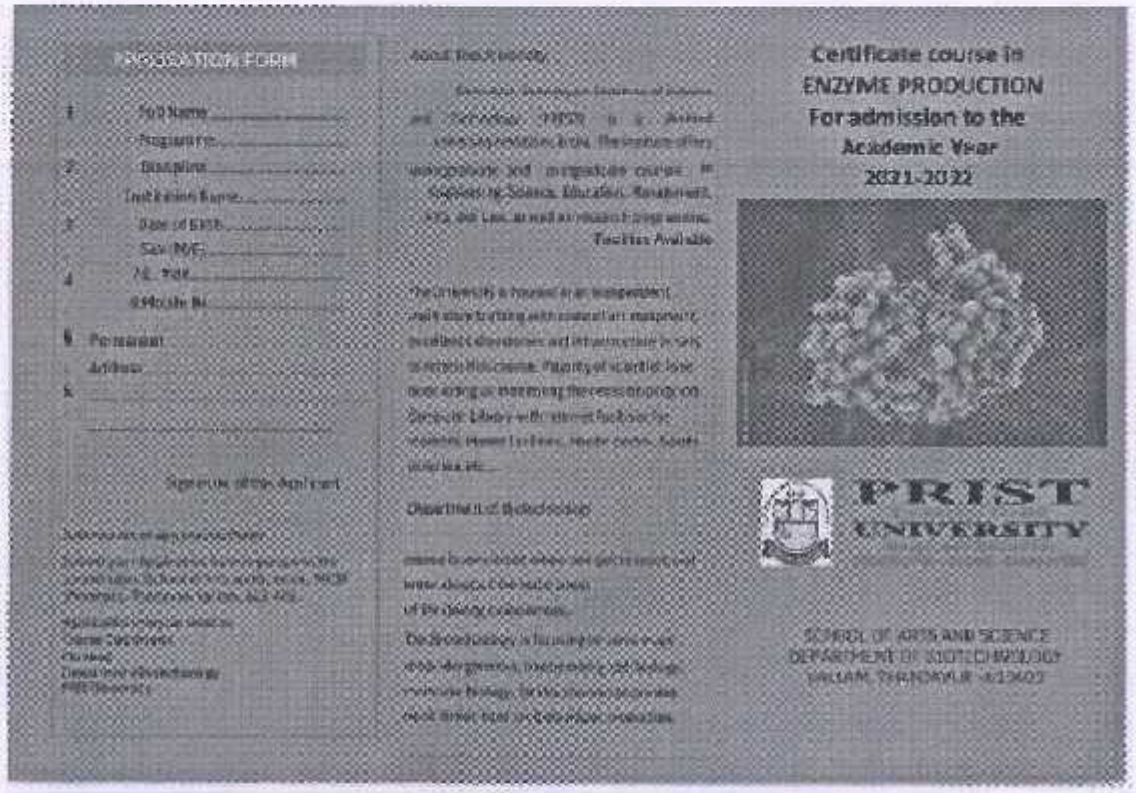
Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dean

Dr. L.CHINNAPPA
M.Sc.,M.Phil.,M.Ed.,M.A.,B.L.,Ph.D.,PGDCA,PGDBA
Dean of Arts and Sciences
PRIST Deemed to be University
THANJAVUR-613 403

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)

1036



PROGRAMME FORM

1 Full Name .....
Programme .....
2 Discipline .....
Institution Name .....
3 Date of Birth .....
Sex M/F .....
4 Mobile No .....
5 Permanent
Address
.....

Signature of the Applicant

About the Faculty

Facilities Available

Department of Biotechnology

Certificate course in
ENZYME PRODUCTION
For admission to the
Academic Year
2021-2022

PRIST UNIVERSITY

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOTECHNOLOGY

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dr. L.CHINNAPPA
Dean of
PRIST Deemed to be University,
THANJAVUR

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, T.N.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

ENZYME PRODUCTION

Subject code: 21517EPN

COURSE OUTCOME

- Acquired knowledge about the nomenclature and properties of enzymes.
- Learnt about enzyme production and its applications.

UNIT I

Enzyme -introduction, properties, nomenclature and classification, applications of enzymes in Industrial, Medical, Analytical, Chemical, Pharmaceutical and Food Sectors.

UNIT II

Industrial applications of enzymes, perspectives of use of enzymes in Industry sectors. Significance and applications of cellulases (cellulose hydrolysis), Pectinases (pectin hydrolysis), Amylase (starch-dextrin conversions), Lipases (oil hydrolysis), proteases (clarification of fruit juices), Laccases (delignification), Asparaginase.

UNIT III

Extremozymes: Microbial source, characteristics and biotechnological significance of extremozymes from thermophiles, psychrophiles, acidophiles, alkalophiles, halophiles. Solvent tolerant enzymes, Barophiliase.

UNIT IV

Methods of enzyme production - isolation of microorganisms, strain development and preservation of organisms, medium formulation, optimization and maintenance of culture, maintenance of culture and stock cultures, purification of enzymes, factors affecting of enzymes production and applications of proteases, pectinases, cellulase enzyme.

UNIT V

Microbial enzymes, manufacture of microbial enzyme production, detergent enzymes, starch processing enzymes, enzymes in cheese production, enzymes in plant juice production, enzymes in textile manufacture, enzymes in leather industry, enzymes in the treatment of wood pulps.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU.

REFERENCE

1. Palmer, T. (2004) Enzymes: Biochemistry, Biotechnology and Clinical Chemistry. Affiliated East West Press Pvt Ltd, New Delhi.
2. Principles of Fermentation Technology by P.F. Stanbury, A. Whitaker and S.J. Hall. Butterworth-Heinemann, Science Books (P)Ltd.

AnyScanner

7. Industrial Microbiology by A H Patel
8. Wiseman, A. Handbook of Enzyme Biotechnology, 3rd Edition, Ellis Horwood Publication

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

AnyScanner

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOTECHNOLOGY

Date: 28.07.2021

CIRCULAR

This is to inform all III B.Sc., Biotechnology students that the value added programme classes for academic year 2021-2022 Semester III will be commenced from 08.07.2021. Hence, requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
Biotechnology	III B.Sc.,	Certificate Course on Patent Law

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

Dr. L.CHINNAPPA



Certificate course in
PATENT LAW
For admission to the
Academic Year
2021-2022

PRIST
UNIVERSITY

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
VALLAM, THANJAVUR -613403

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dean

Dr. L.CHINNAPPA
Dean of Arts and Sciences
PRIST Deemed to be University
THANJAVUR-613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMIL NADU

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE COURSE SYLLABUS

ACADEMIC YEAR 2021-2022

PATENT LAW

Subject Code: 20517PL

COURSE OUTCOME

1. Students learn the fundamental aspects of IPR
2. They also gained knowledge on patent, copyright and trademark

UNIT I

Intellectual Property Rights: Introduction and Protection of Intellectual Property, Copyrights, Trademarks, Patents, Designs, Utility Models, Trade Secrets and Geographical Indications, The Paris Convention, Patent Co-operation Treaty, TRIPS, The World Intellectual Property Organization (WIPO) and the UNESCO

UNIT II

Patents – Concept of Patent, Product / Process Patents & Terminology, Duration of Patents- Law and Policy Considerations, Elements of Patentability, Novelty and Non Obviousness, Industrial Application, Non- Patentable Subject Matter.

UNIT III

Patent Law and practice in India: Novelty and Inventive step, Procedure for Filing of Patent Application and types of Applications Procedure for Opposition, Revocation of Patents, Ownership and Maintenance of Patents, Assignment and licensing of Patents, Working of Patents- Compulsory Licensing, Patent Agent- Qualification and Registration Procedure, Patent Drafting, Infringement and Defenses, PCT and Patent search.

UNIT IV

International Patent Law: American patent law-Patentability Requirements, Eligible subject matter, Application process, Infringement and defenses, America Invents Act, Hatch Waxman Act & FDA, Bayh-Dole Act, Re-examination.

UNIT V:

Standard setting and Technology transfer of Patent Law: Standard setting and patent Law- patent pools, standard essential patents and FRAND, Technology transfer and Patent Law- Technology transfer, IP Licensing and patent trolls.

REGISTRAR
Pondaiyan Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403.

AnyScanner

REFERENCES

- Aswani Kumar Bansal : Law of Trademarks in India
- B. L. Wadehra : Law Relating to Patents, Trademarks, Copyright, Designs and Geographical Indications.
- G.V.G Krishnamurthy : The Law of Trademarks, Copyright, Patents and Design.
- Satyawrat Ponkse : The Management of Intellectual Property.
- Feroz Ali, The Law of Patents, LexisNexis

HOD

Head of the Department
Department of Biotechnology
School of Arts & Science
Pnst Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST UNIVERSITY

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

CIRCULAR

BRANCH NAME	YEAR	COURSE OFFERED
Computer Science and Computer Applications		

HOD

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN

PRIST Deemed to be University

Dean of Arts & Science
PRIST Deemed to be University







REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/S 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

Academic year: 2021-2022
Course: B.Tech (IOT)
Subject Code: 20UCSEW120

Aim:

- To learn the basics of data analysis in R / Python Tool

Objectives:

- To know the fundamental concepts of data handling and analytics
- To learn fundamental data analysis using in R
- To study various analytics on unseen data

Course Outcomes:

MODULE -I

History and overview of R, Install and configuration of R programming environment, Basic language elements and data structures, R Studio, Mac Users, Online Help, Data input/output

MODULE -II

Data storage formats, Subsetting objects, Vectorization, Control structures

MODULE -III

Functions, Scoping Rules, Loop functions, Graphics and visualization, Character and date manipulations, Debug and related tools, Optimization, profiling, Statistical simulation

MODULE -IV

Case Studies: Learning R software using Data Mining

MODULE -V

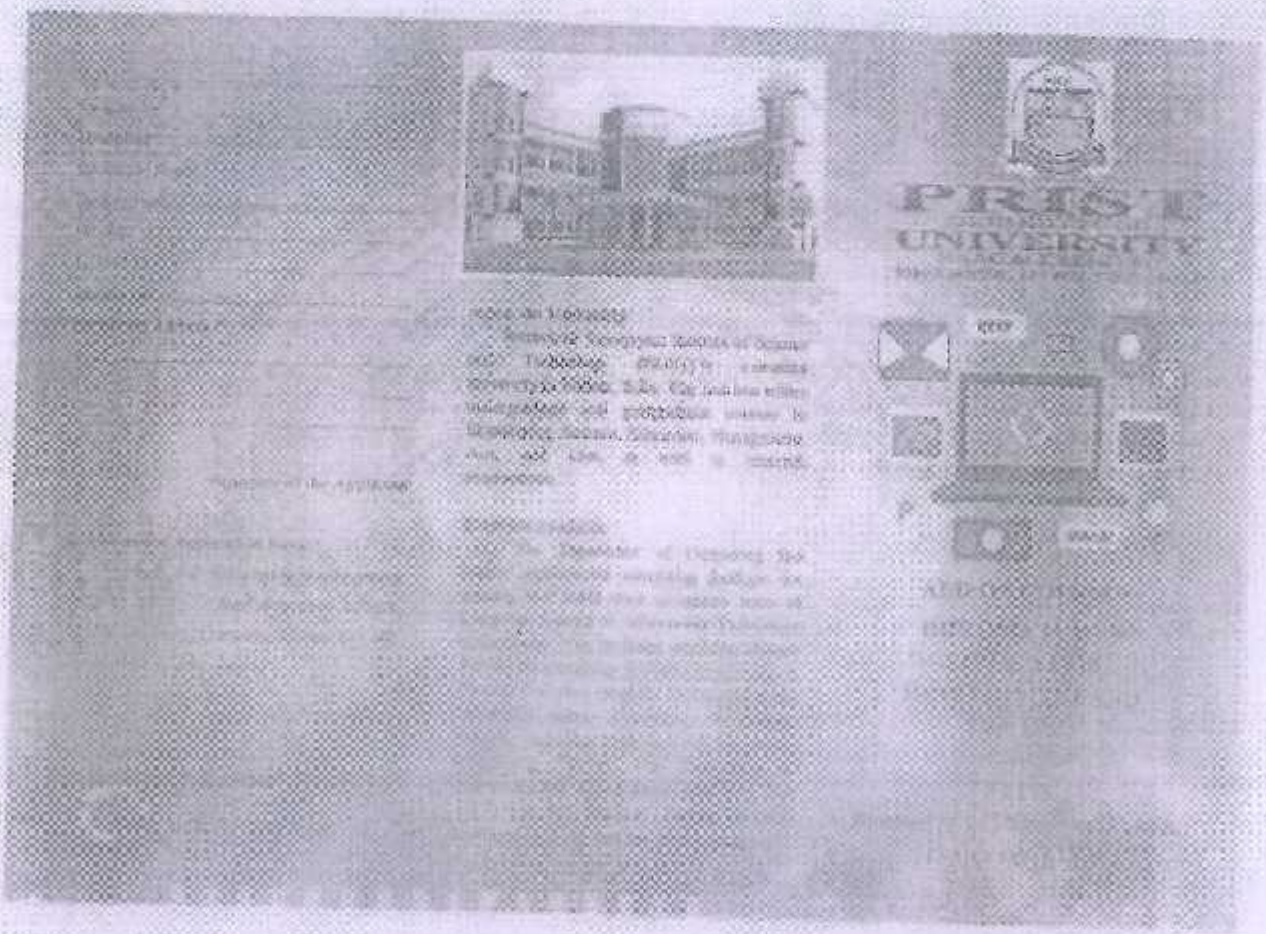
- Common real world problems in Data Science and Analytics
- Perform data analysis using R
- Design effective modeling of algorithms and work in big data platforms

REFERENCE BOOKS:

1. Jeffrey Ericson, Introduction to Statistical Programming with R, W Irizarry
2. Beyond Spreadsheets with R
3. Data Mining: Practical Machine Learning Tools and Techniques
4. Programming Collective Intelligence
5. http://www.cs.waikato.ac.nz

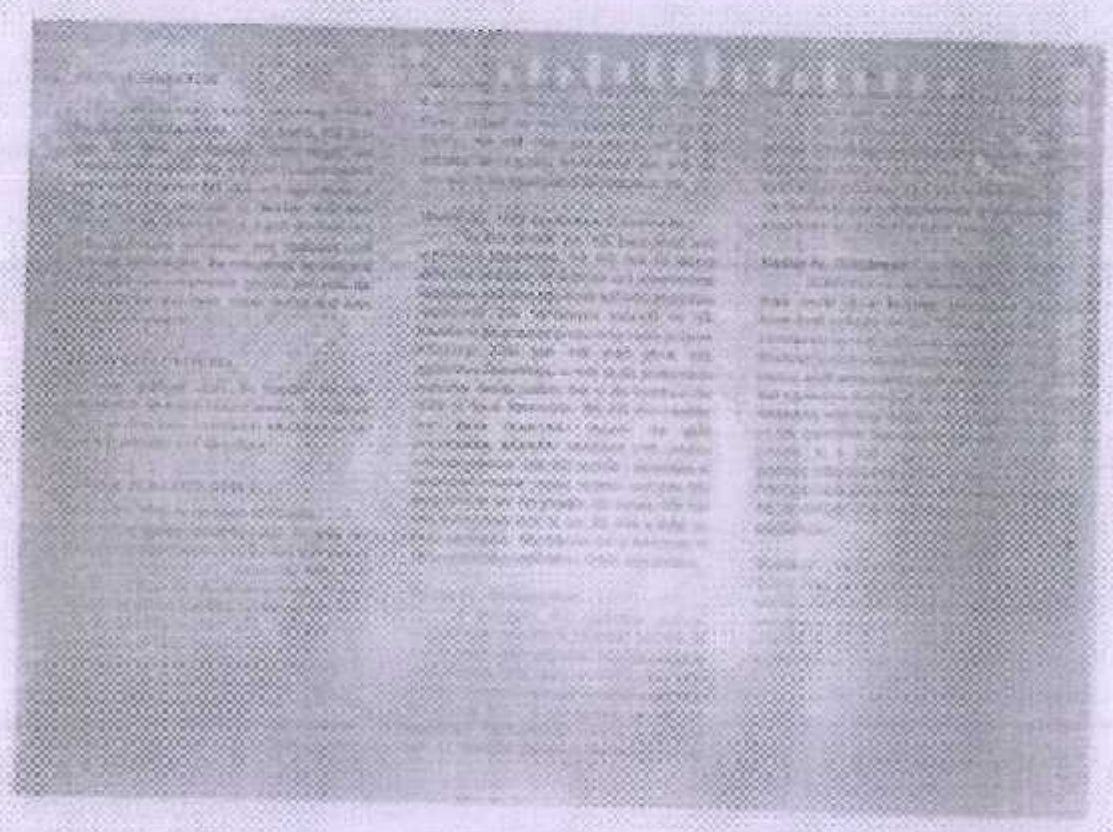
REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

Dean of Arts & Science
Thanjavur - 613 403, Tamilnadu.



REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu



REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
U/S 3 of UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean of Arts & Sciences
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

Course: WEB APPLICATION DEVELOPMENT AND HOSTING
Subject Code: 20DPWP123

Aim:

- To learn the basics of web application and development of hosting

Course objectives:

- To know the fundamental concepts of web designing
- To learn fundamental web application using to hosting
- To study various analyses on stream data

MODULE -1

Basics of Web Designing
Multimedia and its Applications
Web Technologies
Introduction to Web Design & Applications
Computer Graphics

MODULE -2

Mathematical Structures for Computer Science
HTML
CSS
JavaScript
Hosting

MODULE -3

Adobe Dreamweaver
Adobe Flash
Animation Software for Graphic Designing
Animation Techniques

MODULE -4

Control Panel
Creating Emails in Cpanel
Using FTP Client
Managing a Website

Course Outcomes:

- Convert real world problems to web processing in cpanel.
- Perform annotation and tracking the packet hosting.
- Design efficient modelling of large data and work in big data platforms.

REFERENCES: Castro, Elizabeth and Hyslop, *HTML5 and CSS, Eight Edition*, (Visual QuickStart Guide), Peachpit Press, 2013.

1. Deitle, Jon, *HTML5 Multimedia: Develop and Design*, Peachpit Press, 2011.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science (PRIST) (Deemed to be University)
THANJAVUR - 613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.





REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.



Dean of Arts & Science
Thanjavur - 613 402, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...

Courses: Software Testing using Selenium
Subject Code: 20DPIE125

Aim:

- To learn the basics of software testing using java environment.

Course objectives:

- To learn the fundamental concepts of software testing
- To learn fundamental testing the application using selenium
- To apply various impact Web HTML Elements.

Module 1: Java Programming for Selenium

1. Java Environment Setup

Download & Install Java (JDK) software, set JAVA environment variable path, and Download & Install Eclipse IDE

2. Java Keywords and Identifiers

3. Java Data Types

Java Data Types, Categories of Data Types in Java, Java Primitive Data Types, Java Non-primitive Data Types, and Data Type Conversion in Java.

4. Java Variables

Java Variables, What is Variable, Types of Variables in Java, Declare Variables, Assign values to Variables, and Java Variable Naming Rules.

10. Java Operators

Operators in Java, what is the operator? operator precedence, arithmetic operators, unary operators, comparison operators, and logical operators.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean of Academics
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

11. Java Control Flow
i. Decision Making/Conditional Statements
ii. Loop Statements
iii. Branching Statements

12. String Handling in Java

Java Strings, What is String?, Declare Strings in Java, String handling in Java, String Methods, String Concatenation, and String Comparison.

13. Java Data Structures

Java Arrays

Array in Java, What is Array in Java, Declare Arrays, Java Array length & methods, Advantages of Java Arrays, and Drawbacks of Java Arrays.

Java ArrayList

Java ArrayList, Java Data Structures, Java Arrays vs ArrayList, Add elements to an ArrayList, Iterate Java Array List Elements, and Java ArrayList Operations.

14. Java Inner and Nested

Java Inner and Nested, Java Inner Class, Java Objects, Java Access Class, Java Static Class, Java File Handling, and Java Database Connectivity.

15. Java Methods

Java Built-in methods

Java Built-in Methods, Java Java Standard Library Methods, Java String Methods, Java Number Methods, Java Character Methods, and Array Methods.

16. Java Exception Handling

Exception Handling in Java, What is Exception handling, Types of exceptions in Java, Java Program Run-time Errors, and How try-catch block.

17. Java Object Oriented Programming

Java Object-Oriented Programming, Class, Object, Method, Java Inheritance, Polymorphism in Java, Java Abstraction, and Java Encapsulation.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean of Arts & Sciences
PRIST
Thanjavur - 613 403, Tamilnadu.

Thanjavur - 613 403, Tamilnadu.

Module 2: Selenium Web Driver

1. Selenium Test Environment Setup

2. Inspect Web/HTML Elements

3. Locating Elements in Selenium (Using Element Locators)

4. Performing Actions on Elements (Using Selenium WebDriver Methods)

5. Selenium Page Object Model (Creating Object Repositories)

6. Writing Selenium Test Cases
Write Selenium Test Steps
Test Assertions
Identify Validation Points
Handling Exceptions Errors
Etc.

Module 3: TestNG Testing Framework for Selenium

Install TestNG plug-in for Eclipse IDE, Create Test Suites (TestNG Properties), Execute Test Cases, Organize Test Cases, Executing Test Suites, Generating Test Reports etc.

REFERENCE:

1. Guide to test automation using selenium by Dang and Nhu, Pearson (US)
2. Software Testing by Manish Tripathi (Oxford)
3. Introduction to selenium with WebDriver

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

Full Name .....

Programme .....

Discipline .....

Institution Name .....

Date of Birth .....

.....

Gender (M/F) .....

.....

E. Mail Id .....

Mobile No. .....

Permanent Address .....

.....

.....

.....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person

to the Co-ordinator, School of Arts and Science,

PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to :

Course Co-Ordinator

The Head of the Department

Department of Computer Science

PRIST University, Thanjavur

PRIST
Thanjavur - 613 403, Tamilnadu.



About the University

Pennaiyah Ramajayam Institute of Science and Technology is a private university in Vallam, near the campus offers undergraduate and postgraduate courses in Engineering, Science, Management, Arts, and Law, as well as research programmes.

Facilities Available

The Department of Computer Science has high-speed internet connectivity, computing and R&D work in various areas of Computer Science. The Department has various labs. The Software Lab has Parallel Programming, Data Mining & Warehousing, Computer Graphics, Image Processing, Networking, Web Technologies, Software Engineering, Compiler Design, Advanced Computer Architecture, Advanced Operating Systems, Advanced Database Management Systems, Mobile Computing, Cryptography and Network Security, Soft Computing, Pervasive Computing, Cloud Computing, Big Data Analytics, Internet of Things and Big Data Analytics.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU



VALUE ADDED COURSES

Certificate in [Diversity in Python Programming]

PRIST

Deemed to be University, Vallam,
Thanjavur -613 403

Professor
PRIST University, Vallam
Thanjavur - 613 403, Tamilnadu

1132

COURSE OBJECTIVE

The objective of this Graphic Design course has been growing in prominence due to its inclination with creativity and development of new designs with its applicability in a variety of fields. Diploma in Graphic Design is an extensive program wherein the students are instilled with the knowledge of multimedia, its principles, and application in different sectors. The graphics are to seen in magazines, books, advertisements, and websites are created using the tools of graphic designing.

The program not only concentrates on imparting the knowledge of graphic designing including illustration, photoshop, layering, and Corel, students are also imparted with the knowledge of editing, 3D Design, photography, printmaking in glass and textiles, video editing and digital media. Candidates are required to possess the passion for designing, creation and have a creative set of mind to create productive work.

ELIGIBILITY CRITERIA

Any graduate shall be eligible for the admission in the course. Intake Capacity 15 seats on first cum first basis (Additional admission to the course is prerogative of the school)

- String Manipulation – Basic Operations, Slicing & Functions and Methods
- User Defined Functions – Defining, Calling, Types of Functions, Arguments
- Lambda Function
- Importing Modules – Math Module

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (Deemed to be University)
Institution Deemed to be University u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

- Introduction to Python
- Installing Python (IDE) – Python 2.7 and 3.6 versions
- Writing and Executing Python Program
- Data types in Python
- Variables in Python – Declaration and Use
- Expressions in Python
- Operators in Python – Assignment, Logical, Arithmetic etc
- Taking User Input (Console)
- Conditional Statements – If else and Nested if else and elif
- Python Collections (Arrays) – List, Tuple, Sets and Dictionary
- Loops in Python – For Loop, While Loop and Nested Loops
- String Manipulation – Basic Operations, Slicing & Functions and Methods
- User Defined Functions – Defining, Calling, Types of Functions, Arguments
- Lambda Function
- Importing Modules – Math Module

to that effect in the appropriate form by School of Arts and Sciences, Department of Computer Science, PRIST University, Thanjavur, Tamilnadu.

COURSE OUTCOMES:

- Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
- Express proficiency in the handling of strings and functions.
- Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.
- Identify the commonly used operations involving file systems and regular expressions.
- Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

Course : UNIVERSITY IN PYTHON PROGRAMMING
Subject Code : 23CSCPY01

Aim:
To Learn the University in Python Programming Language.

Syllabus:
Installing Python IDES – Python IDLE and Anaconda
Writing Your First Python Program
Data Types in Python
Variables in Python – Declaration and Use
Typecasting in Python
Operators in Python – Assignment, Logical, Arithmetic etc
Taking User Input (Console)
Conditional Statements – If else and Nested If else and elif
Python Collections (Arrays) – List, Tuple, Sets and Dictionary
Loops in Python – For Loop, While Loop & Nested Loops
String Manipulation – Basic Operations, Slicing & Functions and Methods
User Defined Functions – Defining, Calling, Types of Functions, Arguments
Lambda Function
Importing Modules – Math Module

Course Outcomes:
[illegible] the fundamentals Python syntax and semantics to [illegible] as the use of Python control flow statements.
[illegible] in the handling of strings and functions.
[illegible] and implement Python programs for solving the data structures [illegible] and file processing applications.
[illegible] and implement Python programs for [illegible] and object oriented programming.
[illegible] Python.

Reference Books:
The Complete Reference in Python (Martin C. Brown)

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the [illegible]
THANJAVUR - 61



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED



REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403.

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Course : MACHINE LEARNING
Subject Code : 17CS3651R

Unit-I
Machine learning: What and why? - Examples of Machine Learning Applications - Types Of Machine Learning, Supervised Learning - Machine Learning Process- The Curse of Dimensionality, Overfitting - Training, Testing, and Validation Sets, The Confusion Matrix & Basic Statistics - Bias Variance Tradeoff.
Unit-II
Hebb's Rule - Neural Networks - The Perceptron - Linear Separability & Linear Regression, The Multi-layer Perceptron Basics, Algorithm - Local minima and Stochastic gradient Descent, Examples of Using The MLP - Regression Problem & Classification Example - Deriving Back-Propagation.
Unit-III
Linear Discriminant Analysis (LDA) - PRINCIPAL COMPONENT ANALYSIS (PCA), Factor Analysis - Independent Components Analysis - PROBABILISTIC MODEL - Gaussian Mixture Models - EM Algorithm - Nearest Neighbour Methods - Support Vector Machines.
Unit-IV
Evolutionary Learning - The Genetic Algorithm (GA), Reinforcement Learning, Decision Trees - CLASSIFICATION AND REGRESSION TREES (CART) - Ensemble Learning, Bagging, Random Forests, Unsupervised Learning, K-Means Algorithm - Vector Quantization.
Unit-V
Bayesian Networks - Markov Random Fields - Hidden Markov Models (HMMs) - Markov Chain Monte Carlo (MCMC) Methods - Deep Belief Networks (DBN).

Reference books:

Dean
Science & Technology
Thanjavur - 613 403, Tamilnadu.

Principal
Science & Technology
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU.



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMILNADU

SCHOOL OF ARTS AND SCIENCE

VALUE ADDED COURSE

Certificate of Appreciation

This is to certify that Ms/Mr **A.VISWANATHAN** Reg.No. 2101CH10217 has completed the Value Added Course on MACHINE LEARNING from 16/07/2021 to 13/08/2021 during the Academic year of 2021 to 2022.

REGISTRAR
Pennalyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

COURSE COORDINATOR | HOD | DEAN

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

1143

Full Name :

Programme :

Discipline :

Institution Name :

Date of Birth :

Gender (M/F) :

E Mail Id :

Mobile No :

Permanent Address :

Signature of the Applicant

Submission of Application Form

Submit your Application Form in person

Application may be sent to

Course Co-Ordinator

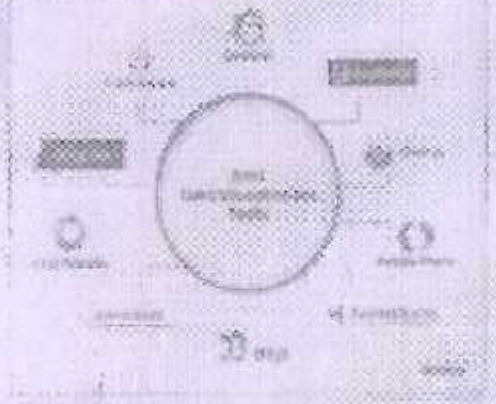
The Head of the Department





PONNAIYAH RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY (PRIST)

Declared as Deemed to be University
u/s 3 of the UGC Act, 1956



ADD-ON COURSES

Certificate in [DATA VISUALIZATION TOOL]

PRIST

Deemed to be University, Vallam,

Thanjavur -613 403

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

Dean of Arts & Science

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

1144

COURSE OBJECTIVE

The objective of Data visualization tools provide data visualization designers with an easier way to create visual representations of large data sets. When dealing with data sets that include hundreds of thousands or millions of data points, automating the process of creating a visualization, at least in part, makes a designer's job significantly easier.

The best data visualization tools on the market have a few things in common. First is their ease of use. The best tools also use a range of different chart, graph, and map types. Most of the tools below can output both images and interactive graphs. There are exceptions to the various criteria though. Some data visualization tools focus on a specific type of chart or map and do it very well. These tools also have a place among the "best" tools listed here.

ELIGIBILITY CRITERIA

Any graduate shall be eligible for the admission to the course without necessity to serve on first come first basis (Additional admission to the course is prerogative to the school)

COURSE DURATION (90 Hrs)

- Computer Studies
- Typographic Design
- Generic Skills
- Graphics Principle and Method of Design Introduction to Multimedia
- Basic Information
- Colour Theory for Computer

COURSE STRUCTURE AND DURATION

Course is 6 months duration and will be of 45 hrs supervised learning programme covering theoretical and practical aspects of Design graphology

Eligibility criteria for appearing in the in the final examination

Minimum Attendance - 80%

Minimum Internal Assessment marks - 40%

- It will be done through the whole year
- Candidate must obtain at least 35% marks in theory internal assessment to be eligible for the university examination.

Internal assessment will be done as follows:

a) Midterm and term examinations - 10 marks

b) Assignments/Projects/Class tests/Tutorial Presentations - 05 marks

c) Attendance - 05 marks

Total - 20 marks

Criteria for a pass in the subject

Minimum marks in theory - 45

SCHEME OF EXAMINATION:

Duration of written examination - 3 hrs

Maximum marks - 100

CERTIFICATION

The candidates successfully qualifying the course the course shall be awarded a certificate in this effect by the appropriate body i.e. School of Arts and Science, Department of Computer Science, PRIST University, Thanjavur, Tamilnadu.

COURSE OUTCOMES

REGISTRAR
Pennalyah Ramalayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMILNADU

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

Design effective data visualizations in order to provide new insights into a community's information to the viewer.

Find and select appropriate data that can be used in order to create a visualization that answers a particular question.

Understand how Cultures of Practice influence the way data may be collected, described, or formatted in order to align their own data management practices with those of their discipline.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Pennaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAM

Course: DATA VISUALIZATION TOOLS
Subject Code: 19CCDV01

AIM:

OBJECTIVES:

- To develop skills to both design and critique visualizations
- To introduce visual perception and core skills for visual analysis
- To understand visualization for time-series analysis
- To understand visualization for ranking analysis
- To understand visualization for deviation analysis
- To understand visualization for distribution analysis
- To understand visualization for correlation analysis
- To understand visualization for multivariate analysis
- To understand issues and best practices in information dashboard design

COURSE OUTCOMES:

- Know the history of data visualization and its connection with computer Graphics
- Understand the visualization pipeline and its relationship to other data analysis Pipelines
- Know the definition of the visualization and interpretation of the process

MODULE - 1 BASICS FOR VISUAL ANALYSIS

MODULE - 2 TIME-SERIES, RANKING AND DEVIATION ANALYSIS

Time-series analysis
Ranking analysis
Time-series displays
Time-series best practices
Slope graphs and ranking systems
Part-to-whole and ranking displays
Best practices

MODULE - 3 DISTRIBUTION, CORRELATION, AND MULTIVARIATE ANALYSIS

Distribution analysis
describing distributions
distribution patterns
distribution displays
distribution analysis best practices
correlation analysis
describing correlations

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAM...

Name :

Programme :

Discipline :

Institution Name:

Date of Birth :

Gender (M/F) :

E. Mail Id :

Mobile No :

Permanent Address :

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Co-Ordinator

The Head of the Department
Department of Computer Science
PRIST University,Thanjavur
E.mail: pristcsit@gmail.com



About the University

Pennaiyah Ramajayam Institute of Science and Technology (PRIST) is a deemed university in Vallam, India. The Institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

Facilities Available

The Department of Computing has highly sophisticated computing facilities for training and R&D work in various areas of Computer Science & Information Technology applications. The facilities available include Parallel Programming, Software Engineering & Testing, Computer Graphics, Multimedia & 3D, AutoCAD, Image Processing, Networking, Virtual Reality, Operating Systems, GUI, Distributed Computing, Unified. The Department of Computing has signed Memoranda with IBM for Python, IoT, Machine Learning, Artificial Intelligence and Big data Analytics training.

REGISTRAR
Pennaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

PRIST

DIGITAL MARKETING

ADD-ON COURSES

Certificate in DIGITAL MARKETING

PRIST
Deemed to be University, Vallam,
Thanjavur -613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

1152

COURSE OBJECTIVE

MATLAB or (Matrix Laboratory) is a high performance fourth generation programming language which is used for technical computing. It provides multi paradigm numerical computing environment and was developed by Math Works. It is used for integrating computation, visualization, and programming so that the programming environment becomes easy to use. The applications of MATLAB are increase. It is a powerful linear algebra tool with a very good collection of toolboxes, therefore it finds applications in research and teaching on domains of robotics and automation.

ELIGIBILITY CRITERIA

Any graduate shall be eligible for the admission to the course Intake Capacity 15 Seats as first come first basis (Additional admission to the course is prerogative of the school)

COURSE DURATION (45 Hrs)

- Logical operations and variables
- Finding and counting
- Logical indexing
- Organizing Data
- Combining tables of data
- Table metadata
- Dates and durations
- Discrete categories
- Dealing with missing data
- Plotting functions
- Customizing plots
- Programming shortcuts
- User interaction
- Decision branching
- Loops

EXAMINATION

1. Every student has to give periodic tests consisting of Programming skills and Objective Questions

2. At the end of the Course each student will give a presentation on a topic covered in the course

COURSE STRUCTURE AND DURATION

Course is 6 months duration and will be of 45 hrs theoretical training programme covering theoretical and practical aspects of Adobe photoshop.

Eligibility criteria for appearing or due to the final examination
Minimum Attendance - 80%
Minimum Internal Assessment marks - 40%
- It will be done through the whole year

- Candidate must obtain at least 33% marks in theory internal assessment to be eligible for the university examination.

Internal assessment will be done as follows
a) Mid-term and test examinations – 10 marks
b) Assignments/Projects/Class test/Model Examinations – 05 marks
c) Attendance – 05 marks Total – 20 marks

Criteria for a pass in the subject
Minimum marks in theory - 45
SCHEME OF EXAMINATION
Duration of written examination - 3 hrs
Maximum marks – 100

CERTIFICATION

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Sciences, Department of Computer Science, PRIST University, Thanjavur, Vallam.

COURSE OUTCOMES

You will learn fundamental computer programming concepts such as variables, control structures, functions and many others

You will learn the powerful support MATLAB provides for working with matrices.

You will learn about various data types and how to handle them in MATLAB

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamilnadu.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

Name : .....

Programme : .....

Discipline : .....

Institution Name: .....

Date of Birth : .....

Gender (M/F) : .....

E. Mail Id : .....

Mobile No : .....

Permanent Address :

.....

.....

.....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Co-Ordinator

The Head of the Department
Department of Computer Science
PRIST University,Thanjavur.
E.mail: pristcsd@gmail.com

PRIST
Thanjavur - 613 403, Tamilnadu.



About the University

Pannaiyah Ramaiyam Institute of Science and Technology (PRIST) is a deemed university in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

Facilities Available

The Department of Computing has highly sophisticated computing facilities for training and R&D work in various areas of Computer Science & Information Technology applications. The facilities available include Parallel Programming, Software Engineering & Testing, Computer Graphics, Multimedia & 3D, AutoCAD, Image Processing, Networking, Various Operating Systems, GIS, Distributed Computing, DotNet. The Department of Computing has signed Memoranda with IBM for Python, IoT, Machine Learning, Artificial intelligence and Big Data Analytics training.

REGISTRAR
Pannaiyah Ramaiyam Institute of Science & Technology (PRIST)
(Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST

Excel Data Analysis

ADD-ON COURSES

Certificate in

DATA ANALYSIS USING MS-EXEL

PRIST
Deemed to be University, Vallam,
Thanjavur -613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

1154

COURSE OBJECTIVE

1. Computer Repair: Identify and fix hardware and software issues with confidence.

2. Maintenance Strategies: Implement preventive measures to keep systems running smoothly.

3. Troubleshooting Expertise: Develop effective skills to diagnose and resolve complex IT challenges.

4. Mobile Device Repair: Learn about the common smartphone and tablet issues and how to resolve them.

ELIGIBILITY CRITERIA

Any graduate shall be eligible for the admission to the course Intake Capacity 15 Seats on first come first basis (Additional admission to the course is perrogative of the school).

COURSE DURATION (45 Hrs)

- Troubleshooting and Diagnosing Common Computer Issues
- Diagnosing and troubleshooting computer hardware issues
- ranging from identifying problems to troubleshooting
- debugging
- PC Hardware & Software Troubleshooting
- Network hardware and concepts
- Virtualization and cloud computing
- Troubleshooting mobile device issues
- How various printer types work
- IP addressing
- Common network ports and protocols
- Computer storage types
- PC components and their functions
- CompTIA A+ concepts

EXAMINATION

3. Every student has to give periodic tests consisting of Programming tasks and Objective Questions

4. At the end of the Course each student will give a presentation on a topic covered in the course

COURSE STRUCTURE AND DURATION

Course is 6 month duration and will be of 45 hrs classroom training programme covering theoretical and practical aspects of Adhesive photography.

Eligibility criteria for appearing in the in the final examination:
Minimum Attendance - 80%
Minimum Internal Assessment marks - 40%
It will be done through the whole year.

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

Candidate must obtain at least 35% marks in theory internal assessment to be eligible for the university examination.

Internal assessment will be based as follows:
a) 3 term end test examinations = 10 marks
b) Assignments/Projects/Class Test/Clinical Presentations = 05 marks
c) Attendance = 05
marks Total = 20 marks

Criteria for a pass in the subject
Minimum marks in theory - 45
SCHEME OF EXAMINATION:-
Duration of written examination - 3 hrs
Maximum marks – 100

CERTIFICATE

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Science, Department of Computer Science, PRIST University, Thanjavur, Vallam.

COURSE OUTCOMES

Repair Laptops, Tablets, Identify the Faults & Troubleshoot, Establish Secured Wireless Network.

Define motherboard components and CPU types, configure BIOS settings, summarize power supply basics, and troubleshoot these items.

Explain networking infrastructures, describing storage devices options.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

Course Name: DATA ANALYSIS USING MS-EXCEL

Course Code: 18CCDAM03

After completion of the course student will be able to

CO1 Indicate the names and functions of the Excel interface components.
CO2 Format & edit data and cells.
CO3 Construct formulas, including the use of built-in functions, and relative and absolute references.
CO4 Create charts and preview worksheets.

Unit I

Introduction to Excel: About Excel & Microsoft – Uses of Excel – Excel software - Spreadsheet window pane - Title Bar - Menu Bar - Standard Toolbar - Formatting Toolbar - the Ribbon - File Tab and Backstage View - Formula Bar - Workbook Window - Status Bar - Task Pane - Workbook & sheets
Columns & Rows: Selecting Columns & Rows - Changing Column Width & Row Height – Auto fitting Columns & Rows - Hiding/Unhiding Columns & Rows - Inserting & Deleting Columns & Rows - Cell - Address of a cell - Components of a cell – Format – value – formula - Use of paste and paste special

Unit II

Functionality Using Ranges: Using Ranges – Selecting Ranges - Entering Information Into a Range - Using AutoFill
Creating Formulas (4 hours): Using Formulas – Formula Functions – Sum – Average, if, Count, max, min, Proper, Upper, Lower, Using AutoSum

Reference Function - Concatenate, Vlookup, Hlookup, Match, Round, Text, Trim Spreadsheet Charts (4 hours)
Creating Charts – Different types of charts, Formatting Chart Objects – Changing the Chart Type – Showing and Hiding the Legend – Showing and Hiding the Data

Unit III

Table Data Analysis – Sorting, Filter – Text to Column – Data Validation PivotTables – Creating PivotTables – Manipulating a PivotTable – Using the PivotTable Toolbar – Changing Data Field – Properties – Displaying a PivotChart – Setting PivotTable Options – Adding Subtotals to PivotTables

Unit IV

Spreadsheet Tools – Moving between Spreadsheets, Selecting Multiple Spreadsheets – Inserting and Deleting Spreadsheets Renaming Spreadsheets – Splitting the Screen – Freezing Panes – Copying and Pasting Data between Spreadsheets Hiding - Protecting Worksheets

Unit V:

Making Macros: Recording Macros – Running Macros – Deleting Macros

Text Books:

1. Microsoft Office Excel, Torben Lage Paudsen, www.Bookboon.com

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TA...

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

Course Name: DIGITAL MARKETING

Course Code: 25CCSS02

CO1 Understanding the concepts of Digital Marketing, Google Ad words, and social media

CO2 Identifying the domains for digital marketing

CO3 Analysis of social media and social network with respect to marketing

Unit I

Digital Marketing Fundamentals – Website Planning and Structure – Facebook Marketing for Business

Unit II

Google Adwords: Understanding Adwords Google Ad Types Pricing Models PPC Cost Formula Ad Page Rank Billing and Payments Adwords User Interface Keyword Planning Keywords Control Creating Ad Campaigns Creating Text Ads Creating Ad Groups Bidding Strategy for CPC Practical Examples

Unit III:

LinkedIN and Twitter Marketing – Google Analytics and Webmaster Tool –Search Engine Optimization (SEO) – Affiliate Marketing & Google AdSense – Case Studies and Practical Assignments – Google Certification Program Training

Unit IV

Marketing vs Sales Section – Marketing Mix and 4 Ps –What is Digital Marketing? Inbound vs Outbound Marketing – Content Marketing – Understanding Traffic – Understanding Leads – Strategic Flow for Marketing Activities.

Unit V

PPC Advertising YouTube and Video Marketing E-mail Marketing for Business Lead Generation & Marketing Automation – eCommerce and Payment Gateway – Remarketing Strategies – Advance Level- Google Plus for Business

Reference Books:

1. Ryan Deiss, Russ Henneberry, "Digital Marketing for Dummies", A Wiley Brand.
2. Ian Dodson, "The Art of Digital Marketing", Wiley
3. Calvin Jones and Damian Ryan, "Understanding Digital Marketing", Koganpage, IV Edition.

PRIST [illegible], Tamilnadu.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act 1956
THANJAVUR - 613 403, TNS

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ADD ON COURSE-Reg.:

It is informed that the department of computer science and engineering is planning to organized a certified course on Data Science Using Artificial Intelligent on 15.10.21 for the academic year 2021-2022 odd semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on Data Science Using Artificial Intelligent and motivate them to attend the course. HOD's are requested to nominate one faculty member to co-ordinate the same.

REGISTRAR
Pannaiyan Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur.

To

The DEAN,
Prist University,
Vallam, Thanjavur.

Respected Sir,

Sub:- Requesting Permission for conducting Add on Course - Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester.

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Details: As Per.

Thanking You.

Yours Truly,
HOD/CSE

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TA... *J.

DATA SCIENCE USING ARTIFICIAL INTELLIGENT

UNIT I

INTELLIGENT AGENTS

Introduction to AI – Agents and Environments – concept of rationality – nature of environments – structure of agents. Problem solving agents – search algorithms – uninformed search strategies.

UNIT II

PROBLEM SOLVING

Heuristic search strategies – heuristic functions. Local search and optimization problems – local search in continuous space – search with non-deterministic actions – search in partially observable environments – online search agents and unknown environments.

UNIT III

GAME PLAYING AND CSP

Game theory – optimal decisions in games – alpha-beta search – monte-carlo tree search – stochastic games – partially observable games. Constraint satisfaction problems – constraint propagation – backtracking search for CSP – local search for CSP – structure of CSP.

UNIT IV

LOGICAL REASONING

Knowledge-based agents – propositional logic – propositional theorem proving – propositional model checking – agents based on propositional logic. First-order logic – syntax and semantics – knowledge representation and engineering – inferences in first-order logic – forward chaining – backward chaining – resolution.

UNIT V

PROBABILISTIC REASONING

Acting under uncertainty – Bayesian inference – naive Bayes models. Probabilistic reasoning – Bayesian networks – exact inference in BN – approximate inference in BN – causal networks.

REGISTRAR
Pennalyah Ramalayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

AI and Data Science are the key enablers for disruptive innovations of this century, these emerging technological revolutions have reshaped our work and life style. From the start of June 2021, CIT, Coimbatore establishes a new department "Artificial Intelligence and Data Science". The department will be driven by its commitment to excel in research, design and development of next generation cutting-edge technologies in the area of Artificial Intelligence and Data Analytics. Our mission is to cultivate Industry-Academia partnership, drive collaborative research with other domains and equip our talents to contribute on multi-disciplinary projects by translating the developed technology into real world impacts.



AI & DS Programme

The unique undergraduate program, B.Tech. Artificial Intelligence and Data Science (AI & DS), aims the students to acquire technical skills to perform data processing, analysis and visualization in multiple real-time applications. Program envisions to equip students with the ability to identify and assess societal, health, safety and cultural issues with an emphasize on identifying their consequent responsibilities as engineers of offering optimal and effective solutions for the same.

The designed curriculum is interdisciplinary at the core – straddling computer Science blended with Mathematical Foundations, Artificial Intelligence Techniques, Machine Learning Principles, Statistical Methods, Data Science Philosophies, and their applications across multiple domains. Curriculum also covers on sub-field such as Big Data Analytics, Deep Learning and Computer Vision and Pattern Recognition.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403

COURSE OUTCOMES:

- Explain intelligent agent frameworks
- Apply problem solving techniques
- Apply game playing and CSP techniques
- Perform logical reasoning
- Perform probabilistic reasoning under uncertainty

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ADD ON COURSE-Reg.

It is informed that the department of computer science and engineering is planning to organized a certified course on 3D Animation using Mat plot on 09.11.21 for the academic year 2021-2022 odd semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on 3D Animation Using Mat plot and motivate them to attend the course. HOD's are requested to nominate one faculty member to co-ordinate the same.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur.

To

The DEAN,
Prist University,
Vallam, Thanjavur.

Respected Sir,

Sub:- Requesting Permission for conducting Add on Course – Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester.

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs.

Thanking You,

Yours Truly,
HOD/AIDS

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

3D ANIMATION USING MATPLOT

UNIT I INTRODUCTION TO SET MODELING FOR FILM, GAMING AND TELEVISION.

Set Modeling Overview and Objective: Modeling using Nurbs and Polygons in 3D software. Strategies of Modeling. Tips and Techniques of Modeling usingPolygons.overview of Polygon selection and creation, Combining, separating and splitting.

UNIT II INTRODUCTION TO INORGANIC, ORGANIC, AUTOMOTIVE MODELING

Inorganic Modeling such as Solar systems, mountain, stage show background, gaming background. Automotive like car, bus and van with reference pictures. To create a model as it is in the picture.

UNIT III BASIC TEXTURING

Advanced Materials Using Specialized Material Types. Unwrapping UVs and Using Poly Mapping and Creating Baked Textures and Normal Maps. Working with Advanced Modeling and Light Tracing with Radiosity

UNIT IV TEXTURING THE MODEL USING UV MAPPING

Texturing and Shading. Intro to Hyper shade,UV mapping overview, Mapping UVs: Modeling and Texturing effects.UVs menu reference, UVs windows and editors reference.

UNIT V RENDERING THE TEXTURE WITH SHADING

Texturing and Shading by Unwrapping the Models. Gaming background Texturing. Digital texturing using Photoshop and Texturing via other 3D tools.Applying Mental Ray Shades to the model and Using Final Gather to Fine Tuning Mental Ray Shades.

3D animation is a process of creating moving images in a three-dimensional digital environment. It involves designing, modeling, and animating objects or characters in a 3D space to create the illusion of movement and depth. This type of animation is widely used in various fields, including film, television, video games, virtual reality, and simulations.

REGISTRAR
Pannaiyan Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Key Components of 3D Animation:

1. **Modeling:** The creation of 3D objects or characters. This involves defining the shape, structure, and appearance of objects using vertices, edges, and polygons. Modeling can be done using software like Blender, Maya, or 3ds Max.
2. **Texturing:** Applying surface details to the 3D models. Textures are images or patterns that give the model its color, detail, and material properties, such as wood grain or fabric texture.
3. **Rigging:** Creating a skeleton or control system for a 3D model, which allows it to be animated. Rigging involves defining bones, joints, and control points that can be manipulated to move the model.
4. **Animation:** The process of creating movement for the 3D models. This involves setting key frames (specific points in time where changes occur) and creating smooth transitions between them to produce realistic motion. Animation can include character movements, object interactions, and environmental changes.
5. **Lighting:** Setting up light sources in the 3D environment to simulate how light interacts with objects. Proper lighting is crucial for creating mood, highlighting details, and ensuring the scene looks realistic.
6. **Rendering:** The process of generating the final images or video from the 3D scene. Rendering converts the 3D data into 2D images or video frames, taking into account textures, lighting, shadows, and other effects. This process can be time-consuming and resource-intensive.
7. **Compositing:** Combining rendered images or video with other elements, such as special effects, background layers, or additional visual enhancements. Compositing helps integrate the 3D animation seamlessly into the final project.

Applications of 3D Animation:

1. **Film and Television:** Creating visual effects, animated characters, and entire virtual environments. Examples include animated movies like "Toy Story" or visual effects in movies like "The Avengers."

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be ... u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TN.

2. **Video Games**: Designing characters, environments, and animations for interactive gameplay. 3D animation is essential for creating lifelike characters and dynamic game worlds.
3. **Virtual Reality (VR) and Augmented Reality (AR)**: Developing immersive experiences that blend virtual elements with the real world or create fully virtual environments for users to interact with.
4. **Simulations and Training**: Building realistic simulations for training purposes, such as flight simulators or medical training programs, to provide hands-on experience in a controlled virtual environment.
5. **Architecture and Product Design**: Visualizing architectural designs and product prototypes in 3D to better understand their appearance and functionality before physical production.
6. **Marketing and Advertising**: Creating compelling visual content for commercials, promotional videos, and advertisements to engage audiences and showcase products or services.

3D Animation using Matplot

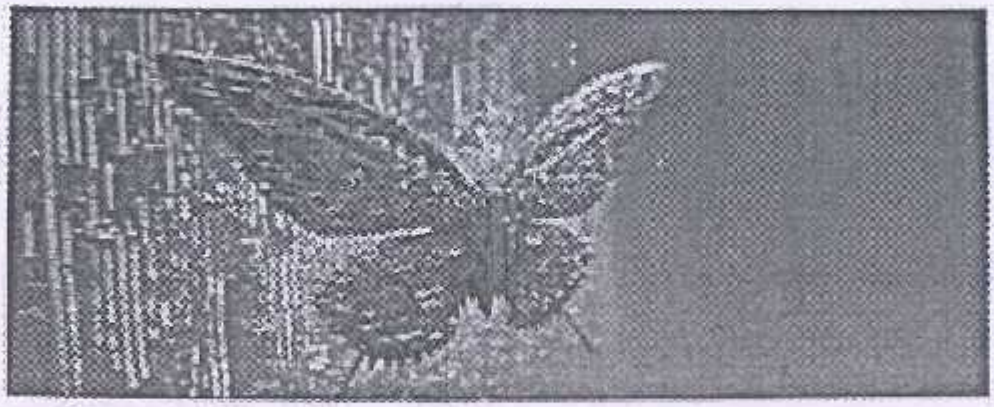
Matplotlib, a popular plotting library in Python, does have some support for 3D plotting and animation, though it's not as feature-rich for 3D animation as some other libraries like Blender or Maya. You can create basic 3D animations using Matplotlib's `mpl_toolkits.mplot3d` module in combination with its animation capabilities.

Install Matplotlib

Make sure you have Matplotlib installed. You can install it using pip if you haven't already:

```
pip install matplotlib
```

REGISTRAR
Pannaiyan Ramaiyan Institute of
Sciences & Technology (PRIST)
(Institution Deemed University)
THANJAVUR



Explanation:

1. Initialize Plot: plt.figure() and fig.add_subplot(111, projection='3d') create a 3D plot.
2. Create Data: np.linspace and np.meshgrid generate a grid of x and y values. Z is initially set to a sine function of the distance from the origin.
3. Plot Initial Data: ax.plot_surface creates a surface plot with the initial data.
4. Update Function: This function updates the Z values for each frame of the animation. It clears the previous plot and redraws the surface with updated data.
5. Animation: animation.FuncAnimation is used to animate the plot. It calls the update function for each frame.

REGISTRAR
Pondicherry Ramaiyan Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
(U/S 3 OF UGC ACT 1956)
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ARMOR COURSE-Reg.

It is informed that the department of computer science and engineering is planning to organized a certified course on Ethical Hacking on 05.01.22 for the academic year 2021-2022 odd semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on Ethical Hacking and motivate them to attend the course. HOD's are requested to nominate one faculty member to coordinate the same.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403. TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur

To

The DEAN,
Prist University,
Vallam, Thanjavur

Respected Sir,

Sub:- Requesting Permission for conducting Add-on Course - Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester.

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs

Thanking You,

Yours Truly,
HOD/AIDS

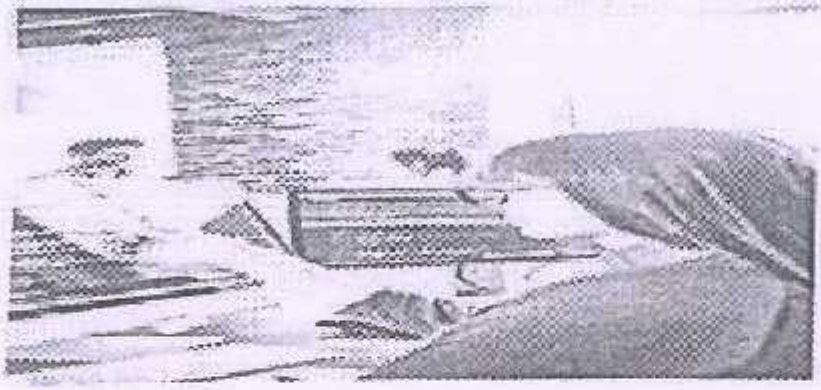
REGISTRAR
Pannaiyan Ramaiyan Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

ETHICAL HACKING



Who is a Certified Ethical Hacker?

A Certified Ethical Hacker is a specialist typically working in a red team environment, focused on attacking computer systems and gaining access to networks, applications, databases, and other critical data on secured systems. A CEH® understands attack strategies, the use of creative attack vectors, and mimics the skills and creativity of malicious hackers. Unlike malicious hackers and actors, Certified Ethical Hackers operate with permission from the system owners and take all precautions to ensure the assessments remain confidential. Bug bounty researchers are expert ethical hackers who use their attack skills to uncover vulnerabilities in the systems.



What is CEH® v12?

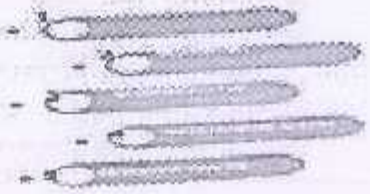
The Certified Ethical Hacker has been battle-hardened over the last 20 years, creating hundreds of

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

thousands of Certified Ethical Hackers employed by top companies, militaries, and governments worldwide.In its 12th version, the Certified Ethical Hacker provides comprehensive training, hands-on learning labs, practice cyber ranges for engagement, certification assessments, cyber competitions, and opportunities for continuous learning into one comprehensive program curated through our core learning framework: 1. Learn 2. Certify 3. Engage 4. Compete

The CEH® v12 is a specialized and one-of-a-kind training program to teach you everything you need to know about ethical hacking with hands-on training, labs, assessment, a mock engagement (practice), and global hacking competition. Stay on top of the game with the most in-demand skills required to succeed in the field of cyber security.





COURSE OUTCOMES:

At the end of this course, the students will be able:

1. To express knowledge on basics of computer based vulnerabilities
2. To gain understanding on different foot printing, reconnaissance and scanning methods.
3. To demonstrate the enumeration and vulnerability analysis methods
4. To gain knowledge on hacking options available in Web and wireless applications.
5. To acquire knowledge on the options for network protection.

Unit I INTRODUCTION TO HACKING

Introduction to Hacking – Important Terminologies – Penetration Test – Vulnerability Assessments versus Penetration Test – Pre-Engagement – Rules of Engagement -Penetration Testing Methodologies – OSSTMM – NIST – OWASP – Categories of Penetration Test – Types

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL ...

of Penetration Tests – Vulnerability Assessment Summary – Reports

Unit II FOOT PRINTING AND RECONNAISSANCE

Scanning Networks – Enumeration – Vulnerability Analysis – System Hacking – Malware Threats – Sniffing

Unit III NETWORK ATTACKS

Vulnerability Data Resources – Exploit Databases – Network Sniffing – Types of Sniffing – Promiscuous versus Non promiscuous Mode – MITM Attacks – ARP Attacks – Denial of Service Attacks –Hijacking Session with MITM Attack – SSL Strip: Stripping HTTPS Traffic – DNS Spoofing – ARP Spoofing Attack Manipulating the DNS Records – DHCP Spoofing –

Unit IV TYPES OF HACKERS

Black Hat Hacker – White Hat Hacker – Grey Hat Hacker – Hacking Process – Foot Printing – Scanning – Gaining Access – Maintaining Access

Unit V WIRELESS AND WEB HACKING

Wireless Hacking – Introducing Aircrack– Cracking the WEP – Cracking a WPA/WPA2 Wireless Network Using Aircracking – Evil Twin Attack – Causing Denial of Service on the Original AP – Web Hacking – Attacking the Authentication – Brute Force and Dictionary Attacks – Types of Authentication – Logic Protection Mechanisms – Captcha Validation Flaw

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403, TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ADD ON COURSE -Reg.,

It is informed that the department of computer science and engineering is planning to organized a certified course on **Block chain** on 14.02.22 for the academic year 2021-2022 odd semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on Block Chain and motivate them to attend the course. HOD's are requested to nominate one faculty member to co-ordinate the same.

REGISTRAR
Pondaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMILNADU

From

The HOD,
Department of CSE,
PRIST University,
Vallam, Thanjavur.

To

The DEAN,
PRIST University,
Vallam, Thanjavur.

Respected Sir,

Sub:- Requesting Permission for conducting Add on Course – Reg

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester.

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs.

Thanking You,

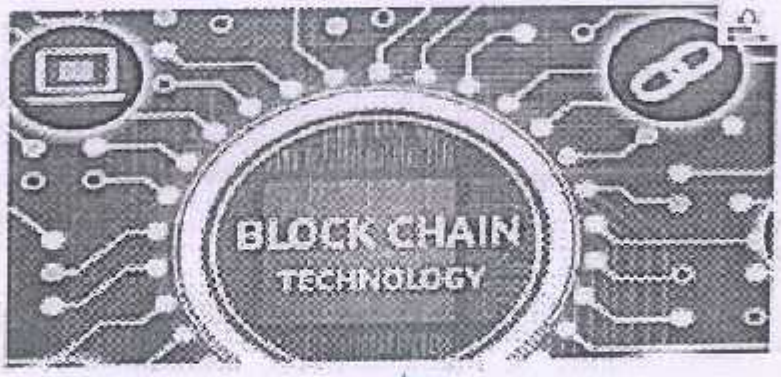
Yours Truly,
HOD/CSE

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL Nadu

BLOCKCHAIN TECHNOLOGY

A blockchain is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties. Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. And, once entered, information can never be erased. The blockchain contains a certain and verifiable record of every single transaction ever made. Bitcoin, the decentralized peer-to-peer digital currency, is the most popular example that uses blockchain technology. The digital currency bitcoin itself is highly controversial but the underlying blockchain technology has worked flawlessly and found wide range of applications in both financial and non-financial world.

The main hypothesis is that the blockchain establishes a system of creating a distributed consensus in the digital online world. This allows participating entities to know for certain that a digital event happened by creating an irrefutable record in a public ledger. It opens the door for developing a democratic open and scalable digital economy from a centralized one. There are tremendous opportunities in this disruptive technology and revolution in this space has just begun. Current digital economy is based on the reliance on a certain trusted authority. But all online transactions rely on trusting. This white paper describes blockchain technology and some compelling specific applications in both financial and non-financial sector. We then look at the challenges ahead and business opportunities in this fundamental technology that is all set to revolutionize our digital world.



REGISTRAR
Pommalyar Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Course outcomes

1. Be able to state core blockchain concepts, the benefits, and the limitations of blockchain technologies.
2. Be able to state the key differentiators for blockchain from other technology systems.
3. Understand the technical underpinnings of blockchain technology at sufficient depth to perform analysis of the impacts of certain implementation decisions in proposals.

UNIT I INTRODUCTION TO BLOCKCHAIN

History of Blockchain – Types of Blockchain – Consensus – Decentralization using Blockchain – Blockchain and Full Ecosystem Decentralization – Platforms for Decentralization.

UNIT II BITCOIN BASICS

Bitcoin blockchain, Challenges and solutions, proof of work, Proof of stake, alternatives to Bitcoin consensus, Bitcoin scripting language and their use.

UNIT III ETHEREUM

The Ethereum Network – Components of Ethereum Ecosystem – Ethereum Programming Languages: Runtime Byte Code, Blocks and Blockchain, Fee Schedule – Supporting Protocols – Solidity Language.

UNIT IV PRIVACY, SECURITY ISSUES IN BLOCKCHAIN

Pseudo-anonymity vs. anonymity, Zcash and Zk-SNARKS for anonymity preservation, attacks on Blockchains: Sybil attacks, selfish mining, 51% attacks advent of algorand; Sharding based consensus algorithms to prevent these attacks.

UNIT V ALTERNATIVE BLOCKCHAINS AND NEXT EMERGING TRENDS

Kadena – Ripple – Rootstock – Quorum – Tendermint – Scalability – Privacy – Other Challenges – Blockchain Research – Notable Projects – Miscellaneous Tools

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ADD ON COURSE-Reg.,

It is informed that the department of computer science and engineering is planning to organized a certified course on Robotics And Automation on 21.03.22 for the academic year 2021-2022 even semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on Robotics And Automation and motivate them to attend the course. HOD's are requested to nominate one faculty member to co-ordinate the same.

HOD

REGISTRAR
Pondicherry Ramaiyah Institute of
Science & Technology (PRIST)
(Accredited Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu, India.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur.

To

The DEAN,
Prist University,
Vallam, Thanjavur.

Respected Sir,

Sub: - Requesting Permission for conducting Add on Course – Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester:

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs.

Thanking You.

Yours Truly,
HOD/AIDS

Ponnaiyah Ramajayam Institute of Science & Technology (Deemed to be University)
Thanjavur - 613 403, Tamil Nadu.

UNIT I OVERVIEW OF ROBOTICS

Introduction to Robotics - History - Definitions - Law of Robotics – Terminologies - Classifications Overview – Links & Joints - Degrees of Freedoms - Coordinate Systems - Work Volume - Precision, Repeatability & Accuracy - Position and Orientation of Objects - Roll, Pitch and Yaw Angles - Joint Configuration of Five Types of Serial Manipulators - Wrist Configuration - Overview of end effector - Selection and Application of Serial Manipulators.

UNIT II FORWARD KINEMATICS - GEOMETRICAL AND ALGEBRAIC APPROACH

Need for forward and Inverse Kinematics Equation – Parameters for Design and Control – Methods of forward and inverse kinematics- Geometrical and Algebraic Approach for Forward Kinematics Solution, 1 DOF - 2 DOF Planar Robot (2P and 2R), 3DOF 2RP Spatial Robot.

UNIT III FORWARD KINEMATIC MODELING – DENAVIT-HARTEBERG (DH) APPROACH

Unit Circle Trigonometry - Translation Matrix - Rotation matrix, Euler Angles - Quaternion Fundamental - Dot and Cross Products - Frames and Joint Coordinates - Homogeneous Transformation - D-H and Modified D-H Convention and Procedures – Forward kinematics Solution using D-H Convention 3 DOF wrist , RR Planar, 3 DOF RRP, Cartesian, Cylindrical, Spherical , SCARA and Articulated 3 DOF robots - 3 DOF robot with wrist.

UNIT IV INVERSE KINEMATICS&MODELING

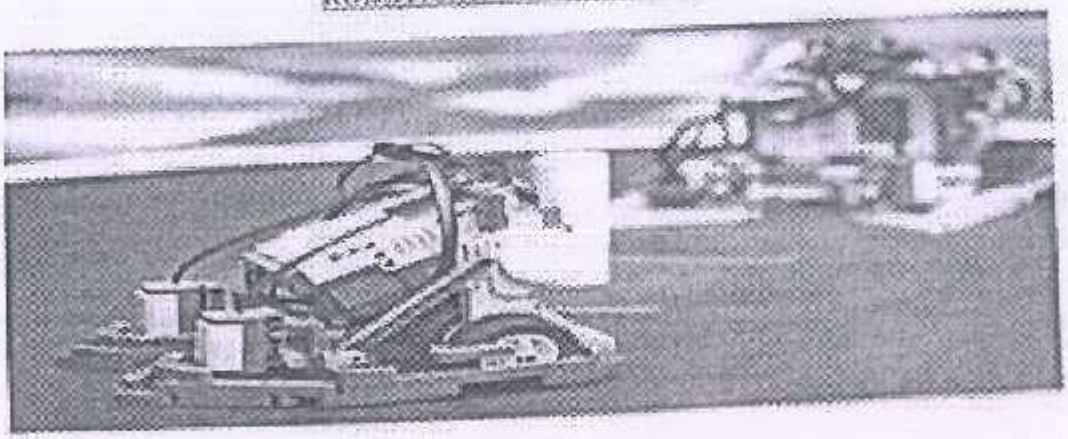
Introduction to inverse kinematics -Issues in inverse kinematics - Inverse Kinematics of 2 DOF Planar robot - 2 and 3DOF planar and Spatial robot - Tool configuration - Inverse kinematics of 3 axis robot and 6 axis Robot - Inverse kinematics Computation- Closed loop solution

UNIT V KINEMATIC MODELING OF DIFFERENTIAL DRIVE ROBOT

Degree of Mobility, Steerability and Maneuverability - Mobile Robot kinematics - Kinematic model and constraints, Mobile robot workspace – Representation of robot position – Kinematic models of differential wheel drive - Fixed wheel and steered wheel - Mobile manipulators and its applications – swarm robots.

REGISTRAR
Periyakulam Ramalingam Institute of Science & Technology (PRIST)
(Deemed to be University)
- 613 403, T.N.

ROBOTICS AND AUTOMATION



What is ROBOTICS AND AUTOMATION

Robotics is a field of engineering that deal with design and application of robots and the use of computer for their manipulation and processing. Robots are used in industries for speeding up the manufacturing process. They are also used in the field of nuclear science, sea-exploration, servicing of transmission electric signals, designing of bio-medical equipments etc. Robotics requires the application of computer integrated manufacturing, mechanical engineering, electrical engineering, biological mechanics, software engineering.

Automation and Robotics Engineering is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. In the scope of industrialization, automation is a step beyond mechanization.

Specialization in robotics engineering may lead to potential career opportunities in manufacturing, research and engineering, agriculture, mining, nuclear power-plant maintenances and a variety of other areas. Besides, there is great scope for qualified experts and researchers to associate themselves with different segments of R & D in robotics. As the recent global career trend in robotics suggests, fields as diverse as surgery, modern warfare and nanotechnology have registered a remarkable increase recently in their demand for technical experts and researches in robotics

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TA...

Course Outline

1. Safety in a Robotics Lab
2. Basic Electronics
    a. Identifying Safety Factors
    b. Calculating Basic Electronic Relationships
    c. Measure Circuit Values in a DC Circuit
    d. Interpret Simple Schematic Diagrams
    e. Analyze Diode and Transistor Circuits
3. Hardware and Software (Line Following)
4. Sensors and Simple Machines (Robot Sumo)

Benefits

A course in Robotics trains and educates an individual in the following fields,



- Artificial Intelligence
- Computer Aided Manufacturing
- Computer Integrated Manufacturing
- System
- Computational Geometry
- Robot Motion Planning

REGISTRAR
Pannaiyan Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Career Prospects

Robotics engineering is one of the recognized professional careers in India. There are ample opportunities in this field for robotics engineers both in India as well as in abroad countries. From manufacturing line robots to experimental robotics for the military, medical and automotive industries, the future of robotics engineering certainly offers a variety of opportunities for professionals entering the field. A candidate having an M.E. degree in robotics can find employment opportunities in space research organizations such as ISRO and also in industries which manufacture microchips. Most robotics engineers are employed in laboratories, space exploration, manufacturing plants, mining and organizations. Now-a-days gaming industries are possibly providing the most enjoyable variation of the kind of intelligence provided by robotics. Most robotics engineers are employed by private robot manufacturers or robot users. Robotics engineers who work for robot manufacturers are sometimes called robotics test engineers or automation system engineers. Professionals in this career can also opt for teaching jobs in universities and colleges.

COURSE OUTCOMES

After successful completion of the course, the students are able to

1. Understand basic components of robotics, classification of robots.
2. Know on types of robot grippers, their usage and design considerations.
3. Understand about various types of sensory devices their working and applications.
4. Apply basic transformations related to the movement of manipulator.
5. Design a robot mechanism to meet kinematics requirements and to write simple programs.

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
Institution Deemed to be
u/s 3 of the
THANJAVUR - 6

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

SUB: ADD ON COURSE-Reg.

It is informed that the department of computer science and engineering is planning to organized a certified course on Digital Marketing on 19.04.22 for the academic year 2021-2022 even semester. The detailed schedule will be given by the departments. Head of the departments are requested to inform their students about the certified course on Digital Marketing and motivate them to attend the course. HOD's are requested to nominate one faculty member to co-ordinate the same.

REGISTRAR
Pondicherry Ramalayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMILNADU.

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur.

To

The DEAN,
Prist University,
Vallam, Thanjavur.

Respected Sir,

Sub: Requesting Permission for conducting Add on Course – Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs.

Thanking You,

Yours Truly,
HOD/CSE

DEAN

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

COURSE OUTCOMES

- To understand the difference between Traditional Marketing and digital Marketing
- To understand and analyze the search engine functions
- To develop a deep knowledge about the Digital marketing platforms and the theoretical aspects of creating a website
- To analyze inbuilt tools for digital Marketing

UNIT I- INTRODUCTION TO DIGITAL

What is Digital Marketing- Need of Digital Marketing-Digital Marketing Platforms - Understanding digital marketing process- Difference between Traditional Marketing and digital Marketing- tools of Digital marketing - Advantages of Digital Marketing- Digital Marketing Manager Role and functions - How we use both Digital & Traditional Marketing

UNIT II-WEBSITE & SEARCH ENGINE

Website -Hosting and Domain- Different platforms for website creation- Introduction to SERP- What are search engines- How search engines work - Major functions of a search engine- What are keywords -Different types of keywords- Google keyword planner tool.

UNIT III-MISC TOOLS-GOOGLE WEBMASTER TOOLS

Site Map Creators- Browser-based analysis tools-Page Rank tools-pinging & indexing tools-Dead links identification tools- Open site explorer Domain information/ whois tools- Quick sprout

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL N

UNIT IV - LEAD MANAGEMENT & DIGITAL MARKETING

Web to lead forms- Web to case forms- Lead generation techniques- Leads are everywhere- Social media and lead gen Inbuilt tools for Digital Marketing-Ip Tracker- CPC reduction (in-case of paid ads) Group posting on Social Media platforms.

UNIT V -TRENDING DIGITAL MARKETING SKILLS

Search Engine Optimization(SEO)-Search EngineMarketing(SEM)- Social MediaMarketing Optimization-Email Marketing, Website Product Marketing- Content Writing, Marketing the created content online Copywriting- Blogging- Local Marketing, Google Ad Words - Campaign Management- PPC Advertising- Affiliate Marketing, Mobile and SMS Marketing- Marketing Automation-Web Analytics- Growth Hacking

DIGITAL MARKETING

Nowadays, everyone is connected to the internet through their mobile phones and laptop devices. Understanding why **digital marketing** is essential for businesses aiming to succeed online through modern marketing and for individuals looking to make a career in **digital marketing**. **Digital marketing**, or **online marketing**, strategically promotes brands, products, or services using various digital channels and technologies. With the rise of the internet and mobile devices, businesses now have huge opportunities to reach a global audience.

Whether through innovative **search engine marketing (SEM)** strategies or **advanced digital marketing software**, companies can connect with potential customers like never before. Utilizing **search engine optimization (SEO)**, **content marketing**, **social media advertising**, and email

REGISTRAR
Periyalyah Hameleya F. Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

marketing allows businesses to effectively reach and engage their target audience, driving growth and achieving marketing objectives.



What is
DIGITAL MARKETING

Digital marketing is the use of online platforms & digital technologies to promote brands, products, or services.

Types of Digital Marketing

Digital marketing encompasses a wide range of strategies and techniques aimed at promoting products or services through digital channels. Here are the key types of digital marketing:

1. Search Engine Optimization (SEO)

SEO involves optimizing a website to improve its visibility in search engine results pages (SERPs). The goal is to attract organic traffic by using relevant keywords, improving site structure, and earning backlinks. Effective SEO can enhance online visibility and drive long-term traffic.

2. Content Marketing

Content marketing focuses on creating and distributing valuable, relevant content to attract and engage a target audience. This includes blog posts, articles, videos, infographics, and eBooks. The objective is to provide useful information that encourages customer loyalty and drives conversions.

3. Social Media Marketing

REGISTRAR
Periyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University)
of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Social media marketing involves using platforms like Facebook, Instagram, Twitter, LinkedIn, and TikTok to promote products and engage with customers. This type of marketing can include organic content, **paid advertising**, and influencer partnerships to reach a broader audience and build brand awareness.

Search Engine Optimization (SEO)

SEO, or **Search Engine Optimization**, is the process of optimizing your website and content to rank higher on search engine results pages (SERPs). It involves keyword research, on-page optimization, and building high-quality backlinks. For example, **Moz**, a leading SEO software company, uses **SEO services** to improve their visibility for high-volume keywords like "SEO tools" and "search engine optimization strategies."

Content Marketing

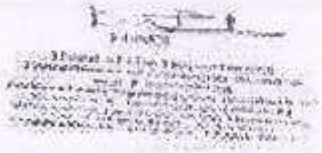
Content marketing focuses on creating and distributing valuable, relevant content to attract and engage a target audience. This includes blog posts, videos, infographics, and ebooks. **HubSpot**, a prominent **digital marketing agency**, utilizes a robust **content marketing strategy** by offering free resources such as blogs, ebooks, and webinars to drive traffic and generate leads for their **marketing automation software**.

Social Media Marketing

Social media marketing involves using platforms like Facebook, Instagram, Twitter, and LinkedIn to promote products, engage with customers, and build brand awareness. For example, **Nike** effectively uses **social media**

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be
u/s 3 of the UGC Act
THANJAVUR - 613 403

advertising on Instagram and Twitter to showcase their products, engage with followers, and drive online sales, often targeting their audience with visually compelling ads.







REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
UNIVERSITY

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIRCULAR

[redacted]

It is informed that the department of computer science and engineering is planning to organized a certified course on Data Science on [redacted] for the academic year 2021-2022 odd semester. The detailed schedule will be given by the department. Head of the departments are requested to inform their students about the certified course on Data Science and encourage them to attend the course. HoD's are requested to communicate further number to co-ordinate the same.

[redacted]

REGISTRAR
Pannaiyah Ramalayam Institute of
Science & Technology (PRIST)
(Deemed to be University)
Under Sec 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMILNADU

From

The HOD,
Department of CSE,
Prist University,
Vallam, Thanjavur.

To

The DEAN,
Prist University,
Vallam, Thanjavur.

Respected Sir,

Sub:- Requesting Permission for conducting Add on Course – Reg.

I wish to bring to your kind information that the department of computer science and engineering has planned to conduct the following Add On course programme for the academic year 2021-22 odd semester.

As the department is equipped with relevant lab facilities and enterprise in the same field, we are requesting the permission for the conduct of the same.

Duration: 45 Hrs.

Thanking You,

Yours Truly,
HOD/ABDS

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
Thanjavur - 613 403.

UNIT I INTRODUCTION TO DATA SCIENCE

Need for data science – benefits and uses – facets of data – data science process – setting the research goal – retrieving data – cleansing, integrating, and transforming data – exploratory data analysis – build the models – presenting and building applications.

UNIT II DESCRIPTIVE ANALYTICS

Frequency distributions – Outliers –interpreting distributions – graphs – averages – describing variability – interquartile range – variability for qualitative and ranked data – Normal distributions – z scores –correlation – scatter plots – regression – regression line – least squares regression line – standard error of estimate – interpretation of r^2 – multiple regression equations – regression toward the mean.

UNIT III INFERENTIAL STATISTICS

Populations – samples – random sampling – Sampling distribution- standard error of the mean – Hypothesis testing – z-test – z-test procedure –decision rule – calculations – decisions – interpretations - one-tailed and two-tailed tests – Estimation – point estimate – confidence interval – level of confidence – effect of sample size.

UNIT IV ANALYSIS OF VARIANCE

t-test for one sample – sampling distribution of t – t-test procedure – t-test for two independent samples – p-value – statistical significance – t-test for two related samples. F-test – ANOVA – Two- factor experiments – three f-tests – two-factor ANOVA –Introduction to chi-square tests.

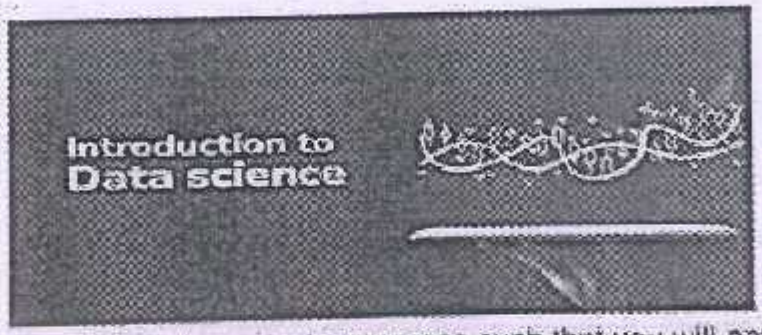
UNIT V PREDICTIVE ANALYTICS

Linear least squares – implementation – goodness of fit – testing a linear model – weighted resampling. Regression using StatsModels – multiple regression – nonlinear relationships – logistic regression – estimating parameters – Time series analysis – moving averages – missing values – serial correlation – autocorrelation. Introduction to survival analysis.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
[illegible]

DATA SCIENCE

In a world of data space where organizations deal with petabytes and exabytes of data, the era of Big Data emerged, and the essence of its storage also grew. It was a great challenge and concern for industries for the storage of data until 2010. Now when frameworks like Hadoop and others solved the problem of storage, the focus shifted to the processing of data. Data Science plays a big role here. All those fancy Sci-fi movies you love to watch around can be turned into reality by Data Science. Nowadays its growth has been increased in multiple ways and thus one should be ready for our future by learning what it is and how can we add value to it.



Data science is not a one-step process such that you will get to learn it in a short time and call ourselves a Data Scientist. It's passes from many stages and every element is important. One should always follow the proper steps to reach the ladder. Every

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

step has its value and it counts in your model. Buckle up in your seats and get ready to learn about those steps.

1. Problem Statement:

No work start without motivation. Data science is no exception though. It's really important to declare or formulate your problem statement very clearly and precisely. Your whole model and it's working depend on your statement. Many scientist considers this as the main and much important step of Date Science. So make sure what's your problem statement and how well can it add value to business or any other organization.

2. Data Collection:

After defining the problem statement, the next obvious step is to go in search of data that you might require for your model. You must do good research, find all that you need. Data can be in any form i.e unstructured or structured. It might be in various forms like videos, spreadsheets, coded forms, etc. You must collect all these kinds of sources.

3. Data Cleaning:

As you have formulated your motive and also you did collect your data, the next step to do is cleaning. Yes, it is! Data cleaning is the most favorite thing for data scientists to do. Data cleaning is all about the removal of missing, redundant, unnecessary and duplicate data from your collection. There are various tools to do so with the help of programming in either R or Python. It's totally on you to choose one of them. Various scientist have their opinion on which to choose. When it comes to the statistical part, R is preferred over Python, as it has the privilege of more than 12,000 packages. While

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

python is used as it is fast, easily accessible and we can perform the same things as we can in R with the help of various packages.

4. Data Analysis and Exploration:

It's one of the prime things in data science to do and time to get inner Holmes out. It's about analyzing the structure of data, finding hidden patterns in them, studying behaviors, visualizing the effects of one variable over others and then concluding. We can explore the data with the help of various graphs formed with the help of libraries using any programming language. In R, GGplot is one of the most famous models while Matplotlib in Python.

5. Data Modelling:

Once you are done with your study that you have formed from data visualization, you must start building a hypothesis model such that it may yield you a good prediction in future. Here, you must choose a good algorithm that best fit to your model. There different kinds of algorithms from regression to classification, SVM(Support vector machines), Clustering, etc. Your model can be of a Machine Learning algorithm. You train your model with the train data and then test it with test data. There are various methods to do so. One of them is the K-fold method where you split your whole data into two parts, One is Train and the other is test data. On these bases, you train your model.

6. Optimization and Deployment:

You followed each and every step and hence build a model that you feel is the best fit. But how can you decide how well your model is performing? This where optimization comes. You test your data and find how well it is performing by checking its accuracy. In short, you

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

check the efficiency of the data model and thus try to optimize it for better accurate prediction. Deployment deals with the launch of your model and let the people outside there to benefit from that. You can also obtain feedback from organizations and people to know their need and then to work more on your model.

REGISTRAR
Ponnaiyah Ramajayam Institute o
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the U.G.C. Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/PO(A)/21-22/ Date: 24.06.2021

CIRCULAR

SUB: ADD ON COURSE –PLC and SCADA– Reg

It is informed that employability/ entrepreneurship/ skill development training will be started on 02.07.2021 to 01.08.2021 for the academic year 2021-2022. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

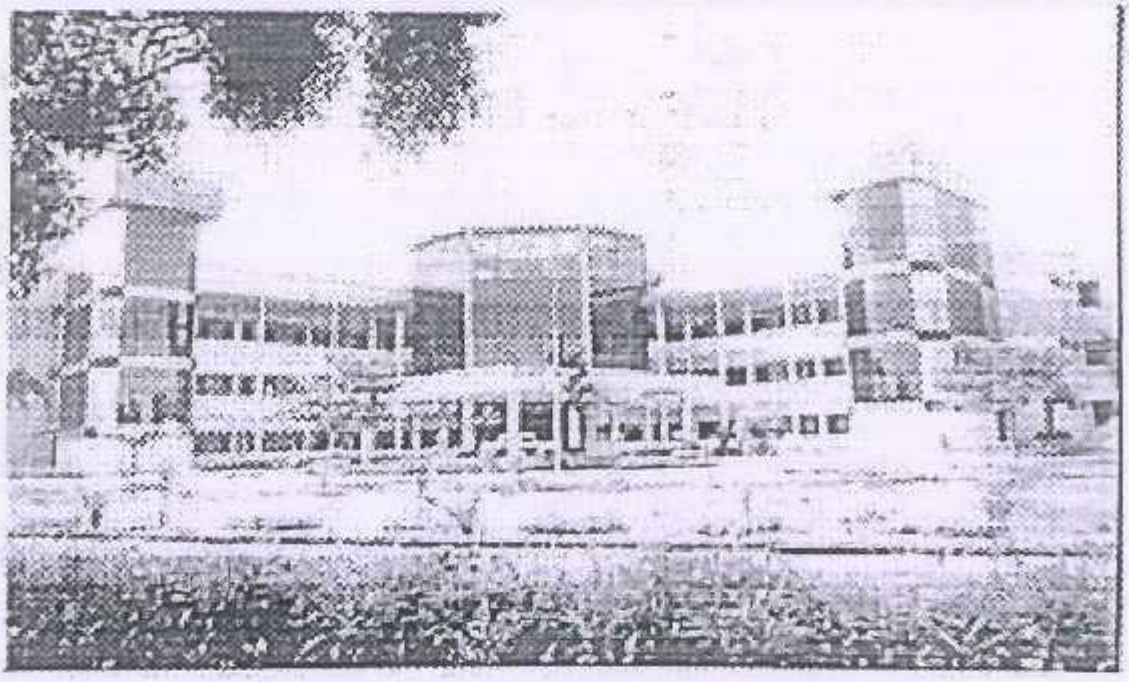
Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
Vallam, Thanjavur
THANJAVUR - 613 403, TAMIL NADU

Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
Vallam, Thanjavur
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE - PLC SCADA

Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology

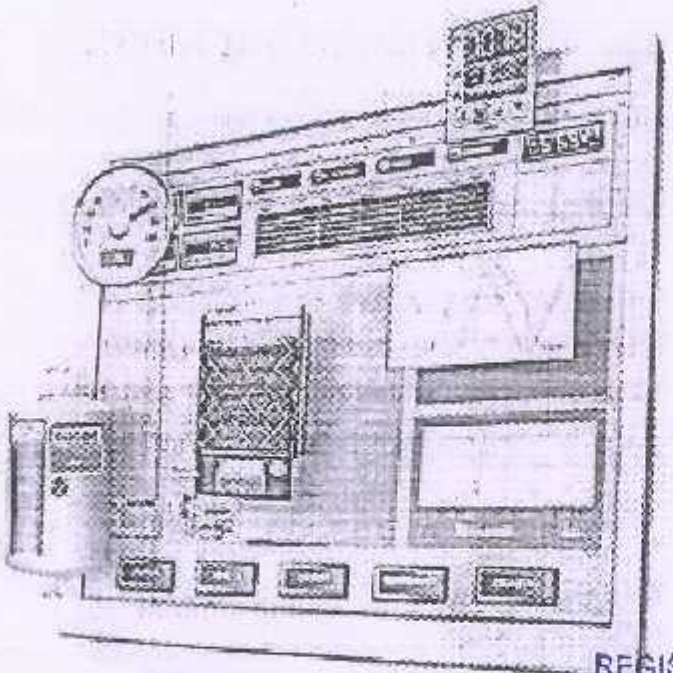
REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, T.N.

ABOUT THE INSTITUTION:

P.R. ENGINEERING COLLEGE was established in the year 2000 under the benevolent Trust named "Sri Ponnaiyah Ramajayathiammal Educational and Charitable Trust" (SPREC1). The institution was founded by the philanthropic munificent founder Prof. P. Murugesan, who began his career as an academician. The first seed to serve the society and higher education was sown by him in the year 1985, by starting Ram Institute of Computer Science and Technology. With the extra-ordinary support and cooperation from the parents, students and public. Within a short span of time, the college had earned good name, fame and reputation, which had encouraged starting P.R. Engineering College in the year 2000. Subsequently, his service to education and society has extended in every sphere and in all aspects till date.

About the Department:

A Department of EEE was Started With Full Zeal in the Year 2005 Electrical and Electronics Engineering is a continuously evolving subject. As technology has advanced, so have the challenges facing the modern engineer. EEE is a subject that naturally partners with other disciplines to open whole new engineering avenues. The EEE Department at PREC prepares students in this field using new-age information and computer-intensive technologies. The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.



PLC SCADA

Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.
Deemed to be University
Vallam, Thanjavur - 613 403.

OVERVIEW

- The Most Used Guiding Force Behind an Automated Industrial Plant Is A "Programmable Logic Controller" Generally Known As A PLC.
- PLCs Along With Certain Other Necessary Ingredients Like Sensors, Motors, Actuators, Valves, Conveyors, Boilers, SCADA Systems, Computers & Many More, Makes A Real Automated Manufacturing Plant.
- The main objective of PLC & Scada Workshop is to make the aspiring engineers acquainted with the conceptual as well as practical knowledge of the Industrial Automation & latest technologies being used to achieve industrial automation.
- The idea of organizing this workshop is to inculcate the basic fundamentals of automation in the students and provide them with a platform to work on, In The Near Future.

Session 1

Presentation on Recent Trends in Industrial Automation & PLC-SCADA

- *Introduction To Automation*
- *Why We Need Automation*
- *Evolution in Industrial Automation (A Brief History)*
- *Different Type Of Industrial Control Mechanisms*
- *Introduction to PLCs*
- *PLC Advantages over Microcontrollers*
- *Area of Applications*
- *DATA Flow During Automation*
- *Motor Drives Introduction & Their Need*
- *Sensors Introduction & Their Need*
- *HMI Introduction & Its Need*
- *SCADA Introduction & Its*

Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, Tamil Nadu

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, Tamil Nadu

Session 2

Detail study of PLC & SCADA

- PLC
- SCADA

PLC I/Os Basics, Burning & Interfacing Concepts

- Allen Bradley & Rockwell Automation's Details
- Brief Description To Input/ Output Pins Of Micrologix-1000
- Ladder Diagram Basics
- Introduction To RSLogix
- Downloading a Ladder Program in PLC Using RSLinx.
- How To Take Input from Panel
- How To Give Output To Panel
- Running First PLC Application

Session 3

Hands-on PLC Training Kit & SCADA Software

- Participants will perform hands on PLC training kit which contain Allen Bradley Micrologix 1000 PLC.
- Software Used: RsLogix, RsLinx & Wonderware InTouch (SCADA)

COURSE DURATION: 45 Hours

P Anuj

Head of the Department
Electrical and Electronics
Ponnaiyah Ramajayam
Science &
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/PO(A) 21-22

Date: 03.06.2021

CIRCULAR

SUB: ADD ON COURSE – DESIGN OF PROJECT USING IOT– Reg

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.06.2021 to 10.07.2021 for the academic year 2020-2021. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

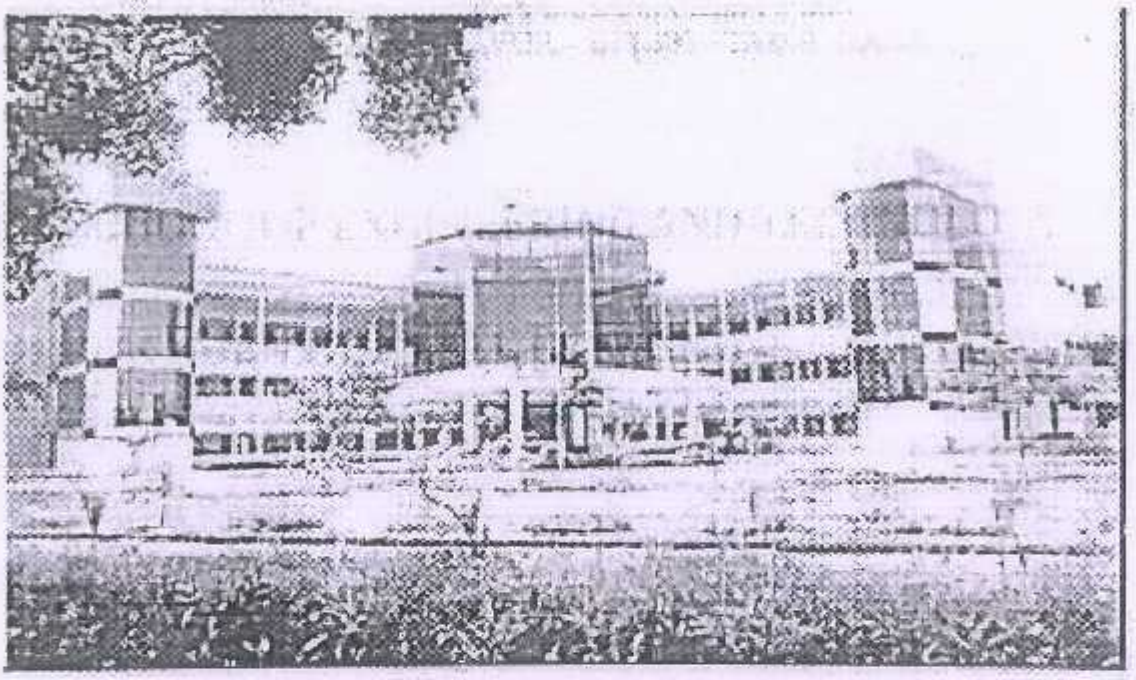
Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – DESIGN OF PROJECT USING IOT
(Certificate Course)

Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

ABOUT THE INSTITUTION:

PonnaiyahRamajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

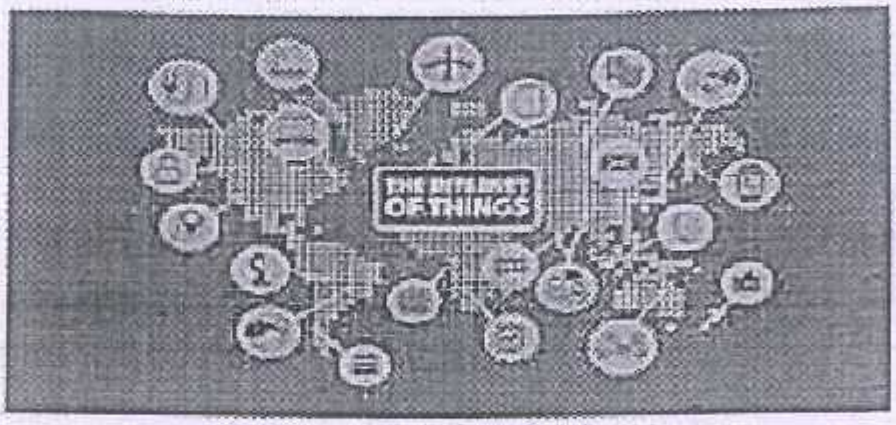
The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines in masters like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue their higher studies and research works.

Head of the Department
Electrical and Electronics Engineering
Pondaiyah Ramajayam Institute of
Science & Technology
Deemed University
THANJAVUR - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DESIGN OF PROJECT USING IOT



Course objective

- This Course focuses on hands-on IoT concepts such as sensing, actuation and communication.
- It covers the development of Internet of Things (IoT) prototypes—including devices for sensing, actuation, processing, and communication—to help you develop skills and experiences.
- The Internet of Things (IOT) is the next wave, world is going to witness. Today we live in an era of connected devices the future is of connected things.

Head of the Department

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TN.

ADD ON COURSE

DESIGN OF PROJECT USING IOT

Introduction to IOT

Understanding IoT fundamentals
IOT Architecture and protocols
Various Platforms for IoT
Real time Examples of IoT
Overview of IoT components and IoT Communication Technologies
Challenges in IOT

Arduino Simulation Environment

Arduino Uno Architecture
Setup the IDE, Writing Arduino Software
Arduino Libraries
Basics of Embedded C programming for Arduino
Interfacing LED, push button and buzzer with Arduino
Interfacing Arduino with LCD

Sensor & Actuators with Arduino

Overview of Sensors working
Analog and Digital Sensors
Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino
Interfacing of Actuators with Arduino
Interfacing of Relay Switch and Servo Motor with Arduino

Basic Networking with ESP8266 WiFi module

Introduction to ESP8266 Wi-Fi Module
Various Wi-Fi library
Basics of Wireless Networking
Web server- introduction, installation, configuration
Posting sensor(s) data to web server

Cloud Platforms for IOT:

Virtualization concepts and Cloud Architecture
Cloud computing, benefits
Cloud services -- SaaS, PaaS, IaaS
Cloud providers & offerings
Study of IOT Cloud platforms
ThingSpeak API and MQTT
Interfacing ESP8266 with Web services

COURSE DURATION : 45 HRS

Head of the Department

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU.

ADD ON COURSE

DESIGN OF PROJECT USING IOT

COURSE OUTCOMES:

- Able to understand the application areas of IOT
- Able to realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Able to understand building blocks of Internet of Things and characteristics.
- Describe what IoT is and how it works today
- Recognize the factors that contributed to the emergence of IoT
- Design and program IoT devices
- Use real IoT protocols for communication
- Secure the elements of an IoT device
- Design an IoT device to work with a Cloud Computing infrastructure.
- Define the infrastructure for supporting IoT deployments.

Head of the Department

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

DEAN

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/EOA/21-22/ Date: 01.07.2021

CIRCULAR

SUB: ADD ON COURSE –COMPUTER APPLICATION IN POWER SYSTEM OPERATION AND PLANNING – REG

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.07.2021 to 10.08.2021 for the academic year 2021-2022. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

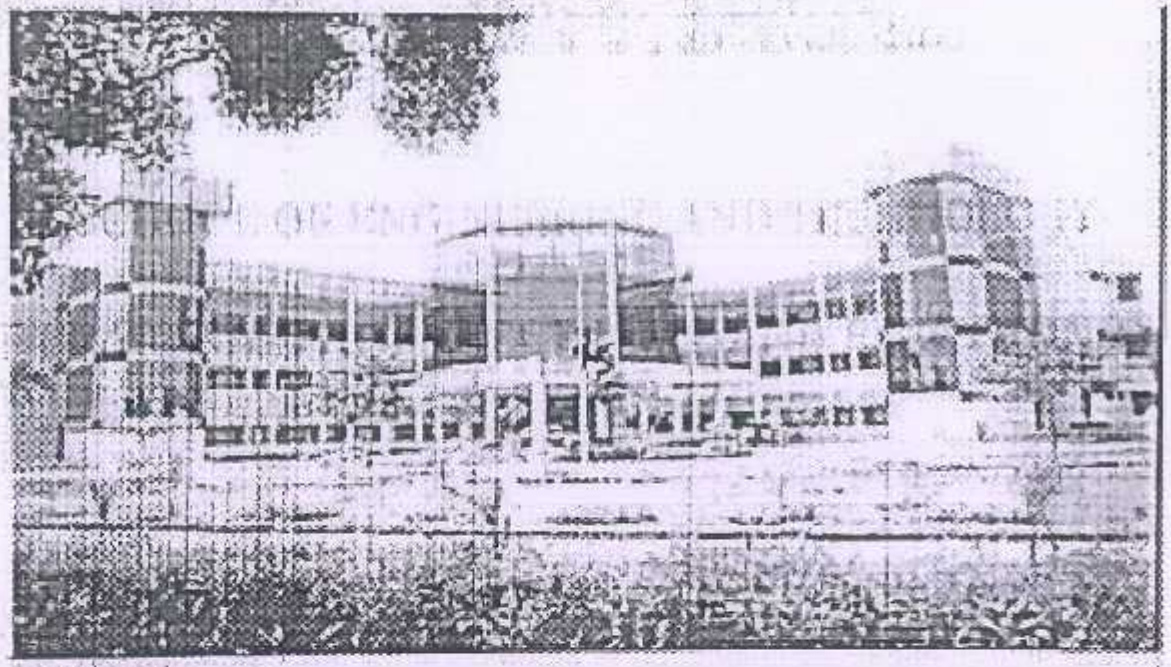
Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – COMPUTER APPLICATION IN POWER SYSTEM OPERATION AND PLANNING

(Certificate Course)

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT THE INSTITUTION:

PonnaiyahRamajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines in masters like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue their higher studies and research works.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

215153CPO - COMPUTER APPLICATION IN POWER SYSTEM OPERATION AND PLANNING

Outcomes:

The course consists of two blocks, each consisting of a project assignment, lectures and ...rise sessions. Block one includes analysis and modeling of the need for information exchange for ...wer system control. The aim is to train the students to analyze different perspectives on information ...cessary for power system control. The project assignment in the block includes implementation of a ...ple information model for the exchange of data on power systems.

...SSION -I

Models of power system components, network model using graph theory, formation of ... ...s, transmissionline models, regulating transformer, line loadability, capability curves of alternator

...SSION -II

Control of load bus voltage using reactive power control variable, SVC & SVS, Regulated shunt compensation, series and shunt compensation, Uniform series and shunt compensation ...d effect onloadability of transmission lines.

...SSION -III

Sensitivity analysis- General sensitivity relations, generation shift distribution factors, ...e outage distribution factors, compensated shift factors, sensitivity associated with voltage-VAR, ...sitivities relating load bus voltage changes in terms of PV bus voltage changes, sensitivity relating ...anges in reactive power generation for changes in PV Bus Voltage.

...SSION -IV

Power system security – Security functions, Security level, contingency analysis, security ...trol, economic dispatch using LP formulation, pre-contingency and post- contingency, corrective ...scheduling.

...SSION -V

Voltage stability - Difference between voltage and angle stability, PV Curve for voltage ...bility assessment, proximity and mechanism, modal analysis using reduced Jacobian, participation ...tor, effect of series and shunt compensation on voltage stability , effect of load models.

COURSE DURATION: 45 Hours

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/PO(A) 21-22 Date: 03.01.2022

CIRCULAR

SUB: ADD ON COURSE – MATLAB for Electrical Engineers – Reg

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.01.2022 to 10.03.2022 for the academic year 2021-2022. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

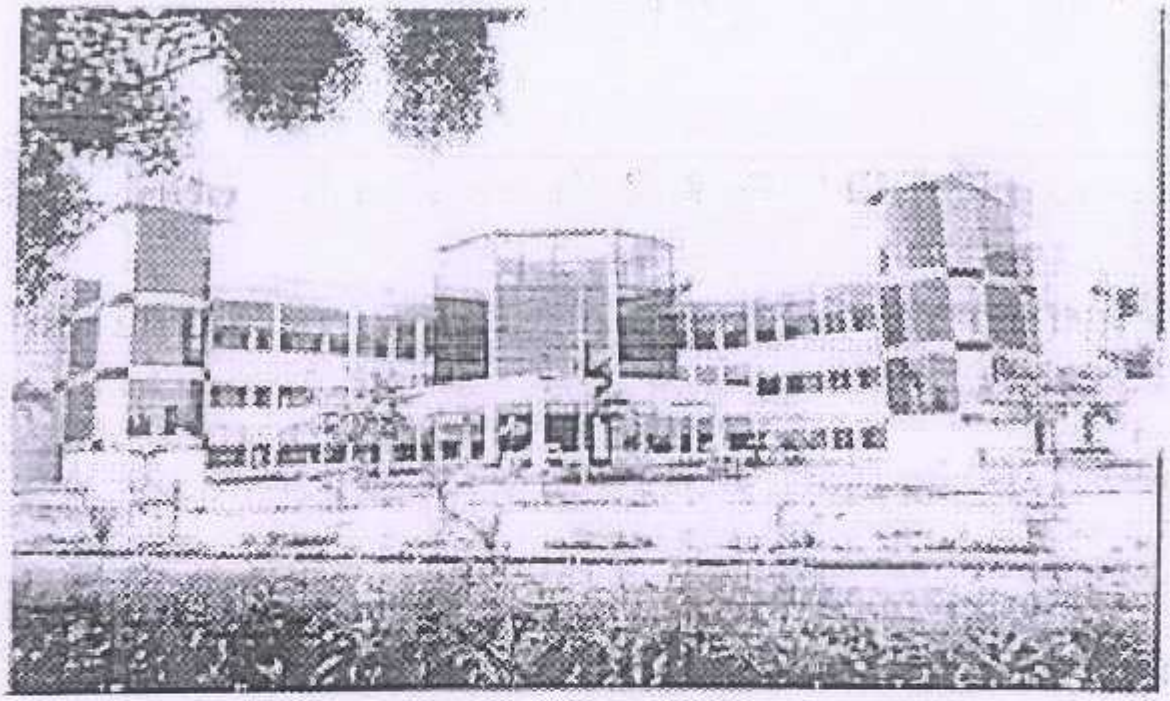
Head of the Department
Electrical and Electronics Engineering
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Thanjavur-613 403, Tamil Nadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – MATLAB FOR ELECTRICAL ENGINEERING

(Certificate Course)

REGISTRAR
Pannaiyan Ramaiyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR – 613 403, TAMIL NADU

1270

ABOUT THE INSTITUTION:

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of Ponnaiyah Ramajayam Institutions, which are serving for more than 35 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through researc[illegible]

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personals as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines to masters like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue their higher studies and research works.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.



MATLAB COURSE

LEARN FROM THE BEST

Course objective

- The course focuses on how to implement complex decision flows and finite state machines using Stateflow and provides a general understanding of how to accelerate the design process for closed-loop control systems using MATLAB.
- Also it offers the good understanding of modelling and analyzing electrical systems.
- This course gives guidance on key features of widely used toolboxes of simulink, help transform concepts to a complete model, verify and evaluate the system behaviour in different user environments.
- It allows the attendees to explore the more advanced features of MATLAB in unified manner and help learners future-proof themselves and remain relevant for the rapidly evolving technology from industry perspective.

Head of the Department

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

WHAT WILL I LEARN?

- MATLAB built-in functions
- 2D and 3D plots
- Simulink modelling
- Model Based Designing
- Masks and Subsystems,
- Lookup table editor and breakpoints
- Stateflow modelling
- Hierarchical state machines
- Parallel state machines
- Events in state machines
- Functions in state machines
- Truth tables and State transition tables
- Control systems stability analysis
- Controller implementation - P, PI, PID
- Frequency response estimation
- Simscape modelling
- Selecting solver methods
- Connecting physical signals and simulink signals

COURSE DURATION: 45 Hours

Head of the Department

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/EEE(A)/21-22/ Date: 02.03.2022

CIRCULAR

SUB: ADD ON COURSE – ELECTRICAL DESIGN AND DRAWINGS – Reg

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.03.2022 to 10.04.2022 for the academic year 2021-2022. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
Web Master
File

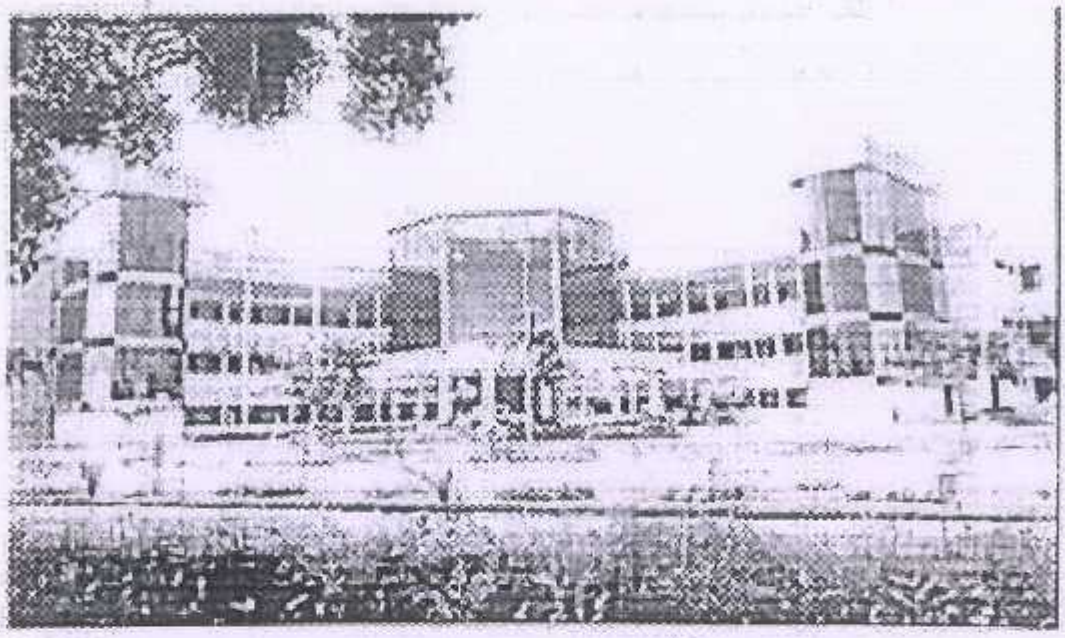
Head of the Department

REGISTRAR
Pannaiyan Ramaiyah Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – ELECTRICAL DESIGN AND DRAWING
(Certificate Course)

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act 1956
THANJAVUR - 613 403, TN

ABOUT THE INSTITUTION:

PonnaiyahRamajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

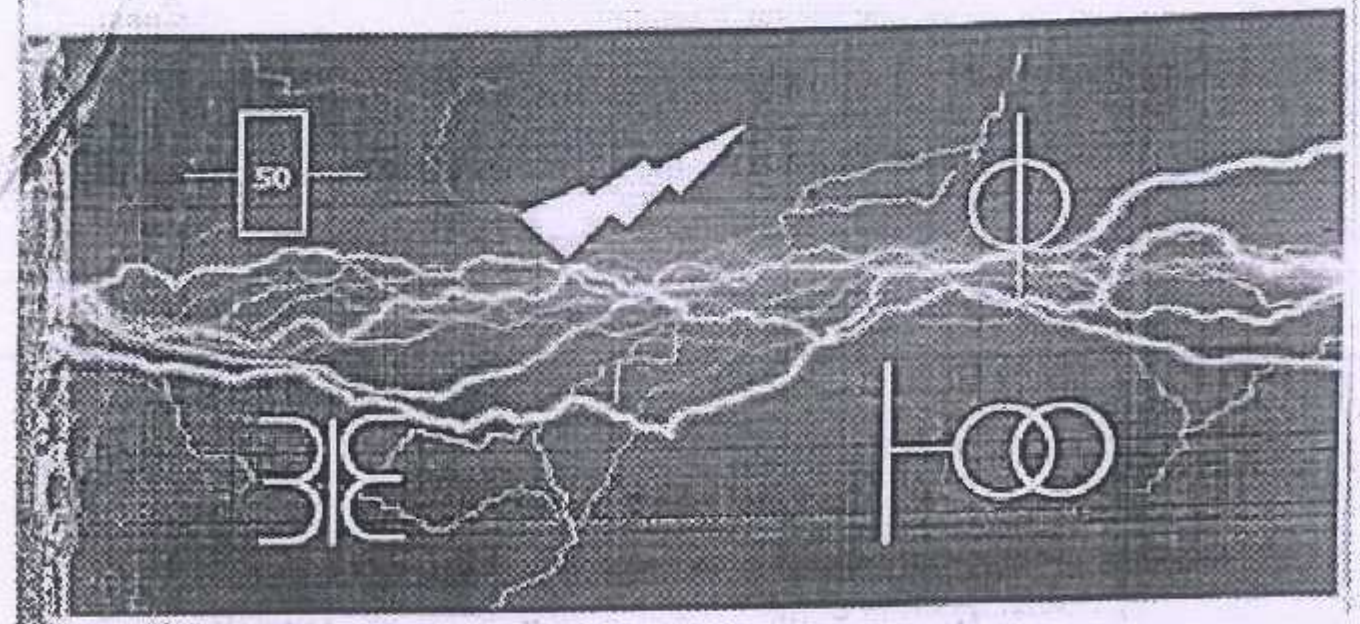
The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines in masters like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue their higher studies and research works.

Head of the Department

REGISTRAR
Pannaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

ELECTRICAL DESIGN AND DRAWINGS



Course objective

- In the area of equipment maintenance, connection or alteration, the capability to read and understand electric drawings is a complete must. This Electrical Drawings and Schematics course covers the creation of detailed electrical drawings, drawing sets and documentation.

- The Electrical Drawings and Schematics course will also provide its participant's familiarity with electrical equipment design drawing methods, practices, procedures, storing and retrieving data, and producing related documentation for introductory and closing drafts for confirmation. Any electrical drawing comprises of lines, symbols, scopes, and notations to precisely convey engineering design to the employees who install the electrical system.

- This course is designed to help students to understand the fundamentals of electrical drawings including logic diagrams, wiring layout and CAD. After completing this course, the trainees will possess a professional knowledge of different types of drawings and diagrams and understand their purpose and flow.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)

MODULE 1

ELECTRICAL DRAWINGS

- Drawings – relevance to engineering
- Standards & their necessity
- CAD & drawing standards
- Drawings in joint engineering
- Manufacturing organizations
- Typical engineering drawing & its parts

MODULE 2

TWO DIMENSIONAL DRAWINGS

- Different types of drawing
- Electrical layout drawing & types
- Wiring diagram, Drawing scales, block
- Symbology for various types of drawings

MODULE 3

LINE DIAGRAMS

- Power & control circuit diagrams
- Commonly used symbols
- Applications of schematic diagrams
- Single line diagram – advantages & example
- Terms associated with single line diagram

MODULE 4

CABLING, WIRING LAYOUT AND CABLE SCHEDULE

- Different types of cabling drawings
- Wiring diagrams
- Cable system drawings
- Different types of wiring drawings
- Difference between cabling & wiring drawings

COURSE DURATION: 45 Hours

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/EEE/2021-22/ Date: 05.02.2022

CIRCULAR

SUB: ADD ON COURSE – WINDING OF INDUCTION MOTOR – REG

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.02.2022 to 10.04.2022 for the academic year 2017-2018. The detailed schedule will be given by respective departments.

Heads of the Departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD's are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

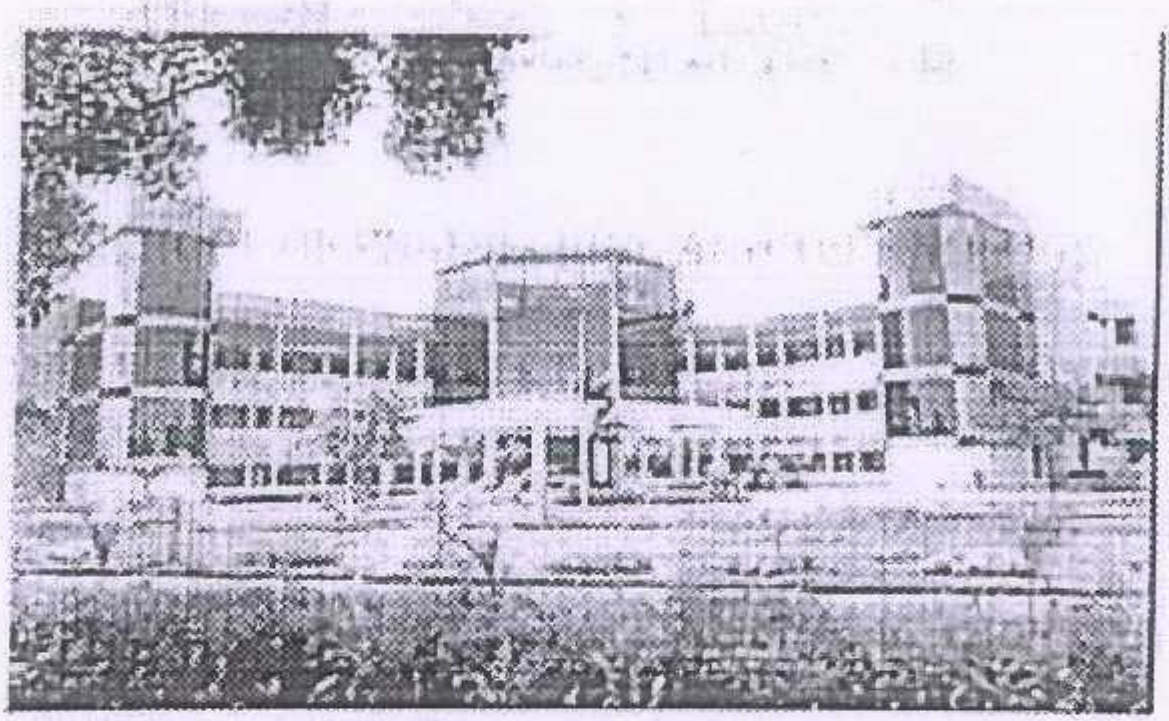
Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

REGISTRAR
Pennalyah Ramalayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – WINDING OF INDUCTION MOTOR

(Certificate Course)

REGISTRAR
Pondicherry Ramaiyan Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT THE INSTITUTION:

PonnaiyahRamajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the domain of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines in fields like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue for higher studies and research works.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

215153WI - WINDING OF INDUCTION MOTOR

Course Outcomes (COs):

- Apply the knowledge of basic principles and construction of AC machines for various industrial and house hold applications.
- Analyze the characteristics and performance of AC machines for a suitable application.
- Evaluate the performance of any AC machine for different loading conditions.
- Develop the equivalent circuit and phasor diagrams of any AC machine.

SYLLABUS

UNIT - I

3-Phase INDUCTION MOTORS: Polyphase induction motors-construction details of cage and wound rotor machines-production of a rotating magnetic field - principle of operation - rotor emf and rotor frequency - rotor reactance, rotor current and pf at standstill and during operation.

UNIT - II

CIRCLE DIAGRAM & SPEED CONTROL METHODS OF INDUCTION MOTORS: Circle diagramno load and blocked rotor tests-predetermination of performance-methods of starting and starting current and torque calculations.

UNIT – III

CONSTRUCTION AND PRINCIPLE OF OPERATION OF ALTERNATORS: Constructional Features of round rotor and salient pole machines. Armature windings. Integral slot and fractional slot windings; Distributed and concentrated windings, pitch and winding factors E.M.F Equation. Synchronous Generator Characteristics. Harmonics in generated E.M.F

UNIT – IV

PARALLEL OPERATION OF SYNCHRONOUS GENERATOR: Synchronizing alternators with infinite bus bars, synchronizing power torque, parallel operation and load sharing. Effect of change of excitation and mechanical power input

UNIT - V

SINGLE PHASE MOTORS: Single phase Motors: Single phase induction motor, Constructional features-Double revolving field theory – Elementary idea of cross-field theory, splitphase motors, shaded pole motor. SPECIAL MOTORS: Principle & performances of AC. Series motor, Universal motor, Principle of permanent magnet machines, stepper motors

COURSE DURATION: 45 Hours

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...

21515IEPA - EMBEDDED PROGRAMMING USING ARDUINO

Objective:

An embedded system is a combination of hardware and software provided that both should be synchronized with each other. Some examples are as follows: industrial machines, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines etc. The Arduino is an open-source computer hardware/software platform for building digital devices and interactive objects that can sense and control the physical world around them. In this course students will learn how the Arduino platform works in terms of the physical board and libraries and the IDE (Integrated Development Environment). The course will also cover programming the Arduino using C code and accessing the pins on the board via the software to control external devices.

Syllabus:

Embedded System design: Basics (45 hours)

i. Introduction to embedded systems.

ii. Components of embedded system.

iii. Advantages and applications of embedded systems.

iv. Examples of real time embedded systems and how they are manufactured industry ready.

v. Different Microcontroller Architectures (CISC, RISC, ARISC).

vi. Internal Resources & Hardware Chips in Details.

vii. History of AVR Microcontrollers and Features.

viii. Memory Architectures (RAM/ROM).

COURSE DURATION: 45 Hours

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PRIST/EOE/21-22/ Date: 05.06.2021

CIRCULAR

SUB: ADD ON COURSE –EMBEDDED PROGRAMMING USING ARDUINO – REG

It is informed that employability/ entrepreneurship/ skill development training will be started on 10.06.2021 to 10.08.2021 for the academic year 2021-2022. The detailed schedule will be given by the departments.

Heads of the departments are requested to inform their students about the skill development training and motivate them to participate the training classes.

HOD'S are also requested to nominate one faculty member to co-ordinate the training class.

DEAN

Copy to:
The Hon'ble Chairman Sir
HOD'S for necessary action
Notice Board
File

Head of the Department

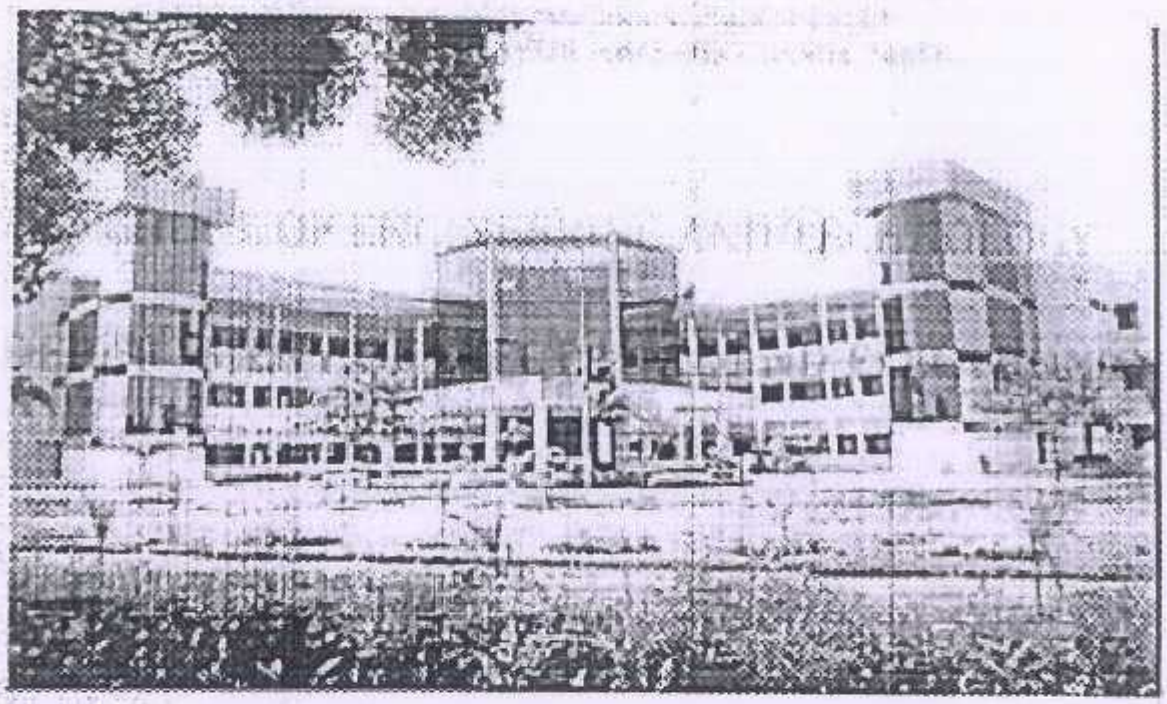
Pondicherry University
Constituent Institution
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Pondicherry University
Constituent Institution
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



INFORMATION BROCHURE

ADD ON COURSE – EMBEDDED PROGRAMMING USING ARDUINO

(Certificate Course)

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

ABOUT THE INSTITUTION:

PonnaiyahRamajayam Institute of Science and Technology (PRIST), a Deemed University (U/s 3 of the UGC Act 1956), is one of the renowned units of PonnaiyahRamajayam Institutions, which are serving for more than 25 years in promoting quality education and research for our Indian community, since its Inception. The institution is now brimming with many social responsibilities, particularly in promoting quality education through research.

About the Department:

The department of Electrical and Electronics of PRIST DEEMED UNIVERSITY was established in 2008. Since then its excellence in each and every aspects has played an important role in the institute.

The EEE Department is dedicated to delivering competent electrical engineers to the arena of the real world. They are outfitted with core technical knowledge as well as professional skills necessary to face the challenges of the future. The committed faculty and staff are fully geared up towards this end.

The department has spacious laboratories such as Machines lab, Electric Circuits Lab, Measurement and Instrumentation Lab, Control System Lab, Power Electronics Lab and Power systems Simulation Lab. All the laboratories are fully equipped with latest, modern and sophisticated equipments.

The Department has young as well as experienced and dynamic personalities as faculty, is involved in providing quality education at both Undergraduate (UG) and Postgraduate (PG) levels. The staffs are from various disciplines in masters like Power electronics and drives, Power system, advanced communication system. Many of the staff members are encouraged to pursue their higher studies and research works.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

21515EPA - EMBEDDED PROGRAMMING USING ARDUINO

Objective:

An embedded system is a combination of hardware and software provided that both should be synchronized with each other. Some examples are as follows: industrial machines, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines etc. The Arduino is an open-source computer hardware/software platform for building digital devices and interactive objects that can sense and control the physical world around them. In this course students will learn how the Arduino platform works in terms of the physical board and libraries and the IDE (Integrated Development Environment). The course will also cover programming the Arduino using C code and accessing the pins on the board via the software to control external devices.

Syllabus:

Embedded System design: Basics (45 hours)

i. Introduction to embedded systems.

ii. Components of embedded system.

iii. Advantages and applications of embedded systems.

iv. Examples of real time embedded systems and how they are manufactured industry ready.

v. Different Microcontroller Architectures (CISC, RISC, ARISC).

vi. Internal Resources & Hardware Chips in Details.

vii. History of AVR Microcontrollers and Features.

viii. Memory Architectures (RAM/ROM).

COURSE DURATION: 45 Hours

REGISTRAR
Pannaiyah Ramaiyam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent address

.....

.....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the secretariat, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403

Application may be send to

Course Co-Ordinator

DR. D. CHENNAKRISHNAN
Associate Professor
Department of Chemistry
PRIST University
Email: chennaicpe@gmail.com

About the University

Pondicherry Ramalingam Institute of Science and Technology (PRIST) is a Private deemed to be University in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programs.

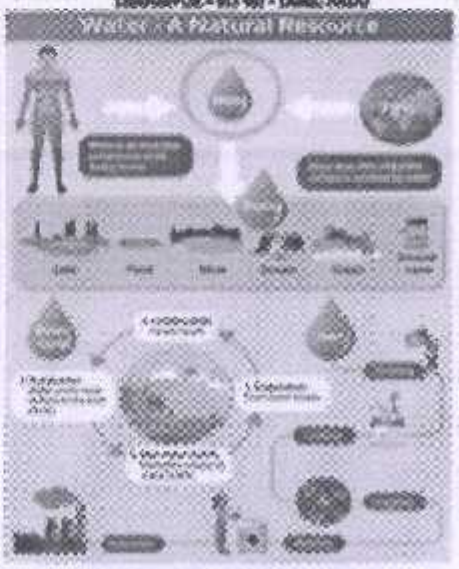
Facilities Available

The University is located in an urban location, and is strong in both state of art equipment, excellent laboratories and infrastructure to help complete the courses. Majority of the courses have been using or monitoring the research programs. Computer Laboratory with internet facilities for students, Hostel facilities, Health centre, Sports complex, etc.,

Department of Chemistry

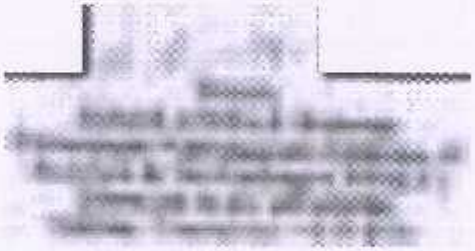
The Department has strong as well as experienced and dynamic group of scientists as faculty, is involved in providing quality education in Undergraduate (UG) and Postgraduate (PG) levels. The staff members have various completed or Ongoing Govt. major projects, Ongoing minor projects, Topology, Electronic Structure, Nanotechnology. Many of the staff members are encouraged to pursue their higher educational research works.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU



CERTIFICATE COURSE
IN
ENVIRONMENTAL ETHICS : WATER RESOURCE MANAGEMENT AND WATER POLLUTION & HEALTH

Head of the Department
Department of Chemistry
PRIST Deemed to be University
Vallam, Thanjavur - 613403



REGISTRAR
Pondicherry Ramalingam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL ...

COURSE OBJECTIVE

- The most fundamental goal in drug design is to predict whether a given molecule will bind to a target and if so how strongly.

- These methods are also used to predict the conformation of the small molecule and to model conformational changes in the target that may occur when the small molecule binds to it.

COURSE CONTENT (Module 1)

Aims of Sustainable Development

COURSE CONTENT (Module 2)

Role and Function of Sustainable

Development

COURSE CONTENT (Module 3)

Sustainable Development

COURSE CONTENT (Module 4)

Sustainable Development

COURSE CONTENT (Module 5)

Sustainable Development

EXAMINATION

There shall be an internal examination at the end of academic years.

Eligibility criteria for appearing in the in the final examination

Minimum Attendance - 80%

Minimum Internal Assessment marks - 40%

- It will be done through the whole year.
- Candidate must obtain at least 50% marks in theory

internal assessment to be eligible for the university examination.

Internal assessment (Theory) will be done as follows :

a) Mid-term and term examinations = 10 marks

b) Assignments/Projects/Observed Clinical Presentations = 05 marks

c) Attendance = 05 marks

Total = 20 marks

Criteria for a pass in the subject Minimum marks in theory - 45

Scheme of Examination :-

Duration of written examination - 3 hrs

Maximum marks - 100

Level of Knowledge Expected

Working knowledge with excellent technological value

Duration of the program

90 hrs add on diploma course

Course Program Outcome

- These methods are fast, and accurately provide valuable insights of experimental findings and mechanisms of action.
- In addition, appropriate implementation of these techniques could lead to a reduction in cost of drug designing and development.
- Currently in biomedicine sciences these software are exhibiting impressive role in the different phases of drug discovery.

Eligibility criteria

Any graduate shall be eligible for the admission to the course under Category 1S Seats on first come first basis (Additional admission to the course is open for the school)

Course Semester and Duration

Course is One year duration and will be of 90 hrs integrated training programmes covering the theoretical and practical aspects of Drug Design.

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to the effect in the appropriate form by School of Arts and Science, Department of chemistry, PRIST University, Thanjavur, Tamil

REGISTRAR
Pennalyah Ramalayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE
Academic year: 2021-2022

Diploma Course on Water Resource, Management and Water Pollution & Health

Aim ;To provide an idea on Water Resource, Management and Water Pollution & Health

Course learning outcomes:

- The participants will learn about the importance of water resources.
- The participants will get insight into the water cycle.
- They will learn and understand the water pollution problem and its gravity.

UNIT -1

- Water cycle and water chemistry
- •Water cycle, Properties of water.
- •Tetrahedral chemistry of water.
- •Physico chemical Characteristics water bodies.

UNIT -2

- Water resources and treatment
- •Types of water resource.
- •National drinking water policy.
- •Drinking water treatment plants and various disinfection processes.
- Household treatment, Drinking water standards.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, (T.N.)

UNIT -3

- Water pollution
- •Causes effect and control measures of water pollution.
- •Pollution control standards, WHO standards of drinking water.
- Water borne diseases. Microbial contamination of water types, sources, threats.
- •Microbial standards of drinking water, MPN.

UNIT -4

- Water conservation and water pollution acts in India.
- •Water conservation: Ice stupa artificial glacier by Sonam Wangchuk.

UNIT -5

- •Rain water harvesting.
- •Watershed Management: Classification, Objective ,Advantages and Disadvantages.

References[edit]

1) Water Q&A: Why is water the "universal solvent"?". Water Science School. United States Geological Survey, U.S. Department of the Interior. 20 June 2019. Archived from the original on 6 February 2021. Retrieved 15 January 2021.

2) 10.2: Hybrid Orbitals in Water". Chemistry LibreTexts. 18 March 2020. Archived from the original on 30 July 2022. Retrieved 11 April 2021.

3) Environmental Health Education Program. Cambridge, MA: Harvard T.H. Chan School of Public Health. July 23, 2013. Archived from the original on September 18, 2021. Retrieved September 18, 2021.

REGISTRAR
Pennaiyar Ramaiyan Institute of
Science & Technology (PRIST)
(Institute Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

APPLICATION FORM

1 Full Name .....

2 Programme .....

3 Discipline .....

4 Institution Name .....

5 Date of Birth .....

6 Sex (M/F) .....

7 E mail .....

8 Mobile No .....

9 Permanent Address

1 .....

.....

.....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613403.

Application may be send to

Course Co-Ordinator

DR.D.CHINNARAJA
Assistant Professor
Department of Chemistry
PRIST University

About the University

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) is a deemed University in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

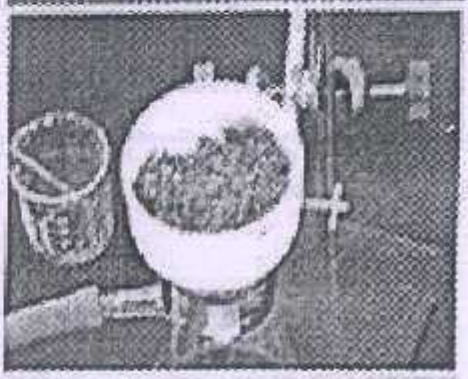
Facilities Available

The University is housed in new independent, multi storied building with state of art equipment, excellent Laboratories and infrastructure to fully complete the course. Majority of students have been securing university ranks in the successful completion. Computer Library with internet facilities for students, Hostel facilities, Health centre, Sports complex, etc.,

Department of Chemistry

The Department has young as well as experienced and dynamic permanent teaching faculty, interested in providing quality education at Undergraduate, Master Postgraduate (PG) levels. The staff members have various disciplines in Inorganic like Ferry theory, Group theory, Symmetry, Stochastic Process, Number theory. Many of the staff members are encouraged to pursue their higher studies and research works.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU



DIPLOMA course

CRYSTALLISATION AND CHROMATOGRAPHY TECHNIQUES

PRIST Deemed to be University
Thanjavur, Vallam-613 403

Head of the Department
Department of Chemistry
PRIST Deemed to be University
Vallam, Thanjavur - 613403

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

COURSE OBJECTIVE

• The most fundamental goal in drug design is to predict whether a given molecule will bind to a target and if so how strongly.

• These methods are also used to predict the conformation of the small molecule and to model conformational changes in the target that may occur when the small molecule binds with

COURSE CONTENT (Module 1)

Aims of Sustainable Development

COURSE CONTENT (Module 2)

Role and Practice of Sustainable

Development

COURSE CONTENT (Module 3)

Sustainable Development

COURSE CONTENT (Module 4)

Sustainable Development

COURSE CONTENT (Module 5)

Sustainable Development

EXAMINATION

There shall be an university examination at the end of academic years.

Eligibility criteria for appearing in the in the final examination

Minimum Attendance - 80%

Minimum Internal Assessment marks - 40%

• It will be done through the whole year.

• Candidate must obtain at least 35% marks in theory

Internal assessment to be eligible for the university examination.

Internal assessment (Theory) will be done as follows:

a) Mid-term and term examinations = 20 marks

b) Assignment s Projects Short test Oral Presentations = 05 marks

c) Attendance = 05 marks

Total = 30 marks

Criteria for a pass in the subject

Minimum marks in theory - 45

Scheme of Examination :-

Duration of written examination - 3 hrs

Maximum marks - 100

Level of Knowledge Expected

Working knowledge with an excellent technological value

Duration of the program

90 hrs add on diploma course

Course Program Outcome

• These methods are fast and accurately provide valuable insights of experimental findings and mechanisms of action.

• In addition, appropriate implementation of these techniques could lead to a reduction in cost of drug designing and development.

• Currently in biomedicine sciences these software are exhibiting imperative role in the different phases of drug discovery.

Eligibility criteria

Any graduate shall be eligible for the admission to the course in the Capacity 15 Seats on first come first basis (Additional admission in the course is prerogative of the school)

Course Structure and Duration

Course is One year duration and will be of 90 hrs imparted training programme covering theoretical and practical aspects of Drug Design.

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate from by School of Arts and Science, Department of chemistry PRIST University, Thanjavur, Vallam.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE

Academic year: 2021-2022

Diploma Course on Crystallisation and chromatography techniques

Department of chemistry

Aim:

To introduce students Crystallisation and chromatography techniques.

Objectives:

- To inculcate concepts of thin layer and column identification and validation.
- To understand techniques in Phenotypic screening and target deconvolution.
- To increase employability of the students.To educate about role of thin layer and column Chromatographic techniques of novel biologically active compounds.

Course Outcomes:

At the end of the course, students will be able to Understand the methods of crystallisation Explain the principles and techniques of column and thin-layer chromatographytechniques. Purify the compounds by crystallisation technique. Analyse and detect the sample by thin layer chromatography

REGISTRAR
Pannaiyah Ramaiyah Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Unit - I

Crystallisation

Principle, Methods of crystallisation – Melt crystallisation, Suspension crystallisation; solvents for recrystallization, Precipitation. Nucleation, Supersaturation, Commonchallenges in crystallisation. Processes involved in crystallisation, applications.

Unit-II

Chromatography Techniques

Chromatography – Adsorption, Partition chromatography. Column Chromatography - Principle, Adsorbents, developers, solvents, columns, packing of the columns, elution,eluting solvent selection-polar and non-polar; Applications. Thin Layer chromatography – Principle, R_f preparation of chromatoplates, application of sample on the chromatoplates, choice of adsorbents, selection of solvent, locating reagents, developing chamber, development of chromatogram and Applications.

Unit-III **Practical**

Crystallisation of simple compounds

Zinc oxide, Copper sulphate, Sodium acetate, Sodium Chloride, Potash alum, Phthalicacid, Benzoic acid, Acetyl salicylic acid, Urea and Sugar.

Unit – IV **Practical**

Thin Layer Chromatography

Separation of Mixture of benzophenone and naphthalene Separation of Mixture of 2-nitrophenol and 4-nitrophenol

Separation of Mixture of Diphenylamine, Benzophenone and Naphthalene Separation of Mixture of Azobenzene, Hydroxyazobenzene and p-aminoazobenzene

Unit – V **Practical**

Column Chromatography

Separation of $KMnO_4$ and $K_2Cr_2O_7$ Isolation of 2-nitrophenol and 4-nitrophenol

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613403.

Application may be send to

Course Co-Ordinator

DR.D.CHINNARAJA
Assistant Professor
Department of chemistry
PRIST University

About the University

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) is a deemed university in Tamil Nadu, India. The university offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts and Law, as well as research programmes.

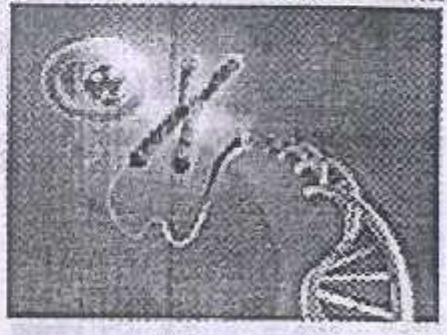
Facilities Available

The University administration, residential housing with state of the art equipment, excellent laboratories and infrastructure to help complete this course. Majority of students have been assisting researchers in the research programs. Computer Library with internet facilities for students, Hostel facilities, Health center, Sports complex, etc.,

Department of Chemistry

The Department has young as well as experienced and dynamic generation of faculty, is involved in providing quality education at Undergraduate (UG) and Postgraduate (PG) levels. The staff are from various disciplines in Domains like Fuzzy theory, Graph theory, Topology, Stochastic Process, Number theory. Many of the staff members are encouraged to pursue their higher studies and research works.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU



Diploma course
MOLECULAR STRUCTURE DRAWING
2020-2021

PRIST Deemed to be University
Thanjavur, Vallam-613 403

Head of the Department
Department of Chemistry
PRIST Deemed to be University
Vallam, Thanjavur - 613403

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Registrar
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

COURSE OBJECTIVE

- The most fundamental goal in drug design is to predict whether a given molecule will bind to a target and if so how strongly.

- These methods are also used to predict the conformation of the small molecule and to model conformational changes in the target that may occur when the small molecule binds to it.

COURSE CONTENT (Module 1)

Aims of Sustainable Development

COURSE CONTENT (Module 2)

Role and Function of Sustainable

Development

COURSE CONTENT (Module 3)

Sustainable Development

COURSE CONTENT (Module 4)

Sustainable Development

COURSE CONTENT (Module 5)

Sustainable Development

EXAMINATION

There shall be an university examination at the end of academic years.

Eligibility criteria for appearing in the in the final examination

Minimum Attendance - 80%

Minimum Internal Assessment marks - 40%

- It will be done through the whole year.

- Candidates must obtain a least 50% marks in theory

internal assessment to be eligible for the university examination.

Internal assessment (Theory) will be done as follows :

a) Mid-term and term examinations= 20 marks

b) Assignments/Projects/Class test/Model Presentations = 05 marks

c) Attendance =05 marks

Total = 30 marks

Criteria for a pass in the subject

Minimum marks in theory - 45

Scheme of Examination:-

Duration of written examination - 3 hrs

Maximum marks - 100

Level of Knowledge Expected

Working knowledge with excellent technological value

Duration of the program

90 hrs add on diploma course

Course Program Outcome

- These methods are fast and accurately provide valuable insights of experimental findings and mechanisms of action.

- In addition, appropriate implementation of these techniques could lead to a reduction in the cost of drug designing and development.

- Currently in biomedicine sciences, these software are exhibiting impressive role in the different phases of drug discovery.

Eligibility criteria

Any graduate shall be eligible for the admission to the course Intake Capacity 25 Seats on first cum first basis (Additional admission to the course is prerogative of the school)

Course Structure and Duration

Course is One year duration and will have 90 hrs imparted training programme covering theoretical and practical aspects of Drug Design.

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Science, Department of Chemistry, PRIST University, Thanjavur, Vallam.

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST),
(Institution Deemed to be Univ...
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE
Academic year: 2021-2022

Diploma Course on Molecular Structure Drawing Tool

Aim

- To introduce students to molecular structure and biological evaluation of novel biologically active compounds.

Objectives:

- To inculcate concepts of molecular structure target identification and validation.
- To understand techniques in Phenotypic screening and target deconvolution.
- To increase employability of the students.
- To educate about role of molecular structure of novel biologically active compounds

Course Outcomes:

At the end of this unit, you will be able to:

- Understand the software used in chemistry
- Perform the Manipulations of Selected Objects
- Apply the chemdraw software to draw the different systems
- Generate the IUPAC and physical properties of organic compounds

Predict resonance spectral data of chemical structures.

REGISTRAR
Ponnaiyah Ramajayam Insti
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

UNIT-I: Molecular Structure Drawing Tool

ChemDraw - Introduction, Installation, Drawing molecular structures - structuretypes,drawing the framework of a structure, Drawing Bonds of Different Types ChangingBond Types, Introducing Atom Labels,

UNIT-II: Manipulations with Selected Objects

Manipulations with Selected Objects- Select Objects, Move Objects, Copy Objects, Rotateand Mirror Objects, Stretch/Shrink/Scale Objects, Structure Perspective, Join Objects.

UNIT-III: ChemDraw-Practical I
Drawi g of molecules - acyclic, cyclic, heterocyclic and bicyclic systems

- Analysis of molecules - formula, exact mass and elemental analysis
- Graphical representation of reaction scheme

UNIT-IV: ChemDraw-Practical II

- Chemical structures to IUPAC names
- IUPAC naming to chemical structures
- 2D structures into 3D structures
- Prediction of boiling point, melting point, critical temperature, critical pressure, criticalvolume and heat of formation.

UNIT-V: ChemDraw-Practical III
Prediction of ^{1}H NMR & ^{13}C NMR of following compounds:

Ethanol, Ethyl methyl ketone, Cycloheptanone, Pyridine and α-napthol

Text Books:

Dr. StefanBienz Short Manual to the Chemical DrawingProgram ChemDraw University of Zurich I-V

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

DEPARTMENT OF EDUCATION

SCHOOL OF EDUCATION

Value Added Course

2021 - 2022

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

SCHOOL OF EDUCATION

VALUE ADDED COURSE

IN

ESSENTIALS EDUCATION

ABOUT PRIST DEEMED TO BE UNIVERSITY

- Established in the year 2008.
- A private University under Section 3 of UGC Act 1956.
- Provides world class learning in all faculties.
- Offering quality higher Education in Engineering & Technology
- Recognized by Computer Society of India, Madras.

Tiruchirappalli, Kumbakonam & Chennai.

Our beloved parents late P. Manjapuram makes his heavenly abode by providing quality education. He gives everything to his beloved father shri Ponnaiyah and his grandfather late Ramajayam and developed him matured person and grandfather.

Our Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Institution, a Deemed to be University, Thanjavur, Tamil Nadu is accredited by UGC under section 3 of Act 1956, is one of the renowned institutions and it quality education serves more than 30 years in promoting.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education started with Bachelor of Education (B.Ed.) programmes and Full time & Part time Diploma programmes to uplift the poor and marginal students. School of Education is contributing its best to promote research and to impart education with latest educational materials and to bring out their latent talents to the world of professional standards.

CERTIFICATE PROGRAMME IN GUIDANCE

The Certificate Programme in Guidance (CIG) caters the needs of teachers, parents, social workers and others interested in guiding children in the age group of 3-12 years in their inter learning and social emotional development. It is an awareness programme, which will help you in dealing with the problems faced by the children. The programme is developed in collaboration with the National Council of Educational Research and Training (NCERT), Delhi, the apex body concerned with school education in the country.

HOW WILL THIS PROGRAMME HELP YOU?

The programme has been specially designed to help you develop understanding of the key concepts, principles, processes and skills available in the area of guidance. You will also have an opportunity to develop your skills in providing guidance to children in the age group of 3-12 years. You will know concepts, understandings involved in various elements which children face

learning and socio-emotional development. You will be able to identify children with special needs and problems. This programme will suggest strategies as feedback to parents about their children.

TARGET GROUP

This programme is meant for a large group comprising teachers, parents, social workers, persons from voluntary agencies and individuals working with children and in the field of guidance.

ELIGIBILITY

Those persons who are graduates and undergraduates.

Age limit 20 years to 30 years and above 30 years to 40 years.

PROGRAMME STRUCTURE

Total no. of hours 90 hours and 3 months

INSTRUCTIONAL SYSTEM

UNIT – I Meaning, Nature and Scope of economics – Scope of science and recent trends in economics of education – Education as consumption and investment – The concept and characteristics of human capital – Education and its relation to Human resource development.

UNIT – II The concept of human resource development – Indicators of human resource development and methods to do so by – Harbison and Meyers – The stages of developing resources – Problems of human resource development in developing countries.

UNIT – III The concept of Manpower – Manpower planning and Economic development – Estimation of manpower requirements – Historical approach, cross section comparison method – Surveys of Establishments – Utility of each method – Suggestions, problems of manpower estimation in developing countries – Migratory flow – Theoretical considerations – Labour supply forecast and educational planning – Education and labour market – Skill development shortage and surpluses.

UNIT – IV Education and Economic growth – Education and National Development – Education and the distribution of income – Education, Population and Poverty – Interrelations, Privatization, Commercialization of Education – Contemporary issues – Globalization and Education – Education.

UNIT – V Educational planning – Meaning, Nature and Objectives – Characteristics of good plan – Principles of Institutional Planning – Educational Planning in India – Centralized and decentralized planning – advantages of planning at the Central and State levels – Different approaches – Rate of return – Limitation of each – Manpower models – Systems approach to educational planning, simulation techniques in educational planning – Limitations of each in large and heterogeneous societies.

METHODOLOGY

Programme will be delivered through multi-media, personal counseling in the following ways:

- Print material, Assignments and support which you can study and send back to us after completing your own.
- Video and Audio programmes developed by Faculty Members.
- Programme schedule, Contact hours, Location of Counselors.
- Feedback provided on written activity or on telephone assignments done by you.
- Live interaction between counselors.
- Reading centers and academic Renewal.
- Centers through telecounselling and radio broadcasting at selected places.

EVALUATION

When you successfully complete all the course requirements above, you will be eligible for the award of Certificate in Guidance. There are three types of evaluation methods used under this programme.

a) There are continuous assignments to be completed. Each assignment will be evaluated by the faculty member. It gets about 30% weightage.

b) There will be one Practical Examination and one Theory Examination.

c) There will be two Practical Examination.

d) The weightage assigned to the above components of assessment will be 70% and 30% respectively.

DURATION

Minimum: 45 HOURS

Maximum: 3 Months **REGISTRATION FEE: Rs. 200**

MEDIUM OF INSTRUCTION: English

For more details of the programme please contact:

The Dean

Or

The Programme Coordinator

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST),

Deemed to be University

Thanjavur - 613403.

Phone: 04362-260871 Fax: +91 4362 260871

Web: www.prist.ac.in

Outlook Mail Id: deanedu@prist.ac.in

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
under Sec. 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU

DEAN,
School of Education

HOD,
School of Education

SCHOOL OF EDUCATION
VALUE ADDED COURSE
IN
Positive Psychology

ABOUT PRIST DEEMED TO BE UNIVERSITY

- Established in the year 2008.
- Accredited with 'A' grade in the year 2013.
- Provides a wide variety of courses.
- Offering quality higher education in Engineering & Technology.
- Reaching out campus spanning Thanjavur, Madurai, Kumbakonam & Chennai.

Our beloved founder Prof. P. Munuswamy makes the humble endeavour to society by providing quality education. He owes everything to his beloved mother late Ponnaiyah Ammal who is responsible for his success in life and profession.

Our Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Institution, a Deemed to be University, Thanjavur, Tamil Nadu is recognized by UGC Under Section 3 of the Act 1956, is one of the renowned institutions with a quality education service more than 10 year in pioneering.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education offers B.Ed., M.Ed., M.Phil programmes and Full time / Part time Ph.D Programmes to uplift the poor and marginal students. School of Education is continuously striving hard to promote research and to impart professional skills among student's and to bring out their talent to face the challenges of the present endeavors.

CERTIFICATE PROGRAMME IN GUIDANCE

The certificate Programme in Guidance (CPG) orients the needs of students, parents, professionals and others interested in guidance with the age ranges 5-15 years for their better learning, understanding considerations. This is an awareness programme, which will help you to develop with the problems faced by the children. The programme is developed in collaboration with the National Council of Educational Research and Training (NCERT), Delhi, Persons closely connected with the above fields in the country.

HOW WILL THIS PROGRAMME HELP YOU?

The programme has been specially designed to help you develop an understanding of child development. You will become more sensitive to the needs of individual children and be able to identify children with special needs and problems. This programme will suggest strategies to facilitate all round development of children.

OBJECTIVES:

The programme is aimed at the following competencies:

- [illegible] students, parents, and voluntary agencies [illegible] child-centered education.
- [illegible] guidance services in schools.
- [illegible]
- [illegible]
- [illegible]

PROGRAMME STRUCTURE

Nationally [illegible] modules.

INSTRUCTIONAL SESSION

UNIT 1: Introduction to positive psychology

Meaning, Definition, Assumptions and Goals of positive psychology, History of positive psychology

UNIT 2: Happiness and well being

Happiness, Meaning and measures of happiness, Types of happiness, Effects of happiness Factors contributing to happiness. Well-being: subjective and psychological well-being. Hedonic and Eudaimonic basis of well-being. Broaden and built theory. PERMA model.

Unit 3: Positive emotions

Positive and negative emotions. Optimism and hope, expectations and outcomes, self-efficacy. Knowledge of optimism. How self-determination theory. Intrinsic and extrinsic motivation, goals.

UNIT 4: Prosocial behavior and inter-personal relationship

Altruism, definition, Empathy-altruism hypothesis. Prosocial and moral lives of couples for belief, Offering and receiving altruism, Forgiveness, definition, Measures of forgiveness, Neural basis of forgiveness, Gratitude, definition, Psychophysiological basis of gratitude, Factors influencing gratitude, Measures of gratitude, Cultivating gratitude, [illegible]

UNIT 5: [illegible]

Cultivating positive [illegible] flow, basic [illegible] Psychological [illegible]

[illegible] interaction is imparted through a multi-media package comprising the following:

- Printed material sent to you by post which you can easily read and understand on your own;
- Video and audio programmes provided at the Study Centres;
- Programmed instructional booklets and books;
- Facility for interactive learning from the academic counsellors at the Study Centres;
- Feedback provided on written and activity-oriented assignments sent by you;
- Live interaction between teachers at the Headquarters and students at Regional Centres through internet enabled counselling at select places.

EVALUATION

When you successfully complete all the courses mentioned above, you will be eligible for the award of Certificate in Guidance. There are three types of evaluation methods used under this programme.

a) There are exercises in the printed learning material which you are required to do while study in order to learn in greater depth and weightage.

b) There will be an in-house examination of the form Assignments.

c) There will be term-end final examination.

d) The weightage given to the final and continuous assessment will be 30% and 70% respectively

DURATION

Minimum 45 Hours

Maximum 3 Months PROGRAMME Fee Rs. 100

MEDIUM OF INSTRUCTION: English

For more details of the programme please contact

The Dean

Or

The Programme Coordinator

Ponnaiyah Ramajayam Institute of Science & Technology

Deemed To Be University

Thanjavur, Tamilnadu

Phone: 04362-264660, 264661 and Ext: 4362

613 403

Web: www.prist.ac.in

E-Mail: [illegible]

HOD, School of Education

DEAN, School of Education

PRIST Deemed to be University, Thanjavur - 613 403

Ponnaiyah Ramajayam Institute of Science & Technology (Institution Deemed to be University) THANJAVUR - 613 403, TAMIL NADU

REGISTRAR

1340

PONNAIYAH RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY

SCHOOL OF EDUCATION
VALUE ADDED COURSE
IN
RESEARCH SKILLS

ABOUT PRIST DEEMED TO BE UNIVERSITY

- Established in the year 2000.
- Attached to Periyar University in the year 2008.
- Provides world class education.
- Offering quality higher Education in Engineering & Technology.
- Located at Vallam, Thanjavur, Tamil Nadu.

Our beloved founder Late Dr. Ponnaiyah Ramajayam makes his humble contribution to society by providing quality education. He rose everything to his beloved father late Ponnaiyah and his correspondent Mrs. K. Sarojini Ramajayam who inspired him in his path to success and promoted him.

Dr. Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Institution, a Deemed to be University, Thanjavur, Tamil Nadu is recognized by UGC Under Section 3 of Act 1956, is one of the renowned institutions and is leading education service more than 20 years in promoting.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education is offering B.Ed., M.Ed., M.Phil programmes and Full time / Part time Ph.D Programme to cater the young and aspired students. School of Education is primarily formed to promote research and to impart educational skills to pre-service students and to bring out their innovations in the field of the trained students.

CERTIFICATE PROGRAMME IN GUIDANCE

The Certificate Programme in Guidance (CPG) caters the needs of teachers, parents, social workers and others interested in guiding children in changing world. It provides the basic learning related, emotional and social development. This is an excellent programme, which will help you in dealing with the problems faced by the children. The programme is developed in collaboration with the National Council of Educational Research and Training (NCERT), Delhi. It covers the fields concerned with the needs of children in the country.

HOW WILL THIS PROGRAMME HELP YOU?

The programme has been specially designed to help your development and professional skills. You will learn

- Principles of learning and how you can use them in your classroom.
- Various methods of teaching in the Primary Classes.
- Programmes on Guidance and Counselling in Doordarshan.
- Facilities for the development of instructional materials in the Resource Centres.
- Participation in a project which develops orientation towards gainful employment.
- Improved professional competence.
- Better performance of students in School.
- Centres through which you can take counselling at other places.

EVALUATION

When you successfully complete all the courses mentioned above you will be eligible for the award of Certificate in Guidance. There are three types of evaluation methods used under this programme.

a) Theory courses are evaluated on the basis of Internal Assessment and Semester Examinations. Internal Assessment is based on Assignments, Seminars, Tests and Attendance. The weightage for Internal Assessment is 25% and for Semester Examinations is 75%.

b) There will be continuous evaluation of the practical assignments.

c) There will be a comprehensive examination at the end of the programme.

d) The weightage for practical work and comprehensive examination will be 50% and 50% respectively.

DURATION

Minimum: 45 Hours

Maximum: 3 Months PROGRAMME FEE: Rs. 100

MEDIUM OF INSTRUCTION: English

For more details of the programme please contact:

The Dean
Or
The Programme Coordinator
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST),
Deemed To Be University
Thanjavur, 613403.

Phone: 04639066804, Fax: +91 4362 264371
Web: www.prist.ac.in
Outlook Mail Id: deanedu@outlook.com

DEAN,
School of Education

PONNAIYAH RAMAJAYAM INSTITUTE OF SCIENCE & TECHNOLOGY
(PRIST) Institution
Deemed to be University U/s 3 of the UGC Act 1956
THANJAVUR - 613 403.

PROGRAMME STRUCTURE

Number of Hours: 45 Hours

INSTRUCTIONAL SYSTEM

Unit I Introduction to Research and Research Design

Nature and scope of research; information based decision making and science of knowledge. The research process; basic approaches and terminologies used in research. Defining research question and hypothesis. Preparing a research plan, qualitative and quantitative research designs. Experimentation, Observational studies, Exploring secondary data.

Unit II Measurement and Scaling, Data Source and Data Collection

Field research; primary data collection from observations, surveys and experimentation. Measurement and scaling; commonly used scales in reliability and validity of scales.

Designing questionnaire for data collection; testing the instruments, data collection process, sampling methods and procedures and sample size decisions.

Unit III Data Analysis

Editing and coding of data; data entry; graphic presentation of data; cross tabulation. Testing of hypotheses and Inferences; Parametric tests based on normal, t, F and chi-square distributions; Analysis of variance and covariance; Non-parametric tests; Factor analysis, cluster analysis, multidimensional scaling, conjoint analysis.

Unit IV Report Writing and Presentation

Need for different documentations, Importance of Report Writing, Types of research reports, Report structure, Report preparation and presentations, Tables, Graphs, Charts, Referencing etc.

Instruction is imparted through a multi-media package comprising the following:

- Printed study materials, each booklet of which you can read and understand in a few days' time.
- Video and Audio programmes telecast from the Study Centres.
- Programmes are recorded in Cassettes and broadcast on Doordarshan.
- Facilities for the development of instructional materials in the Resource Centres.
- Participation in a project which develops orientation towards gainful employment.
- Improved professional competence.
- Better performance of students in School.
- Centres through which you can take counselling at other places.

SCHOOL OF EDUCATION
VALUE ADDED COURSE
IN
SPSS

ABOUT PRIST DEEMED TO BE UNIVERSITY

- Established in year 2008
- Attained university status in the year 2018
- Accredited with 'A' grade by NAAC
- Offering quality higher education in Engineering & Technology
- Reaching out Campuses in Coimbatore, Madurai, Trichy, Tanjore, Kumbakonam & Chennai.

Our Beloved patron Prof. P. Ramajayam poured his needful contribution to society by providing quality education. He owes everything to his beloved Sister Late Pon. Vasanthi and his loving mother Late Smt. Rukmani ammal who inspired him, nurtured him and groomed him.

Late Pon. Vasanthi Ramajayam Institute of Science and Technology (PRIST) Institution, a Deemed to be University, Thanjavur, Tamil Nadu is recognized by UGC Under Section 3 of Act 1956, is one of the endowed institutions and it quality education serves more than 20 year in rural setting.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education under Pon. Vasanthi Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education unit with UGC B.Ed, M.Ed, M.Phil programmes and Full time / Part time Ph.D Programmes to uplift the poor and marginal students. School of Education is committed to best to promote research and to inspire educational skills to the rural students and to bring out best talent values in the mind of the rural students.

CERTIFICATE PROGRAMME IN GUIDANCE

The Certificate Programme in Guidance (CPG) caters the needs of teachers, parents, social workers and others interested in guidance and counseling to provide for their better learning and social-emotional development. This is an awareness programme, which will help you in dealing with the problems faced by the children. The programme is developed in collaboration with the National Council of Educational Research and Training (NCERT), the apex body concerned with school education in the country.

HOW WILL THIS PROGRAM BENEFIT YOU?

The programme has been specially designed to help you develop understanding of children's behaviour. You will learn to provide individual therapeutic intervention to children in difficulty. You will solve concepts and processes involved in guiding elementary school children for learning and socio-emotional development. You will be able to identify children with special needs and problems. This programme will support you to be a dedicated teacher, counsellor and facilitator.

TARGET GROUP

The programme is meant for a target group consisting of college pass-outs, school personnel, para-voluntary organizations and social workers interested in guidance and counselling of children.

ELIGIBILITY

Teachers, parents, social workers and others

Aspirants of UG degree holders in any discipline with a minimum of 50% marks in aggregate

PROGRAMME STRUCTURE

National Credit Framework (NCF) Guidelines

INSTRUCTIONAL SCHEDULE

UNIT I: Introduction to SPSS

Statistical concepts – Definitions of statistics – Population and sample – Descriptive and inferential statistics – Measurement scales – Data entry in variable view – Data view – Deep freeze – Importing data – Metadata in SPSS and Defining variables – Creating a Codebook in SPSS.

UNIT II: Working with Data

Computing variables

Recoding Data (Visual Binning, Optimal Binning, Automatic Recode) - Rank Cases - Sorting Cases - Selecting Subsets of Cases - Weighting Cases - Sorting Data - Transposing Data - Restructuring Data - Merging Files - Aggregating Data - Orthogonal Design - Identifying Duplicate Cases - Identifying Unusual Cases - Creating Time-Series Data - Replacing Missing Values - Random Number Seed - Count Occurrences of Values - Shift Values - Rank Cases - Automatic Recode - Create Time Series - Replace Missing Values - Multiple Imputation

UNIT III: Exploring Data

Descriptive Statistics for Continuous Variables - Descriptive Statistics for Categorical Variables - Explore Procedure - Frequencies Procedure - Descriptives Procedure - Ratio Statistics - Crosstabs Procedure - Frequencies and Descriptives Procedures.

UNIT IV: Analysing Data

Comparing means and ANOVA - One-Sample T Test - Independent-Samples T Test - Paired-Samples T Test - One-Way ANOVA - Univariate Analysis of Variance - Bivariate Correlations - Partial Correlations - Distances - Linear Regression - Curve Estimation - Binary Logistic Regression - Multinomial Logistic Regression - Ordinal Regression - Nonlinear Regression - Two-Stage Least Squares - Probit Analysis - Weight Estimation - Two-Stage Least Squares - Nonparametric Tests - Chi-Square Test - Binomial Test - Runs Test - One-Sample Kolmogorov-Smirnov Test - Two-Independent-Samples Tests - Two-Related-Samples Tests - K-Independent-Samples Tests - K-Related-Samples Tests - Multiple Response Analysis - Multiple Response Frequencies - Multiple Response Crosstabs - Reliability Analysis - Multidimensional Unfolding (PREFSCAL) - Multidimensional Scaling (PROXSCAL) - Multidimensional Scaling (ALSCAL) - Forecasting - Sequence Charts - Autocorrelations - Cross-correlations - Spectral Plots - Exponential Smoothing - Univariate ARIMA - Multivariate ARIMA - Seasonal Decomposition - Survival Analysis - Life Tables - Kaplan-Meier - Cox Regression - Cox Regression with Time-Dependent Covariates - Cox w/ Time-Dep Cov Extended - Direct Marketing - Quality Control - Pareto Charts - Control Charts - Moving Average - Exponentially Weighted Moving Average - CUSUM - Variables Charts - Attribute Charts - Time-Weighted Charts - Multivariate Charts - Process Capability - Process Capability Ratios - Multivariate Process Capability - Acceptance Sampling - Single Acceptance Sampling - Multiple Acceptance Sampling - Sampling Plan Evaluation - Bayesian Statistics - Bayesian Binomial Test - Bayesian Independent-Samples T Test - Bayesian Paired-Samples T Test - Bayesian One-Way ANOVA - Bayesian Linear Regression - Bayesian Binary Logistic Regression - Bayesian Poisson Regression - Bayesian Survival Analysis - Bayesian Life Tables - Bayesian Kaplan-Meier - Bayesian Cox Regression - Bayesian Cox Regression with Time-Dependent Covariates - Bayesian Cox w/ Time-Dep Cov Extended - Bayesian Autoregression - Bayesian Multivariate Autoregression - Bayesian Seasonal Decomposition - Bayesian Spectral Plots - Bayesian Cross-correlations - Bayesian Autocorrelations - Bayesian Sequence Charts - Bayesian Exponential Smoothing - Bayesian Univariate ARIMA - Bayesian Multivariate ARIMA - Bayesian Seasonal Decomposition

SCHOOL OF EDUCATION
VALUE ADDED COURSE
IN
Early Childhood Care and Education

ABOUT PRIST DEEMED TO BE UNIVERSITY

- Declared as Deemed University u/s 3(1) of UGC Act 1956 vide MHRD Notification No. F.9-26/2002-U.3 dated 26th May 2006
- Accredited by NAAC with 'A' Grade
- Provides world class learning environment
- Offering quality Higher Education in Engineering & Technology, Management, Pharmacy, Architecture, Physiotherapy, Nursing, Medicine, Dentistry, Law, Arts & Science, Education, Agriculture, Biotechnology, Food Technology, Fashion Technology, Hotel Management & Catering Technology, Information Technology and Business Administration

Our beloved Founder Late. Dr. P. Munusamy Naidu made his mark in society by providing quality education. He owes everything to his beloved father late Dr. Periyasamy and his mother late Shri. Sornammal and what inspired him, remained his and ground like.

Our Poompuhar Ramaiyan Institute of Science and Technology (PRIST) institution, a Deemed to be University, Thanjavur, Tamil Nadu is recognized by UGC u/s Section 3 of the Act, 1956, is one of the renowned institutions and it's quality education serves more than 30 years in promising.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education, under Poompuhar Ramaiyan Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education has the full fledged B.Ed, M.Ed, M.Phil programmes and full time / Part time Ph.D Programme to uplift the poor and needy students. School of Education is committing its best to provide research and to impart educational skills to rural students and to bring out their keen talents in the midst of the rural students.

CERTIFICATE PROGRAMME IN GUIDANCE

The Certificate Programme in Guidance (CIG) caters to the needs of teachers, parents, social workers, health professionals, college students and counselors in the area of basic training and skill development. This is an awareness programme, which will help you in dealing with the problems faced by the children. The programme is developed in collaboration with the National Council of Educational Research and Training (NCERT), Delhi, the apex body concerned with the school education in India.

HOW WILL THIS PROGRAMME HELP YOU?

The programme has been specially designed to help you develop an understanding of children's growth. You will also understand the difference between average and exceptional children. Education (Yes) will also introduce you to the concepts and processes involved in guiding elementary school children for [illegible]

TARGET GROUP

The programme is meant for a large group comprising teachers, parents, social workers, parents of young children, care takers, child [illegible] and anyone else interested in early childhood care and education.

ELIGIBILITY

Teachers, pre-school teachers, primary schools, Anganwadi workers, nursery school teachers, health professionals, parents and those interested in working with children.

PROGRAMME DURATION

Six months including practicum.

COURSE CONTENTS

UNIT – I Meaning, Nature and Scope of education – Significance of education towards economics of education – Education as consumption and investment – The economic concept of human capital. Education and its role in Western resource development.

UNIT – II The concept of Human resource development – Indicators of human resource development and indicators in the study of Harbison and Meyers. The scope of developing countries – Problems of human resource development under developed countries.

UNIT – III The concept of Manpower – Manpower planning and its scientific development – Estimation of manpower requirements – Historical approach, cross section comparison method – Surveys of Business and public sector, projection – Suggestions, problems of manpower estimation technology changes – Migratory flow – Theoretical considerations – Labour supply approach and educational planning – Education and labour market – Skill development strategies and surpluses.

UNIT – IV Education and Economic growth – Education and Technical Development – Education and the distribution of income – Education, Productivity and poverty – Interrelation – Private and social returns to Education – Cost benefit analysis in Education – Problems in Education.

UNIT – V Educational Planning – Meaning – Objectives – Characteristics of planning – Its Temporal Phasing – Education policy considerations – Constraints and [illegible] decentralized planning – Advantages of planning at the Central and State levels – Different approaches to manpower approach – Rate of return – Evaluation of such

Macro models – Systems approach to educational planning, simulation techniques in educational planning – Limitations.

Instruction and Learning Process: Face-to-face, Peer-to-peer, Self-learning

- Interactive classes by subject experts through you channel broadcast/webcast/podcast etc.,
- Video and Audio programmes available in Study Centres.
- Programmed learning packages and Books.
- Periodical interaction with learners at their Study Centres.
- Practicum in Education in nearby schools / Anganwadi / Child Guidance Centres.
- Practical work, assignments and activity oriented classroom participation by learners.
- Discussions through chat rooms.
- Term-end examinations.
- Contact programmes through video conferencing at select places.

EVALUATION

When you successfully complete all the courses mentioned above, you will be eligible for the award of Certificate in Guidance. There are three types of evaluation methods used in this programme.

a) Theory assignments are to be submitted to the respective regional centre/study centre in the exam guide format as per the schedule.
b) Practicum (Practical work) assignments.
c) There will be term-end final theory exams.
d) Weightage: theory assignments and practicum assessment will be 70% and 30% respectively.

DURATION:
Minimum: 6 Months
Maximum: 8 Months **PROGRAMME FEE:** Rs. 1000
MEDIUM OF INSTRUCTION: English

For more details of the programme please contact:

The Dean
Or
The Programme Coordinator
School of Education
Poompuhar Ramaiyan Institute of Science & Technology (PRIST),
Deemed To Be University
Thanjavur, 613402.
Phone: 9443836804, Fax: 04362236571
Web: www.prist.ac.in
Outlook Mail id: deanedu@prist.ac.in

REGISTRAR
Poompuhar Ramaiyan Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
Under Sec. 3 of UGC Act, 1956
THANJAVUR - 613 403.

DEAN
School of Education
Poompuhar Ramaiyan Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
Under Sec. 3 of UGC Act, 1956
THANJAVUR - 613 403.

SCHOOL OF EDUCATION

VALUE ADDED COURSE

IN

GENDER SENSITIZATION

ABOUT PRIST DEEMED TOBE UNIVERSITY

- Accredited with grade 'A' by NAAC.
- Awarded Category-I status by UGC in 2007.
- Provides world class education in engineering.
- Offering quality higher education in Engineering & Technology.
- Recognized by Government of India, Ministry of Medical Health, Family Welfare and Government of Chennai.

The visionary founder of Prist University realized the unstable society that is ruled by providing quality education. He owes everything to his beloved father late Ponnaiyah and his kulagurudeiva Late Ramanathanmudaliar who inspired him, nurtured him and groomed him.

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) instituted a Deemed to be University, Thanjavur, Tamil Nadu is recognized by UGC (under section 3 of Act 1956, is one of the renowned institutions and it quality education crosses more than 20 year in promoting.

PROFILE OF THE SCHOOL OF EDUCATION

The School of education under Ponnaiyah Ramajayam institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The School of Education started functioning with M.Ed., M.Phil., M.Ed programmes and Ph.D. Part time Ph.D Programme to uplift the poor and marginal students. School of Education is committed to achieve to promote research and to impart educational skills to the prospective students and to bring out their latent talents in the present students.

EXTENSION PROGRAMME & OUTREACH

Under extension Programme and outreach (EPO) caters the needs of teachers, parents, schools and teachers and others interacting regarding their role in the management of learning and their better learning achievement and development. Each is an awareness programme, which will help you in dealing with the problems faced by the children. The programme is undertaken in collaboration with the National Council of Educational Research and Training (NCERT), Delhi, the apex body concerned with school education in the country.

The programme has been specially designed to help you acquire a deeper understanding of child development. You will have been motivated to have an active involvement in the context of child education. You will know aspects and processes involved in making elementary school children for learning and to develop their potentialities. The programme will suggest strategies to facilitate all round development of children.

TARGET GROUP

This programme is meant for a target group comprising teachers, parents, social workers, personnel from voluntary organizations and other interested persons working in and outside schools.

ELIGIBILITY

Those who have completed 10+2 or equivalent with a minimum age of 18 years and a minimum 15 years of schooling.

PROGRAMME STRUCTURE

Weekend Value Programmes in Tamil.

INSTRUCTIONAL SYSTEMS

UNIT - I Understanding Gender and Related Concepts
Gender Issues, Gender Roles, Social construction of Gender, Gender Roles, Gender Stereotypes, Gender Division of Labour, Patriarchy, Power Work, Familial Ideals, Violence Against Women, Inter Relationship, Gender, Caste & Class

UNIT - II Gender Sensitization
Gender Sensitization - Meaning, Nature & importance, Challenges before Gender Sensitization, practices for Gender Sensitization.

UNIT - III Women Equality - Convention & Declaration
Convention on the Elimination of all forms of Discrimination Against Women (CEDAW)
Declaration on the Elimination of Violence Against Women (DEVAW)

UNIT - IV
Gender Equality in the Indian Constitution, Policies and Acts
Gender Equality in the Indian Constitution, Policies and Acts
Women Empowerment in India, Women Development Programmes
Children Rights in India, Child Labour, Child Abuse, Child Trafficking
Laws for Women, Women Welfare Programmes
Laws for Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

UNIT - V
Gender Issues in Family, Work Place and Society

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403.

The programme will comprise the following:

- Printed materials sent to you by post which you are expected to read and do certain activities as directed.
- Video and Audio programmes provided in the Study Centres.
- Personal contact programmes at the Study Centre (Co-ordinator).
- Facility to borrow books for reading from the resource centre at the Study Centre.
- Feedback from the co-ordinator, interaction with the resource persons and other students.
- Live interaction between teachers and students.
- Practicum and projects in Tamil.
- Lectures, theory, demonstration, and many occasions at other places.

EVALUATION

When you successfully complete all the courses mentioned above, you will be eligible for the award of Certificate in Gender Issues. There are three types of evaluation methods used in the programme.

a) There are exercises in the printed learning material which you are required to do while study to get clues in your lesson weightage.
b) There will be continuous examination in the form of assignments.
c) There will be one end of the examination.
d) The weightage given to the final and continuous assessment will be 70% and 30% respectively.

DURATION

Minimum: 45 Hours

Maximum: 3 Months PROGRAMME FEE: Rs. 100/-

MEDIUM OF INSTRUCTION: English

For more details of the programme please contact:

The Dean
Or
The Programme Coordinator
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST),
Deemed To Be University
Thanjavur, -613403.
Phone: 04380 6804 Fax: 04362-250371
Web: www.prist.ac.in
Outlook Mail Id: deanedu@prist.ac.in
Gmail Id: pristsoe@gmail.com

Dean
School of Education
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST) Deemed to be University
Thanjavur - 613 403

PRIST DEEMED TO BE UNIVERSITY
SCHOOL OF EDUCATION
VALUE ADDED COURSE
Research skill
COURSE CODE: 21U3EVAC3

OBJECTIVES

The student teacher will be able to

- Identify the different types of research
- Identify the appropriate research problem pertaining to his/her dissertation work
- Write the review of literature in accordance with the 7th edition of the Manual of Research Skill association
- Write research proposal in an effective manner

Unit I Introduction to Research and Research Design

Nature and scope of research, information based decision making and source of knowledge. The research process, basic approaches and terminologies used in research. Defining research question and framing of hypotheses. Preparing a research plan, qualitative and quantitative research designs, Experimentation, Observational studies, Exploring secondary data.

Unit II Measurement and Scaling, Data Source and Data Collection

Field research: primary data collection from observations, surveys and experimentation. Measurement and scaling, commonly used scales in reliability and validity of scales.
Designing instrument for data collection, testing the instrument, data collection process, Sampling: methods and procedures and sample size decisions.

Unit III Data Analysis

Editing and coding of data, classification, graphic presentation of data, cross tabulation. Testing of hypotheses, type I and II errors, one tailed and two tailed tests of significance, Parametric and non-parametric methods, Choice of statistical techniques, Tests of association, Simple linear regression and other non-parametric tests.

Unit IV Report Writing and Presentation

Need for Effective documentations, Importance of Report Writing, types of research reports, Report structure, Report preparation and presentations , Tables, Graphs, Charts, Referencing etc.

References-Research Methods for Business Students-Pearson Education
Research Methodology by D.K. Bhattacharyya-Excel
Research Methodology by Kothari

Out comes: CO1: Reflect on the role of research in teaching and over all professional development
CO2: Discuss ways of ensuring integrity and ethics in conducting research
CO3: Understand the process of research
CO4: Comprehend the research design and research plan
CO5: Recognize the research problem

HOD,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

DEAN,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403.

PRIST DEEMED TO BE UNIVERSITY
SCHOOL OF EDUCATION
VALUE ADDED COURSE
SPSS
COURSE CODE: 21EDVAC4

OBJECTIVES

The student teacher will be able to

- Get hands on SPSS to learn various statistical measurements and its analysis.
- Enable to distinct various competencies in standardizing different types of measuring instrument.
- Familiarize to construct different kinds of tests and tools.

UNIT I: Introduction to SPSS

SPSS Environment, data editor, output viewer, syntax editor – Data View window – SPSS Syntax – Data creation – Importing data – Variable types in SPSS and Defining variables – Creating a Codebook in SPSS.

UNIT II: Working with Data

Computing Variables- Recoding Data- Creating Variables- Recoding Categorical String Variables- using Automatic Recode - Rank Cases - Sorting Data - Grouping or Splitting Data.

UNIT III: Exploring Data

Descriptive Statistics for Continuous Variables – The Explore procedure – Frequencies Procedure – Descriptives- Comparing Groups- Explore for Categorical Data.

UNIT IV: Analysing Data

Inferential Statistics for Association- Pearson Correlation, Chi-square Test of Independence – Inferential Statistics for Comparing Means: One Sample t Test, Paired-Samples T Test, Independent Samples T Test, One Way ANOVA.

References

- IBM Corp. IBM Knowledge Center. SPSS Statistics. IBM. retrieved 18 May 2016. http://www-01.ibm.com/support/knowledgecenter/SSLVMB/welcome
- HOW TO USE SPSS: A Step-By-Step Guide to Analysis and Interpretation. Brian C. Cronk. Tenth edition published in 2018 by Routledge.
- SPSS for Intermediate Statistics: Use and Interpretation, Nancy L. Leech et. al., Second edition published in 2005 by Lawrence Erlbaum Associates, Inc.
- Using IBM SPSS statistics for research methods and social science statistics, William E. Wagner, Fifth edition published in 2015 by SAGE Publications, Inc
- Course Outcomes
- Students' familiarity with the tool box of statistical software.
- Capacitating students to analyse complex information, using statistical software – Statistical Package for Social Sciences (SPSS).
- Strengthened understanding and application in statistical analysis.

HOD,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403.

REGISTRAR
Pondicherry Ramaiyam Institute of Science & Technology (PRIST)
Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu, India.

DEAN,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403.

PRIST DEEMED TO BE UNIVERSITY
SCHOOL OF EDUCATION
VALUE ADDED COURSE
GENDER SENSITIZATION
COURSE CODE: 21130VAC6

OBJECTIVES
The student teacher will be able to:

- To introduce gender sensitization and related issues.
- To raise and develop social consciousness among the students.
- To sensitize the students regarding the issues of gender and the gender inequalities prevalent in society.
- To initiate the gender perspective in all domains of understanding Gender Studies with the issues of their daily life.
- To encourage capacity building among the students to enable them to engage in policy decisions to remove gender biases in all fields of life in the process of gender equality for nation building.

UNIT - I Understanding Gender and Related Concepts
Gender : Sex vs. Gender, Social construction of Gender, Gender Roles, Gender Stereotypes, Gender divisions of Labour, Patriarchy, House Work, Gender Based Violence, Sexual Rights, Intersectionality, Gender, Caste & Class.

UNIT - II Gender Sensitization
Gender Sensitization : Meaning, Nature & importance, Challenges before Gender Sensitization, practices for Gender Sensitization.

UNIT - III Towards Equality : Convention & Declaration
Convention on the Elimination of all Forms of Discrimination against Women (CEDAW)
Declaration on the Elimination of Violence Against Women (DEVAW)

UNIT - IV Towards Equality : Constitutional Provisions and Acts
Gender Equality: Constitutional Provisions, Protection of Women from Domestic Violence Act, 2005, Protection of Children from Sexual Offences Act, 2012, Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

Reference Books

1. Anne Phillips & Lucella Wheleham (ed) *Key Concepts in Gender Studies*, SAGE Publications, New Delhi
2. Shoma Kanda *Who is Powerful?* Edi for Women, New Delhi
3. V. Geetha *Gender*, STREE SAMYA, Kolkata
4. V. Geetha *Patriarchy*, STREE SAMYA, Kolkata

Links: Understanding Gender - https://youtu.be/MvhBHOrdfg

1. Basic concept of sex and gender, gender attributes & questions of identity (WS) - https://www.youtube.com/watch?v=70Z8ZuhlWcQ
2. Gender and intersectionality theory - https://youtu.be/GqbdLnbsJ7w
3. Patriarchy - https://youtu.be/-f19qsqsKg8
4. Gender Stereotypes meaning - https://youtu.be/EqfCA1Gqpek
5. Gender Sensitization: Issues and Challenges - https://youtu.be/eLOOSfcm04

Outcomes: CO1: Comprehend the concept, meaning and nature of measurement and evaluation
CO2: Understand the relationship between measurement and evaluation.
CO3: Acquire knowledge about various tools of measurement and evaluation in education
CO4: Develop skills on using psychological test for measurement and evaluation.

HOD,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403

REGISTRAR
Pondicherry Ramaiyah Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

DEAN
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403.

PRIST DEEMED TO BE UNIVERSITY
SCHOOL OF EDUCATION
VALUE ADDED COURSE
COURSE CODE: 21U3VAC1

ESSENTIALS OF EDUCATIONAL PSYCHOLOGY

OBJECTIVES

The student teacher will be able to

- Understand the different schools of psychology
- Compare and contrast the strength and weakness of different methods of psychology
- Spellout the biogenic and socio-genic motives and various theories of motivation
- Explain the factors influencing self-regulation of the learners
- Undergrand the concepts of intelligence,its theories and measurement

UNIT I Introduction to Psychology: Meaning - Definitions -Branches of Psychology- Goals of Psychology - Basic Psychological Process - Fields of Psychology- Schoolsof Psychology- Structuralism, Psychoanalysis, Behaviourism and Humanism.

UNIT II Educational Psychology: Meaning - Nature -Aims - Scope - Relation between Psychology and Education- Latest trends in Educational Psychology- EducationalPsychologist andtheirexperiments.

UNIT III Methodsof EducationalPsychology:(a)Introspectionmethod (b)Observationmethod(c)Interviewmethod(d)Experimentalmethod (e)Case Study method Principles - Procedure - Merits and Demerits of the Methods.

UNIT IV Growth and Development: Meaning-factors influencing Growthand Development - difference between growth and development - Stages of Development and Characteristics - Adolescence Problems and solutions- Role of teachers, parents and peer group in adolescence- Related issues

Introduction, Methods And Growth & Development Of Educational Psychology

Introduction To Psychology

Educational Psychology Introduction Methods And Growth & Development Of Educational Psychology

Methods Of Educational Introduction Methods And Growth & Development Of Educational Psychology

Growth And Development Introduction, Methods And Growth & Development Of Educational Psychology

OUTCOMES

- ✓ Comprehendthepersonality theories and assessmentofpersonality
- ✓ Apply thedifferentypesofmechanismsandDefensemechanisms.
- ✓ Acquireskillsandcompetenciesindesigning andapplicationofpsychologicaltestsandtechniques
- ✓ Evaluatethestrengthsandweaknessofstandardizedtesting

HOD,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

DEAN,
School of Education
PRIST Deemed to be University
THANJAVUR - 613 403

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MATHEMATICS

ADD-ON COURSE

CIRCULAR

26.07.2021

Department of Mathematics /ODD/2021-2022

It is hereby informed that the department is organizing Add on courses (Certificate & Diploma courses) from 03.08.2021 for the academic year 2021-2022. Students Those who are interested register your name to the Department of Mathematics.

DEAN
Dean of Arts & Science
PRIST Deemed to be University
Thanjavur – 613 403, Tamil Nadu.

BOD/MATHS
H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Copy to

- Registrar
- Dean
- All Heads
- File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL...



ABOUT THE UNIVERSITY

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Declared Under Section 3 of UGC Act, 1956
Thanjavur, Tamilnadu, India

ADD-ON COURSES
Diploma
in
Mathematics for Competitive Exam
2021-2022

School of Arts and Science
Department of Mathematics

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, T...



ABOUT THE UNIVERSITY

ABOUT FACULTY OF MATHEMATICS

REGISTRATION FORM

Name of the student: .....

Degree/ Year: .....

Gender: ..... Age: .....

Register Number: .....

Address for correspondence: .....

Mobile number: .....

Email Address: .....

Name and Signature of the Candidate

Ponnaiyah Ramajeyam Institute of Science & Technology (PRIST)

Declared Under Section 3 of UGC Act, 1956

Thanjavur, Tamilnadu, India

ADD-ON COURSES

Certificate

in

Quantitative Aptitude and Reasoning

2021-2022

School of Arts and Science

Department of Mathematics

HOD
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean
School of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ.
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

CERTIFICATE COURSE

Duration: 6 months

SYLLABUS FOR QUANTIATIVE APTITUDE AND REASONING

COUSE OUTCOMES:

- Use their logical thinking and analytical abilities to solve Quantitative aptitude questions in competitive examination.

Quantitative Aptitude	Logical Reasoning	Verbal Ability
Alligation & Mixtures	Analogies	Active/Passive Voice
Area & Volume (Mensuration)	Blood Relation/Family Tree	Cloze Test
Arithmetic Aptitude & Word Problems	Coding Decoding	Contextual vocabulary
Average	Course of Action	Direct Indirect Speech
Calendar	Data Sufficiency	Error Correction
Clock	Direction Sense	Error Detection
Compound Interest	Games and Puzzles	Fill in the Blanks
Data Interpretation	Inequality	One Word Substitutions
Divisibility Rules & Remainder Theorem	Input and Output	Para Jumble
Ecperiodity	Letter Series	Reading Comprehension
HCF LCM	Number Series	Sentence Completion
Logarithm	Odd man out	Sentence Improvement
Number System	Pattern Recognition	Subject Verb Agreement
Percentage	Seating Arrangement	Synonyms/Antonyms
Permutation & Combination	Spatial Reasoning	
Pipes & Cisterns	Statement Argument	
Power, Surds & Indices, Simplification	Statement Assumption	
Probability	Syllogisms	
Problems on Ages		
Problems on Boats		
Problems on Trains		
Profit Loss		
Quadratic Equations		
Ratio Proportion		
Simple Interest		
Speed Distance Time		
Time & Work, Inverse Trigonometry, Heights and Distances		

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Principal
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu





ABOUT THE UNIVERSITY

PRIST University, Thanjavur, Tamilnadu, India, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institutes, Polytechnic college are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education upto the level of the Ph.D Doctoral programmes in a wide array of disciplines such as Medicine, Engineering, Arts & Science education, Pharmacy, Management, Technology etc.

ABOUT FACULTY OF MATHEMATICS

High quality teaching across a broad range of disciplines. Promoting world class research in mathematics. Dedicate the conceptualization, expansion and integration of knowledge through conferences and to make the institution emerge as a centre of academic excellence in mathematics.

REGISTRATION FORM

Name of the student: .....

Department: .....

Gender: .....

Register Number: .....

Address for correspondence: .....

Mobile number: .....

Email Address: .....

Name and Signature of the Candidate

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

REGISTRAR
Pennaiyah Ramaiyah Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
U/s 3 of the UGC Act ...
...613 403, TA...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
Thanjavur, Tamilnadu, India

ADD-ON COURSES
Diploma in

MATLAB
21VADML

2021-2022

School of Arts and Science
Department of Mathematics

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC[A] ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

Regulations 2021
VALUE ADDED COURSE

DIPLOMA

Duration: 90 Hours

Course Code	Course Title	L	T	P	C
21VADML	MATLAB	4	0	0	2

Duration : 90 hours

Objectives

1. To bridge the skill gaps and make students industry ready.
2. To provide an opportunity to students to develop inter-disciplinary skills.
3. To impart the Knowledge to the students with MATLAB software. [This enhances programming knowledge in Research and Development].
4. To provide a working introduction to the Matlab technical computing environment. [Themes of data analysis, visualization, and programming].

Topics to be covered:

1. Basics of Matlab and MATLAB Compiler
   - The Matlab user interface
   - Working with Matlab data types
   - Creating matrices and arrays
   - Operators and control statements
   - Using scripts and functions
   - Data import and export
   - Using the graphical features
2. Programming with simple examples
3. Discussion of Toolboxes with Applications □ Signal Processing □ Image Acquisition Toolbox □ Image Processing □ Neural Network □ Fuzzy Logic Toolbox
4. Simulink and Hardware Interfacing (Using Kits: Lego, Raspberry Pi, Mind storm etc.)

Learning Resources and References:

[1] http://www.eng-tips.com/threadminder.cfm?pid=573
[2] http://www.matlabtutorials.com/matlabforum/
[3] http://www.mathworks.in/matlabcentral/
[4] http://www.cfd-online.com/Forums/tags/matlab.html
[5] https://diydrones.com/forum/topic/listForTag?tag=Matlab
[6] MATLAB Manuals and Handbooks

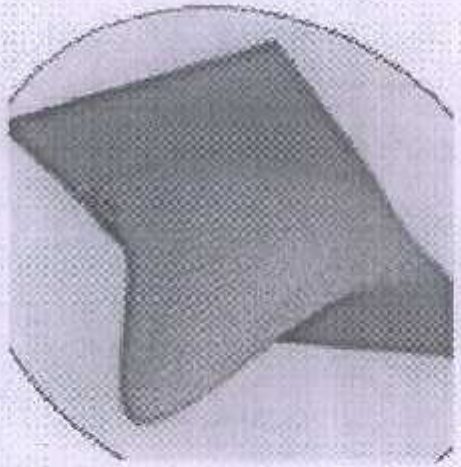
REGISTRAR
Pennalyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University

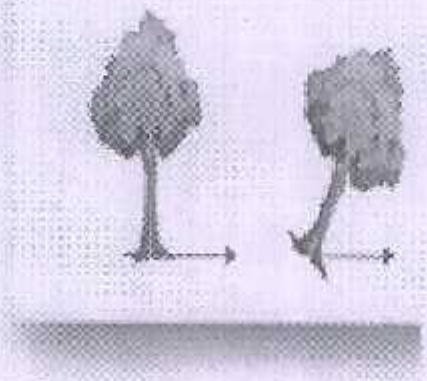
Course outcomes:

1. Understand the basics of Matlab
2. Break a complex task up into smaller, simpler tasks
3. Case Study (Any two Modules)

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu





H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

ABOUT THE UNIVERSITY

PRIST University, Founded Ramajayam Institutions, made a forge into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various constituent of Higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic college are added footages to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education upto the level of the Ph.D Doctoral programmes in a rich variety of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, Technology etc.

ABOUT FACULTY OF MATHEMATICS

High quality teaching across a broad range of disciplines. Fostering world class research in mathematics. Facilitate the accumulation, expansion and integration of knowledge through excellence and to make the institution emerge as a centre of academic excellence in mathematics.

REGISTRATION FORM

Name of the student: _____

Department: _____

Gender: _____

Register Number: _____

Address for communication: _____

Mobile number: _____

Email address: _____

Signature of the Candidate

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL ...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 - TAMIL NADU

Thanjavur, Tamilnadu, India

ADD-ON COURSES
Certificate in

R-PROGRAMMING
17VACRP

2021-2022

School of Arts and Science
Department of Mathematics

PRIST Deemed to be University
Thanjavur - 613 403, ...

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMILNADU

Regulation 2017
VALUE ADDED COURSE

CERTIFICATE
Duration: 45 Hours

Course Code	Course Title	L	T	P	C
17VACRP	R Programming	4	0	0	2

Objectives:

Learn the applications of mathematics in real life problems. Understand the suitable methods to adopt the problem using several mathematical concepts.

Unit I:
Simple Programs using Mathematical constants
Programs using complex functions

Unit II
Numerical solutions of nonlinear equations and systems , Solving system of linear equations using Jacobi method

Unit III:
Program using Trigonometric and Hyperbolic Expressions 6. Finding Eigen values and Eigen vectors

Unit IV:

Plotting Points in the Plane and Space
Analyse data using Central Tendency and Measures of dispersion and distributions

Unit V: Find the Laplace integral transforms for different functions.
Obtain the solution of the initial value problem Books for

References:

1. Programming with R by S.R. Mani Sekhar, T.V. Suresh Kumar, Madhavi Kasa, Sunil Kumar S. Manvi, Cengage Learning India Pvt. Ltd, 2017
2. R for Statistics by Pierre-Andre Cornillon, Arnaud Guyader, Francois Husson, Nicolas Jegou, Julie Josse, Maela Kloareg, Eric Matzner-Lober, Laurent Rouviere, Chapman and Hall, 2012
3. Statistics with R Programming by Dr. Sandip Rakshit, McGraw Hill Education (India) Pvt. Ltd, 2018

DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

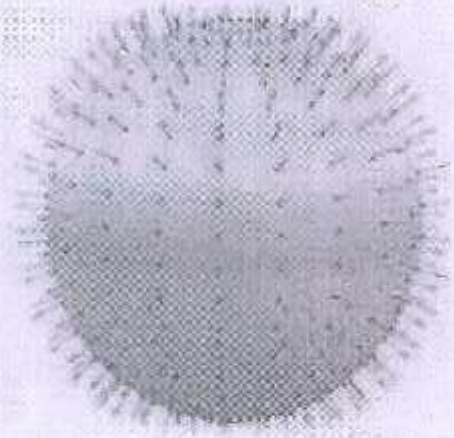
Course Outcomes:

1. To learn a new programming language, beginner in the field of data science.
2. To kindle the problem solving ability of the students in statistics.

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean (Arts & Science)
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL





DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

ABOUT THE UNIVERSITY

PRIST University, Poompuhar Kanagiyan institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institutes, Polytechnic college are added fetthers to the PRIST crown. Today, PRIST encompasses a multiple student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education until the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Sciences, education , Pharmacy, Management, Technology etc.

ABOUT FACULTY OF MATHEMATICS

High quality teaching across a broad range of disciplines Promoting world class research in mathematics. Dedicate the continuous expansion and integration of knowledge through excellence in order to make the institute campus as a centre of academic excellence in mathematics.

REGISTRATION FORM

Name of the student: .....

Department: .....

Gender: .....

Register Number: .....

Address for communication: .....

Mobile number: .....

Email Address: .....

Name and Signature

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 TAMIL NADU

Thanjavur, Tamilnadu, India

ADD-ON COURSES

Certificate in

SAGEMATH
19VACMA

2021-2022

School of Arts and Science
Department of Mathematics

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 . TAMILNADU

Regulation 2019
VALUE ADDED COURSE

CERTIFICATE
Duration: 45Hours

Course Code	Course Title	L	T	P	C
19VACS&I	SAGEMATH	4	0	0	2

Objectives:

Learn the applications of mathematics in real life problems.
Understand the suitable methods to adopt the problem using several mathematical concepts.
Implement SageMath using templates and exceptional and handling concepts.
Make use of theoretical concepts to solve problems and visualize the outp

List of Practical

Unit I

Finding all local extremas and inflexion points of a function.
Creating and plotting 2-D graphs and 3-D graphs.

Unit II

Finding the surface area of given surface using package.
Finding the approximate roots using Newton's method.

Unit III

Plotting and finding area between curves using integrals.
Finding the average of a function.

Unit IV
Finding the volume of solid of revolution.
Finding the solution for a system of linear equations.

Unit V
Finding the divergence and curl of vector v[illegible]
Using differential calculus to analyse a quint[illegible] features, including the optimal grapking window.

REGISTRAR
Pondicherry Rameswaram Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

Books for Reference:

1. Razvan A. Mezei, An Introduction to SAGE Programming: With Applications to SAGE, Wiley, 2016
2. https://doc.sagemath.org/pdf/en/tutorial/SageTutorial.pdf

Course outcomes:

1. Using SageMath as a calculator.
2. Implement and illustrate 2-D graphs and 3-D graphs.
3. Solving mathematical problems and to plot using SageMath.

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MATHEMATICS

ADD-ON COURSE

CIRCULAR

It is hereby informed that the department is organizing add on Certificate course for the academic year 2021-2022. Students those who are interested register you name to the Department of Mathematics.

DEAN
Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)

HOD/MATHS
H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403.

Copy to
- Registrar
- Dean
- All Heads
- File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be
U/s 3 of the
THANJAVUR -

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF MATHEMATICS

This is to inform all the PG students of Mathematics Department that the value added programme classes for Odd Semester academic Year 2021-2022 will be commenced from 18- 07- 2022. Hence requesting all the registered students to attend the class without fail.

Branch name	Year	Course offered
MATHEMATICS	II PG	Certificate Course in RING THEORY

HOD

HOD
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

DEAN
Dean
School of Arts & Science
Pennalyah Ramajayam Institute of
Science & (PRIST)

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

Course Code	20512RT	TITLE OF THE COURSE	L	T	P	C
Value Added		Ring Theory	4	1	-	4
Pre-requisite		Knowledge in basic algebra	Syllabus Version		2021-22	

Course Objectives

The main objectives of this course are to:

1. In physics, Lie groups appear as symmetry groups of physical systems, and their Lie algebras (tangent vectors near the identity) may be thought of as infinitesimal symmetry motions.
2. Lie algebras and their representations are used extensively in physics, notably in quantum mechanics and particle physics.

Expected Course Outcomes

On the successful completion of the course, student will be able to:

1	Understand the basics of R Language	K2
2	Apply the logical skills for performing statistical analysis	K4
3	Use appropriate plots, charts and diagrams for all kinds of data	K3
4	Perform parametric methods	K3
5	Write and execute the code for multivariate analysis	K5

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create

Unit:1	
	Binary operations
Unit:2	
	Permutation groups
Unit:3	
	Rings, Integral domains and fields, some non-commutative rings
Unit:4	
	HOMOMORPHISM OF RINGS
Unit:5	
	Maximal Ideals – Prime Ideals – Prime fields.

Books for Study

1	John B. Fraleigh, The first course in Abstract Algebra, Narosa Publishing house.

Reference Books

1	Joseph A Gallian, Contemporary Abstract algebra, Narosa publishing house
2	B.Sc., Mathematics – Vol II, S.Chand & Co., New Delhi
3	B.Sc., Mathematics – Vol.II , Deepthi Publications, Tenali.

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

1	

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be [illegible])
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & [illegible] (PRIST)
Deemed [illegible]
Thanjavur.



PRIST
DEEMED TO BE
UNIVERSITY

ADD-ON COURSES
Certificate in

RING THEORY
20512RT

2021-2022

School of Arts and Science
Department of Mathematics

ABOUT THE UNIVERSITY

PRIST University, Ponnaiya Ramajayam Institutions, made a foray into th Academic Domain, with the establishment c Sri Ram Institute of Computer Science an Technology in 1985. Over time, variou institutions of higher learning such as Arts an Science College, College of Engineering an Technology, College of Education, Resourc Institution, Polytechnic college are adde feathers to the PRIST crown. Today, PRIS commands a massive student base, spreu across a whole array of campuses such a Puducherry, Trichy, Kumbakonam, Chennai an Madurai. The Academic research extends righ from school education upto the level of the Ph.I Doctoral programmes in a rich array c disciplines such as Medicine, Engineering, Art & Science, education , Pharmacy, Management Technology etc.

ABOUT FACULTY OF MATHEMATICS

High quality teaching across a broa range of disciplines Promoting world clas research in mathematics. Dedicate th communication expansion and integration c knowledge through excellence and to make th institution campus as a centre of academic excellence in mathematics.

REGISTRATION FORM

Name of the student: .....
Department : .....
Gender : .....
.....
Register Number : .....
.....
Address for communication: .....
.....

Mobile number: .....
.....
Email Address: .....
.....

Name and Signature of the Candidate

HOD
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (Deemed
Institution Deemed to be University
U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST

DEEMED TO BE UNIVERSITY

SCHOOL OF ARTS AND SCIENCE

ACADEMIC YEAR 2021 – 2022

Certificate of Appreciation

This is to certify that

Ms/Mr T.SUKUMAR (2001MA20215)

has completed the Value Added Course on

LIE GROUPS & LIE ALGEBRA- 22512LGLA

from 18.7.22-03.08.22 during the Academic year of

2021 – 2022

Course coordinator

HOD

DEAN

REGISTRAR
Pannaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of UGC Act, 1956
THANJAVUR

DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean
School of Arts & Science
Pannaiyah Ramajeyam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

PRIST
DEEMED TO BE UNIVERSITY
RAAC ACCREDITED
THANJAVUR- 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MATHEMATICS

ADD-ON COURSE

CIRCULAR

It is hereby informed that the Mathematics department is organizing add on Certificate courses for the academic year 2021-2022. Students those who are interested register your name to the Department of Mathematics.

DEAN

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
THANJAVUR - 613 403

HOD/MATHS

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Copy to

- Registrar
- Dean
- All Heads
- File

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Institution Deemed to be University
(U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR 613 403 TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MATHEMATICS

This is to inform PG students of English Department that the value added programme classes for Even Semester academic Year 2021 – 2022 will be commenced from 03 – 02 – 2022. Hence requesting all the registered students to attend the class without fail.

Branch name	Year	Course offered
Mathematics	PG	Certificate Course in MACHINE LEARNING

HOD

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST (DEEMED TO BE UNIVERSITY)
THANJAVUR - 613 403

DEAN

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR- 613 403 - TAMIL NADU

Course Code	20512ML	TITLE OF THE COURSE	L	T	P	C
Value Added		MACHINE LEARNING	4	1	-	4
Pre-requisite		Knowledge in basic algebra	Syllabus Version		2021-22	

Course Objectives

The main objectives of this course are to:

- To Learn about Machine Intelligence and Machine Learning applications To implement and apply machine learning algorithms to real-world applications.
- To identify and apply the appropriate machine learning technique to classification, pattern recognition, optimization and decision problems.
- To understand how to perform evaluation of learning algorithms and model selection.
- To understand about the basic theory of problem solving paradigms and search strategies in artificial intelligence
- To make the students familiar with knowledge representation, planning, learning, natural language processing and robotics

Expected Course Outcomes

On completion of the course students will be expected to:

1	Have a good understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc	K2
2	Have an understanding of the strengths and weaknesses of many popular machine learning approaches	K4
3	Appreciate the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms of supervised and unsupervised learning	K3
4	Be able to design and implement various machine learning algorithms in a range of real-world applications	K3
5	Understand the computation intelligence	K6

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create

Unit:1	
	Introduction to ML
Unit:2	
	Fundamentals of ML
Unit:3	
	Selected Algorithms
Unit:4	
	Neural Network Learning
Unit:5	
	Key Concepts from ML

Books for Study

1	Marc Peter Deisenroth, A. Aldo Faisal, Cheng Soon Ong, Mathematics for Machine Learning, Cambridge University Press (23 April 2020
2	Tom M. Mitchell- Machine Learning - McGraw Hill Education, International Edition

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

Dean
School of Arts & Science
Pondicherry Institute of Science & Technology (PRIST)
Deemed to be University
THANJAVUR - 613 403, TAMIL NADU



ABOUT THE UNIVERSITY

PRIST University, formerly Pachaiyappa's Engineering Institute, started in Madras under the Academic Direction of Sri Ram Institute of Computer Science and Technology in 1965. Over time, it became a distinguished institution of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institutions, Polytechnic colleges are added features in the PRIST canvas. Today, PRIST commands a massive student base, spread across a vibrant array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education upto the level of the Ph.D. Doctoral programmes in a wide array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, Technology etc.



ABOUT FACULTY OF MATHEMATICS

High quality teaching across a broad range of disciplines. Pursuing world class research in mathematics. Dedicated to communicating, expansion and integration of knowledge through excellence and to make the institution campus as a centre of academic excellence in mathematics

REGISTRATION FORM

Name of the student: .....

Department .....

Course .....

Register Number .....

Address for communication .....

Mobile number .....

Email Address .....

Name and Signature of the Candidate

PRIST

DEEMED TO BE UNIVERSITY

ADD-ON COURSES

Certificate in

MACHINE LEARNING

20512ML

2021-2022

School of Arts and Science

Department of Mathematics

PRIST Deemed to be UNIVERSITY
THANJAVUR - 613 403

Dean
School of Arts & Science
Pannaiyan Ramaiyam Institute of
Science & Technology (PRIST)
Deemed University
Thanjavur - 613 403.

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST

DEEMED TO BE UNIVERSITY

SCHOOL OF ARTS AND SCIENCE

ACADEMIC YEAR 2021 – 2022

Certificate of Appreciation

This is to certify that

Ms/Mr S.Srikumari (2101MA20208)

has completed the Value Added Course on

MACHINE LEARNING AND ARTIFICAL INTELLIGENCE- 20512MLAI

from 03.02.22-18.[illegible] during the Academic year of

2021 - 2022

Course coordinator

HOD

DEAN

H.O.D.
DEPARTMENT OF MATHEMATICS
PRIST DEEMED TO BE UNIVERSITY
THANJAVUR - 613 403

REGISTRAR
Pondicherry Ramalayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Deemed to be University
Thanjavur - 613 403.

1508

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF BIOCHEMISTRY

28.06.2022

This is to inform to all students that the value-added programmes classes for academic year 2021-2022 semester I, III, V will be commenced from 09.07.2022. Hence requesting all the registered students to attend the classes without fail.

Branch Name	Year	Course Offered
B.Sc. Biochemistry	2021-2022	Diploma Course in Clinical Research

HOD

Head of the Department
Department of Biochemistry
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

DEAN

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST UNIVERSITY

DIPLOMA COURSE IN CLINICAL RESEARCH 2021-2022



Head of the Department
Department of Biochemistry
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

REGISTRAR
Pandalyadi Rajagopalan Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU.

SYLLABUS

DIPLOMA IN CLINICAL RESEARCH

Subject Code: 20513CR

Aim:

The aim of the course is to have thorough insight on project management related to Introduction to Clinical Trial, is to find ways to more effectively prevent, diagnose, or treat disease

Course objective: The objective of clinical trials is to establish the effect of an intervention. Treatment effects are efficiently isolated by controlling for bias and confounding and by minimizing variation.

Course outcome: To monitored design a study to document the impact that a given intervention or exposure has on the health of a given population

Module 1: Introduction to Clinical Research

- Introduction to Clinical Research
- Terminologies and definition in Clinical Research
- Origin and History of Clinical Research
- Difference between Clinical Research and Clinical Practice
- Types of Clinical Research
- Phases of clinical research
- Career in Clinical Research

Module 2: Pharmacology

- Introduction to Pharmacology
- Concept of Essential Drugs
- Routes of Drug Administration
- Introduction to Drug Discovery and Development

Module 3: drug development

- Hurdles in Drug Development

Head of the Department
Department of Pharmacy
School of Life Sciences
PRIST Deemed to be University
Thanjavur-613 403

REGISTRAR
Pennaiyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Aloe vera Gel / Cucumber gel. Liquorice, Neem and Turmeric Cream. Importance of Quality control in cosmetic preparation and guidelines.

UNIT V :Oils and Fats used in cosmetics - Botanical source, chemical constituents, Physical parameters and morphological aspects of fixed oils - Sesam, Groundnut, Mustard, Castor, Coconut and Sunflower. Botanical source, Morphological and physiological aspects of commonly used herbs - Brahmi, Neem, Aloe vera, Liquorice, Henna, cucumber, Tulsi, Ritha, Amla, Turmeric. Extraction of herbs

Reference Books:

1. Hirsadri Pooja, Herbal Cosmetics Handbook. 3rd revised edition.
2. Handbook on herbal products. (Vol. 1 and 2) NIIR Board of Technologists. Delhi.

Head of the Department
Department of Pharmacology
School of Pharmacy
PRIST Deemed to be University
Thanjavur 613 403

REGISTRAR
Pannaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOCHEMISTRY

02.08.21

This is to inform to all students that the value-added programmes classes for academic year 2021-2022 semester I, III, V will be commenced from 19.08.2021. Hence requesting all the registered students to attend the classes without fail.

Branch Name	Year	Course Offered
B.Sc., Biochemistry	2021-2022	Certificate Course in Nanotechnology

HOD

Head of the Department
Department of Biochemistry
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

DEAN

Dean / Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

REGISTRAR
Pennalyan Ramalyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

APPLICATION FORM

PRIST UNIVERSITY

CERTIFICATE COURSE IN NANOTECHNOLOGY 2021-2022



REGISTRAR
Pondicherry Rangarajan Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu, India

1530

SYLLABUS

CERTIFICATE COURSE IN NANOTECHNOLOGY

COURSE CODE- 215150F

Aim:

Nanotechnology is an interdisciplinary field and attracts students from various disciplines. This course provides basic overview of nanomaterials and their applications. This course begins with a review of various types of nanomaterials and an introduction to general toxicologies. Subsequently the course covers synthesis methodologies, physical and chemical characterization of nanomaterials. Finally, case studies illustrating application of nanomaterials in diverse fields will be discussed.

Course objectives:

1. To understand the nature and properties of nanomaterials.
2. To provide scientific understanding of application of nanomaterials and nanotechnology in particulars, health and environmental conservation

Unit I: Background to Nanoscience

Introduction to Nano-science and Nano-technology, Nano-scale material, implications for Physics, Chemistry, Engineering & Biology, and Motivation for Nanotechnology study. History & development of Nano-science and Nano-technology with the emphasis on History of Nano-metals, Chalcogenides& Boron Nitride and Carbon Nanomaterials.

Unit II: Types of nanostructure and properties of nanomaterials

One dimensional, Two dimensional and Three dimensional nanostructured materials, Quantum dots shell structures, metal oxides, semiconductors, composites, mechanical/physical-chemical properties. Classification of nanoparticles, layered nanoparticles (Clay), fibrillar nanoparticles (carbon nanotubes (CNTs) etc and other nanoparticles, polymer clay nano-composites (PCNC). Polymer nano-composites: definitions, incorporation of nanomaterials in polymer matrix

Unit III: Size Dependent Properties of Nanomaterials

Elucidation of the structure: chemistry and properties of Nano-structured materials. Variation in properties of micro and Nanomaterials, Length scale involved and effect on properties.

REGISTRAR
Pondicherry Science

mechanical, electronic, optical, magnetic and thermal properties.

Unit IV: Application of Nanomaterial

Ferroelectric materials, coating, molecular electronics and nanoelectronics, biological and environmental, membrane-based application, polymer based application

References:

1. Rao, C. N. R., Müller, A., & Cheetham, A. K. (Eds.). (2006). The chemistry of nanomaterials: synthesis, properties and applications. John Wiley & Sons.
2. Nanoparticles: From theory to applications – G. Schmidt, Wiley Weinheim (2004).
3. Instrumen & I. Principe, P Gnauck and P Hoffrogge, Microscopy and Microanalysis (2005), 11: 830 – 831, Cambridge University Press.
4. Processing & properties of structural nanomaterials – Leon L. Shaw, Nanochemistry: A Chemical Approach to Nanomaterials, Royal Society of Chemistry, Cambridge (UK) (2005).

Head of the Department
Department of Physics
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

REGISTRAR
Pennalyah Ramalyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR - 613 403

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF BIOCHEMISTRY

28.07.2021

This is to inform to all students that the value-added programmes classes for academic year 2021-2022 semester I, III, V will be commenced from 05.08.2021. Hence requesting all the registered students to attend the classes without fail.

Branch Name	Year	Course Offered
B.Sc., Biochemistry	2020-2021	Certificate Course in Herbal Cosmetics

HOD

Head of the Dept.
Department of Biochemistry
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

DEAN

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403, Tamilnadu

REGISTRAR
Pondicherry Institute of
Science & Technology (PRIST)
Thanjavur



APPLICATION FORM

CERTIFICATE COURSE
CERTIFICATE COURSE IN
HERBAL COSMETICS
2021-2022

PRIST
DEEMED TO BE
UNIVERSITY



Head of the Department
Department of Biochemistry
School of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur-613 403

CERTIFICATE COURSE IN

HERBAL COSMETICS

COURSE CODE-21SISHC
SYLLABUS

Objectives of course:

1. Understanding and recognition of various raw materials and their properties.
2. To formulate herbal cosmetics.
3. Analysis and testing methods in cosmetics.
4. Motivate students to take up cosmetics as a field of research for further education.

Learning Outcomes:

1. 1. Job opportunities in cosmetic industry
2. 2. Entrepreneurship in cosmetic fields

UNIT I: Chemistry of oils and Fats. Fatty acids. Different types of oils. Saturation and Unsaturation. Analytical chemistry used in cosmetics. Instrumental analysis using pH meter, colorimeter, viscometer and TLC Principle and Evaluation. Method and principle for determination of heavy metals, chlorides and sulphates.

UNIT II: Oils and Fats used in cosmetics - Botanical source, chemical constituents, Physical parameters and morphological aspects of fixed oils - Sesam, Groundnut, Mustard, Castor, Coconut and Sunflower. Botanical source, Morphological and physiological aspects of commonly used herbs - Brahmi, Neem, Aloe vera, Liquorice, Heena, cucumber, Tulsi, Ritha, Amla, Turmeric. Extraction of herbs

UNIT III: Different methods of extraction. Process for development of cosmetics. Different bases used in cosmetics. Basic theory of cream, oils and Gels. Raw materials used in cosmetics.

UNIT IV: Formulation of cosmetic products using herbs. Amla hair oil / Heena hair oil

Head of the Department

Dean of Arts & Science

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu.

- Sources of Drugs
- Basics of Drug Discovery & Development
- Approaches to Drug Discovery
- Evolutionary Classification of the strategies for Drug Discovery
- Emerging technologies in Drug Discovery
- Preclinical Testing
- Investigational New Drug Application
- Clinical trials
- New Drug Application and Approval
- Pharmacokinetics 16. Pharmacodynamics

Module 4: Guideline in Clinical Research

- Historical guidelines in Clinical Research
- Guidelines for Good Clinical Practice Glossary

Module 5: Clinical Trial Management

- Project Management
- Protocol in Clinical Research
- Informed Consent
- Case Report Form
- Investigator's Brochure (IB)
- Selection of an Investigator and Site 7. Clinical Trial Stakeholders

Reference Book:

1. Basic Principles of Clinical Research and Methodology - S.K. Gupta by ICRI
2. Fundamentals of Clinical Trail- Lawrence M. Friedman
3. Designing Clinical Research - Dr. Stephen B. Hulley

Head of the Department
Department of Biochemistry
School of Life Sciences
Periyar University
Salem-636 011

Dean of Life Sciences
Periyar University
Salem-636 011, Tamilnadu

REGISTRAR
Pannaiyan Ramaiyan Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MICROBIOLOGY

1.07.2021

This is to inform all Microbiology/Biotechnology/Biochemistry/ Agri students that the value added courses classes for the academic year 2021-2022 odd semester will commence from 12.07.2021. Hence requesting all registered students to attend the classes without fail.

1. Certificate course on Microbial Toxins and Food Protection - 20516MTFP
2. Certificate Course on Application of microorganisms in food and microbial fermentation - 20516AMFMF
3. Diploma in Air Pollution & Control - 21516APC
4. Certificate Course on Applied Environmental Microbiology - 21516AEM

HOD

DEAN

Copy to:

1.Hon'ble Vice Chancellor (for your kind information)

2.Registrar

3.Registrar office

4.Dean

5.Department file

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403, TAMIL NADU

SYLLABUS

Certificate course on Microbial Toxins and Food Protection

Subject code-20516 MTFP

Outcomes:

This course is designed on toxins produced by microorganisms in food, food protection by various methods including physical, chemical and most importantly food additives with emphasis on green technology for food preservation.

Unit I:

Microbial toxins (endotoxin and exotoxin) and toxoids, source and chemistry of microbial toxins as contamination of food grains and food products.

Unit II:

General principles of food protection, methods of food protection, asepsis, maintenance of anaerobic conditions, protection by use of high temperature (Thermal death time, heat resistance of microorganisms, determination of thermal death process, protection by use of low temperatures: Growth of microorganisms at low temperatures, effect of refreezing and freezing temperatures on microorganisms.

Unit III:

Protection by drying: methods of drying, factors in the control of drying, microbiology of dried foods, food protection with modified temperature: definition, primary effect of CO2 on microorganism, the safety of Map foods, spoilage of Map and vacuum packaged meats.

Unit IV:

Protection by food additives: the ideal antimicrobial protection, food additives, added preservatives, developed preservatives, protection by Radiation: UltraViolet radiation, ionizing radiations, Gamma rays and Cathode rays, Microwave processing.

Head of the Department
Department of Microbiology
School of Arts & Science

REGISTRAR
Pannaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Filled-in Application Form should reach us on or before 30.07.2021

Applications may be sent to

About the University

Pennalyah Ramajayam Institute of Science and Technology (PRIST) a Deemed University under Section 3(a) of the UGC Act, 1956 has been accredited with A+ grade by NAAC in its second cycle. The institute offers undergraduate and postgraduate courses in Engineering, Science, Technology, Management, Arts, and Law as well as research programmes.

Position Available

The University is pleased to announce the state of the art building with state of art equipment, modular laboratories and infrastructure to help complete the course. Students of various fields are doing an internship for the research projects. Computer Center with internet facilities for students. Books, Journals, Project reports, Digital Library etc.

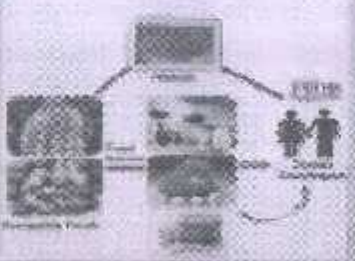
Department of Microbiology

Microbiology course is very broad which can go in depth and learn about all the major areas of life biological sciences.

The Microbiology in Pharma is one major area like general, pharmaceutical, cell biology, molecular biology. In this course can provide much knowledge about Microbial Toxins and Food Protection.

School of Arts and Science
Department of Microbiology

Certificate Course
on
Microbial Toxins and Food Protection
For admission in the
Academic Year
2021-22



PRIST Deemed to be University
Thanjavur, Tamilnadu 613 403

Introduction

The world is surrounded by several microorganisms (bacteria) that are becoming contaminated by the day. Therefore, the certificate course in Microbial Toxins and Food Protection by PRIST. The aim of Microbial Toxins and Food Protection is to enhance their ability to distribute understanding and interpreting the data associated with microbial toxins in food products to prevent outbreaks diseases and protect public health.

Importance of Microbial Toxins and Food Protection

Understanding microbial toxins is crucial for food protection as it helps prevent foodborne diseases and ensures the safety and quality of food products.

Course Contents

- Introduction to Microbial Toxins
- Mechanisms of Toxicity
- Detection Methods
- Risk Assessment and Management
- Food Safety Regulations and Best Practices

Objectives and Programs

- To identify and characterize various microbial toxins that can contaminate food products.
- To understand the mechanisms by which these toxins cause foodborne illnesses and their effects on human health.
- To develop strategies for detecting and mitigating the presence of microbial toxins in food systems.
- To promote safe food handling and storage practices to minimize the risk of toxin exposure.

Level of Knowledge Expected

A basic understanding of microbiology, toxicology, and food safety principles is expected for students pursuing certificate course on food protection.

Duration of the programme

[illegible] for certificate course

Course Outcomes

On completion of the course, the students will develop the ability to identify, control, and manage microbial toxins in food to ensure safety and compliance with food protection standards.

Eligibility criteria & Fee Structure

Any graduate shall be eligible for the admission to the course.

Certification

The candidates successfully completing the course the course shall be awarded a certificate to that effect by the appropriate form by School of Arts and Science Department of Microbiology, PRIST Deemed To Be University, Thanjavur, Tamilnadu

Head of the Department
Department of Microbiology
School of Arts & Science
Deemed to be University, Thanjavur

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, Tamil Nadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMIL NADU

SYLLABUS

Certificate course on Application of Microorganisms in Food and Microbial Fermentation

Subject code:20S16AMFMF

Learning outcomes:

This course acquaints students with fermentation technology, types of fermentation that can be applied in Industry. Also they learn various production technologies for various industrial products where microbes are involved.

Unit I:

Microorganisms important in food microbiology (molds, yeasts and bacteria), oriental fermented foods.

Unit II:

Solid state and submerged fermentation, bioreactors, production and application of various organic acids (lactic acid, acetic acid and acetic acid).

Unit III:

Production and application of various microbial enzymes (amylase, invertase, pectolytic, proteolytic, glucose oxidase, cellulase, glucoseisomerase, lipase, lactase and catalase) and vitamins (B12, riboflavin, A).

Unit IV:

Concept of antibiosis, secondary metabolites, antibiotic fermentations , production of β lactams (penicillin), semisynthetic penicillins and cephalosporins, amino-glycosides (streptomycin), macrolids (erythromycin) and quinines.

Head of the Department
Department of Microbiology
School of Arts & Science
Prist Deemed to be University, Thanjavur

REGISTRAR
Pennalyah Ramaiyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of birth .....
6. Tel (M.P) .....
7. E mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form

Submit your Application Form in person/by post to Director, School of Arts and Science, PRIST Deemed to be University, Thanjavur, Tamil Nadu, 613 403

Application can be mailed to

Course Co-Ordinator
Department of Microbiology
PRIST Deemed to be University
Email: microbio@prist.edu

About the University

Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) is a deemed university in Thanjavur. The campus offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law as well as research programmes.

Facilities Available

The University is located in an educational, multi-storied building with state-of-the-art equipment, excellent classrooms, and laboratories to help develop the overall talents of students. The campus has a well-stocked Library, with internet facilities for students, Home facilities, Health centre, Sports complex, etc.

Department of Microbiology

Microbiology course is one of the most sought after courses. Microbiology is the study of microscopic organisms, which include bacteria, viruses, fungi, and protozoa. Microbiology is also known as Applications of Microorganisms in Food and Microbial Fermentation

School of Arts and Science
Department of Microbiology

Certificate Course
on
Application of Microorganisms in Food and Microbial Fermentation
For admission in the
Academic Year
2021-22



PRIST Deemed to be University
Thanjavur, Tamil Nadu 613 403

Introduction

The world is surrounded by many microbial species, but we cannot understand by the eye. Therefore the microbiologists in Application of Microorganisms in Food and Microbial Fermentation. In PRIST, we will learn the practical principles of microorganisms in many food production. Microbes are used to make many foods, including fermented foods like yogurt, cheese, sauerkraut, soy sauce, and vinegar. Microbes also play important roles in processing, storage, and preparation of foods.

Importance of application of Microorganisms in Food and Microbial Fermentation

The application of microorganisms in food and fermentation is crucial for enhancing food preservation, nutritional value, flavor development, and health benefits.

Course Outcomes

- Microorganisms in Food Systems
- Microbial Contributions to Human Health
- Fermented Food Processing
- Microbial Fermentation and Food Safety
- Probiotics and Functional Foods

Objectives of the Program

- To provide knowledge on history of microbial roles in the production of fermented foods
- To understanding microbial fermentation processes and their impact on flavor, texture, and preservation
- To Examining food safety by controlling harmful pathogens in fermentation
- To Enhancing food quality through probiotic development and nutrient enrichment

Level of Knowledge Expected

A foundational understanding of microbiology, food science, and fermentation processes is expected. In addition, the application of microorganisms in food and microbial fermentation.

Duration of the program

45 hours as Certificate course

Course Outcomes

On completion of the course, the students will gain the ability to understand and apply microbial fermentation techniques to enhance food production, safety, quality, and preservation.

Eligibility criteria & For Admission

Any graduate shall be eligible for admission to the course.

Commencing

The candidates successfully qualifying for course the course shall be awarded a certificate in the order in the appropriate form by School of Arts and Science, Department of Microbiology, PRIST Deemed to be University, Thanjavur, Tamil Nadu

Head of the Department
Department of Microbiology
School of Arts & Science
PRIST Deemed to be University, Thanjavur

Head of Science
PRIST Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

Diploma Course on Air Pollution and Control

Academic Year 2021-22

Syllabus

Course code: 21516APC

Course Outcome

1. The course will provide a deeper understanding of air pollutants, pollution inventory and modelling. The course also imparts knowledge on the impacts of air pollution on different aspects such as policy, human health and induce contemporary technological innovation for betterment of air quality

Objective the Program

Course Content

1. Air Pollution: Introduction and impacts of air pollution on human health, vegetation, animals, building materials, structures, and atmosphere, acid and white haloes.
2. Sources, classification and formation/transformation of air pollutants: Meteorology and Atmospheric Stability.
3. Air Quality Modelling, Gaussian dispersion models: point, line and area source models
4. Emissions Inventory: Transport, Industrial, Agriculture, Residential and Commercial sectors
5. Application of Remote sensing/Satellite based data in emission inventory, Source apportionment using receptor modelling.
6. Indoor air pollution: sources, types and health impacts. Sampling, assessment and evaluation of indoor air quality. Global and regional environmental issues of air pollution: Ozone depletion, Climate change, Global

Head of the Department
Department of Microbiology
School of Arts & Science
Deemed to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

1573

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

.....

.....

Signature of the Applicant

Submission of Application Form:

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam 613 403.

Application may be send to

Course Co-Ordinator

Dr. R. Sathya
Associate Professor
Department of Microbiology
PRIST Deemed To Be University 613 403
E-mail: sathyaram1986@gmail.com

About the University

Promising Participated Institute of Science and Technology (PRIST) is a premier university in Vallam, India. The institute offers undergraduate and postgraduate courses in Engineering, Science, Pharmacy, Management, Arts, and Law, as well as research programmes.

Facilities Available

The University is spread over independent, multi-storied building with state-of-art equipments, excellent Laboratories and Maintenance in fully complete and active situation. All courses have been using an interesting web based program. Computer Library with reading facilities for students, Hostel facilities, Health Centre, Sports complex, etc.,

Department of Microbiology

Microbiology course is very broad where one get to touch and know about all the major areas of life sciences.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
THANJAVUR-613 403

land on Air Pollution and Control

School of Arts and Science
Department of Microbiology

Diploma Course
on
Air Pollution and Control

For admission to the Academic Year 2021-22



PRIST Deemed to be University
Thanjavur, Vallam-613 403

INTRODUCTION

Air pollution is a mixture of solid particles and gases in the air. Car emissions, chemicals from factories, dust, pollen and mold spores may be suspended as particles. Ozone, a gas, is a major part of air pollution in cities. When ozone forms air pollution, it's also called smog.

Importance of Air Pollution

Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution.

Breathing clean air can lessen the possibility of disease from stroke, heart disease, lung cancer as well as chronic and acute respiratory illnesses such as asthma. Lower levels of air pollution are better for heart and respiratory health both long- and short-term. Both short and long term exposure to air pollutants have been associated with health impacts.

Course Content

[illegible]

Level of Knowledge Expected

To illustrate and discuss the global life expectancy for each person.

Duration of the program

45 hrs add on Certificate course

Course Outcome

The course will provide a deeper understanding of air pollutants, pollution inventory and modelling. The course also imparts knowledge on the impacts of air pollution on different aspects such as policy, human health and various contemporary technological innovation for betterment of air quality

Eligibility criteria & Fee Structure

Any graduate shall be eligible for the admission to the course

Certification

The candidates successfully completing the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Science, Department of Microbiology, PRIST Deemed To Be University, Thanjavur, Vallam.

Pamaiyan Ramaiyan Institute of Science and Technology (PRIST)
Deemed to be University u/s 3 of UGC Act 1956
THANJAVUR-613 403, Tamil Nadu, India

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 – TAMIL NADU

Certificate Course on Applied Environmental Microbiology

Academic Year 2021-22

Syllabus

Course code: 21516A2204

Course Outcome

Develop analysis and synthesis skills, obtain information, design experiments and interpret results. Recognise and use the properties of microorganisms, principally bacteria, to remedy problems of contamination and other environmental impacts.

Objective the Program

- To provide good platform their institutionally verified skills in microbiology, accelerating their educational or career growth by miles ahead.
- [illegible] microorganisms and their activities.

Course Content

- Microbial ecosystems, symbiosis, mutation, competition, conflict, cells, microbial diversity, and microorganisms, examples, environment, etc
- Microbial metabolism, bacteria, functional diversity, chemical reactions, major metabolic pathways, nucleotides, catalysis, etc
- Microbial ecosystems, communities, environmental effects, microenvironments, etc
- Microbial ecology, genetic exchange, environmental genomics, transformation, transduction, conjugation, vertical gene transfer, etc
- Virus, microbial symbiosis, mutation, population dynamics, void, etc
- Environmental microbiology, its investigations, detection, taxonomic annotation, examples, culture-independent tools, case studies, etc
- Wastewater microbiology, bioremediation, acid mine drainage, examples, etc
- Drinking water microbiomes, treatments, water borne microbial diseases, etc

Head of the Department
Department of Microbiology
School of Arts & Science

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

1578

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E. mail .....
8. Mobile No .....
9. Permanent Address .....

.....

.....

Signature of the Applicant

Submission of Application Form:

Submit your Application form in person to the co-ordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Co-Ordinator

Dr. R. Sathya
Associate Professor
Department of Microbiology
PRIST Deemed To Be University 613 403
[illegible]

1579

About the University

Pennalyah Ramaiyan Institute of Science and Technology (PRIST) is a deemed University in Tamil Nadu. The campus offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts and Law, as well as research programmes.

Facilities Available

The University is housed in an independent, multi storied building with state of art equipments, excellent Laboratories and infrastructure to help complete this course. Majority of scientist have been acting as mentors for research program. Computer Library and Internet facilities for students, Hostel facilities, health centre, Sports complex, etc.,

Department of Microbiology

Microbiology course is very broad where one get in touch and learn about all the various areas of life (biological) sciences.

The Microbiology is focusing on some major areas like genetics, immunology, cell biology, molecular biology. So that [illegible] can pursue much future based on [illegible]

REGISTRAR
Pennalyah Ramaiyan Institute of Science & Technology (PRIST)
Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, [illegible]

School of Arts and Science
Department of Microbiology

Certificate Course on Applied Environmental Microbiology

For admission to the Academic Year 2021-22



PRIST Deemed to be University
Thanjavur, Vallam-613 403

INTRODUCTION

Our world is surrounded by several environmental challenges that are becoming troublesome by the day. Therefore, the online course in Applied Environmental Microbiology by PRIST aims to teach students about these pressing issues by developing in-depth knowledge about microbial processes and communities, found in waste and natural environments. The program holds impeccable industry support from numerous water and wastewater treatment organizations, biotechnological companies, and bioremediation entities.

Importance of Environmental Microbiology

The Applied Environmental Microbiology certification syllabus lays a firm foundation of basic microbial energetics, microbiology, and diversity, and how they address relevant environmental problems. The curriculum offers a holistic exploration of microbes' diverse roles, microbial communities, cell elements, ecology, microbial energetics, environmental microbial processes, and more.

Course Content

•Microbial energetics, oxidation-reduction reaction, thermodynamics, biochemistry and bioenergetics, aerobic respiration, etc

•Microbial taxonomy, bacteria, functional diversity, classical taxonomy, major catabolic pathways, metabolism, enzymes, etc

•Microbial ecosystem, communities, environmental effects, microenvironments, etc

•Microbial ecology, genetic exchange, environmental genetics, transformation, transduction, conjugation, transfer, etc

•Viral structure, replication, evolution, population dynamics, and etc

•Environmental microbiology, its investigations, principles, techniques, enrichment, sampling, culture independent tools, case studies, etc

•Wastewater microbiology, bioremediation, solid waste management, methods, etc

•Landfills, waste characteristics, biodegradation, water-borne infection diseases, etc

Objectives for Program

•To provide good academic base

•To provide quality training in microbiology

•To provide better education and career growth by

•To develop skills and their activities

Level of Knowledge Expected

To illustrate and describe the biology of microorganisms, focusing on microbial processes and their effects on other organisms and the environment

Duration of the program

45 hrs add on Certificate course

Course Outcome

Develop analysis and synthesis skills. Obtain information, design experiments and interpret results. Recognise and use the properties of microorganisms, principally bacteria, to remedy problems of contamination and other environmental impacts.

Eligibility criteria & Fee Structure

Any graduate shall be eligible for the admission to the course

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to that effect in the appropriate form by School of Arts and Science, Department of Microbiology, PRIST Deemed To Be University, Thanjavur, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMILNADU

1580

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF MICROBIOLOGY
Certificate Course on Applied Environmental Microbiology - 21S16AEM
STUDENTS ATTENDANCE
Academic Year 2021-2022

S.NO	REG.NO	Name Of The Student	21.12.21	22.12.21	23.12.21	24.12.21	27.12.21	28.12.21	29.12.21	30.12.21	31.12.21	03.01.22	04.01.22	05.01.22	06.01.22	07.01.22	10.01.22	11.01.22	12.01.22	13.01.22	14.01.22	17.01.22	18.01.22	19.01.22	20.01.22	21.01.22	24.01.22
1	1901MB1020	R.Lathesh																								
2	1901MB1021	I.Anbu Tamil																								
3	1901MB1022	A.Arthi																								
4	1901MB1023	T.Promoth Kumar																								
5	1901MB1024	Janani.S																								
6	1901MB1025	Meena.R																								
7	1901MB1026	Chanthra.K																								
8	1901MB1027	Shanthi.M																								
9	1901MB1028	Mana.G																								
10	1901MB1029	Manjari.N																								

HOD

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology(PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

DEAN

1582

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403, TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF MICROBIOLOGY

01.02.2022

This is to inform all Microbiology/Biotechnology/Biochemistry/ Agri students that the value added courses classes for academic year 2021-22 even semester will commence from 04.02.2022. Hence requesting all registered students to attend the classes without fail.

1. Diploma in Biomedical Research - 21516BMR
2. Certificate Course on Biofertilizer Production Technology - 22516BFT
3. Certificate Course on Hygiene & Life - 22516HL

HOD

DEAN

Copy to:

1.Hon'ble Vice Chancellor (for your kind information)

2.Registrar

3.Registrar office

4.Deans

5.Department file

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TA...

Head of the Department
Department of Microbiology
School of Arts & Science
Prist Deemed to be University, Thanjavur.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMIL NADU

Diploma Course on Biomedical Research

Course code: 21516BMS
Academic Year- 2021-22
Syllabus

Objectives the Program

To study biological processes and diseases with the ultimate goal of developing effective treatments and cures. Biomedical research is an evolutionary process requiring careful experimentation by many scientists, including biologists and chemists.

Course Outcome

Biomedical research hopes for ways to prevent and treat diseases. Biomedical science refers to a set of sciences that are aimed at developing new therapies, treatments, and technologies that can help with the understanding of human [illegible] and [illegible].

1. [illegible]
2. [illegible]
3. Measures of disease frequency
4. Experimental study designs
5. Validity of epidemiological studies
6. Measurement of study variables
7. Sampling methods
8. Calculating sample size and power
9. Designing data collection tools
10. Principles of data collection
11. Data management
12. Overview of data analysis
13. Ethical framework for health research
14. Conducting clinical trials

REGISTRAR
Pondicherry Ramalingam Institute of Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Head of the Department
Department of Microbiology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dean of Arts & Science
Prist Deemed to be University
Thanjavur - 613 403, Tamil Nadu

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E mail .....
8. Mobile No .....
9. Permanent Address .....

.....

.....

Signature of the Applicant

Submission of Application Form

Submit your Application form in person to the coordinator, School of Arts and Science, PRIST University, Thanjavur, Vallam, 613 403.

Application may be send to

Course Co-Ordinator

Dr. R. Sabeya
Associate Professor
Department of Microbiology
PRIST Deemed To Be University 613403
E mail: sabeyam1984@gmail.com

About the University

Promoted [illegible] Science and Technology, [illegible] Deemed Universities in India [illegible] the various other undergraduate and [illegible] courses in Engineering, Science, [illegible] Management, Arts, and Law as well as [illegible] programmes.

Facilities Available

The University campus is an [illegible] with state of art equipment, excellent [illegible] and infrastructure to help complete the [illegible] of students have been setup in accordance [illegible] research program. Campus [illegible] offers facilities for students, Hostel facility, Health centre, Sports complex, etc.

Department of Microbiology

Microbiology [illegible] very broad course and [illegible] which cover all the major areas of life [illegible] sciences.

The Microbiology [illegible] some main areas like [illegible] molecular biology [illegible] Immunology [illegible] Medical Microbiology [illegible] Environmental Microbiology [illegible] Industrial Microbiology [illegible] Agricultural Microbiology [illegible] Food Microbiology [illegible] Veterinary Microbiology [illegible] Microbial Genetics [illegible] Microbial Physiology [illegible] Microbial Ecology [illegible] Microbial Biotechnology [illegible] Microbial Taxonomy [illegible] Microbial Pathogenesis [illegible] Microbial Diagnosis [illegible] Microbial Chemotherapy [illegible] Microbial Vaccines [illegible] Microbial Immunology [illegible] Microbial Nanotechnology [illegible] Microbial Bioinformatics [illegible] Microbial Proteomics [illegible] Microbial Genomics [illegible] Microbial Metabolomics [illegible] Microbial Transcriptomics [illegible] Microbial Epigenetics [illegible] Microbial Systems Biology [illegible] Microbial Synthetic Biology [illegible] Microbial Nanobiotechnology [illegible] Microbial Nanomedicine [illegible] Microbial Nanotoxicology [illegible] Microbial Nanoparticles [illegible] Microbial Nanocomposites [illegible] Microbial Nanofibers [illegible] Microbial Nanotubes [illegible] Microbial Nanowires [illegible] Microbial Nanosensors [illegible] Microbial Nanobiosensors [illegible] Microbial Nanobiomaterials [illegible] Microbial Nanobiocomposites [illegible] Microbial Nanobiofibers [illegible] Microbial Nanobiotubes [illegible] Microbial Nanobiowires

INTRODUCTION

The course will explain the fundamental concepts of research methodology in details. Course materials include video lectures, reading/resource materials, example accompaniments, workbooks, lecture handouts and frequently asked questions (based on participant queries from previous cycle). Certificates will be done based on lecture wise assignments and a final proctored exam.

Importance of Biomedical Research

Biomedical research is important because it is the first step towards the creation of new medications and treatments that help to manage all different types of health conditions and diseases. Without this research, the prevention and cure of diseases would be practically impossible.

Clinical research is what allows doctors to decide how to best treat patients. It is what makes the development of new medicines, new procedures and new tools possible. Without clinical research, we would not be able to decide if new treatments are better than our current treatments.

Course Content

- Introduction to research
- Formulation of research problem, research protocols and proposals
- Methods of literature search
- Experimental study designs
- Various types of observational studies
- Measurement of study variables
- Sampling methods
- Calculation of sample size and power
- Designing data collection tools
- Pre-validation of tools
- Data management
- Overview of data analysis
- Ethical principles in biomedical research
- Conducting clinical trials

Objectives of the Program

- To study the [illegible] diseases and illnesses with the [illegible] and developing effective treatments and [illegible] research is an [illegible] requiring careful [illegible] and [illegible] including biological [illegible]

Level of Knowledge Expected

The pre-specified goal(s) or condition(s) that reflect the effect of one or more interventions on human subjects.

Duration of the program

45 hrs add on Certificate course

Course Outcome

Biomedical research looks for ways to prevent and treat diseases. Biomedical science refers to a set of sciences that are aimed at developing new therapies, treatments, and technologies that can help with the management of diseases, illnesses, and disabilities.

Eligibility criteria & Fee Structure

Any graduate shall be eligible for the admission to the course.

Certification

The candidates successfully qualifying the course the course shall be awarded a certificate to the effect in the appropriate field by School of Arts and Science, Department of Microbiology, PRIST Deemed To Be University, Thanjavur, Tamil Nadu.

REGISTRAR
Pennalyah Ramalayam Institute of Science & Technology (PRIST)
Deemed to be University

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF MICROBIOLOGY
Certificate Course in Hygiene & life

ACADEMIC YEAR 2021-2023

Subject Code: 21516HL
Value added course: 7 **Total: 45 hours**

Course objectives:

- To provide knowledge on different health indicators and types of hygiene methods
- To impart knowledge on different health care programmes taken up by India
- To make student understand the latest concepts of health such as HIA, EIA, SIA and SEA
- To enable student with disaster mitigation strategies

Course Outcomes:

On completion of this course, the students will be able to understand -

- What is a healthy diet
- How can we use available information to optimize our diet?
- How nutrition be used for a healthy life?
- Is there a one-size-fits-all "good" diet or should we individualize our dietary goals?
- Awareness in public through digital media viz., mobile apps

Unit I: Basics of Nutrition

1. Nutrition – definition, importance, Good nutrition and malnutrition, Balanced Diet. Basics of Meal Planning

2. Carbohydrates –functions, dietary sources, effects of deficiency

3. Lipids –functions, dietary sources, effects of deficiency.

Unit II: Health (9 Hrs)

4. Proteins –functions, dietary sources, effects of deficiency.

5. Brief account of Vitamins- functions, food sources effects of deficiency.

6. Macro and micro minerals –functions, effects of deficiency, food sources of Calcium, Potassium and Sodium; food sources of Iron, Iodine and Zinc

Unit III: Health (9 Hrs)

7. Importance of water– functions, sources, requirements and effects of deficiency.

8. Health - Determinants of health, Key Health indicators, Environment health & Public health. Health Education: Principles and Strategies

9. Health Policy & Health Organization in India: Salient features of National Health Policy of Govt. of India-2017; Functioning of various national and health organizations in India viz., NIN

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
(Deemed to be University)
U/S 3 of the UGC Act 1956
THANJAVUR - 613 403, T.N.

Head of the Department
Department of Microbiology
School of Arts & Science
PRIST Deemed to be University, Thanjavur

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamil Nadu

(National Institution of Nutrition), FNB (Food and Nutrition Board), ICMR (Indian Council of Medical Research), IDA (Indian Dietetics Association),WHO-India, UNICEF-India

Unit IV: Hygiene 10 Hrs.

10. National Health Mission: National Rural Health Mission (NRHM) Framework, National Urban Health Mission (NUHM) Framework

11. Women & Child Health Care Schemes: Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+); Janani Shishu Suraksha Karyakaram (JSSK); Rashtriya Bal Swasthya Karyakram(RBSK); India Newborn Action Plan (INAP); Adolescent Health- Rashtriya Kishor Swasthya Karyakram (RKSK)

12. Disaster Management – Containment, Control and Prevention of Epidemics and Pandemics – Acts, Guidelines and Role of Government and Public

Unit IV: Hygiene 10 Hrs.

13. Hygiene – Definition; Personal, Community, Medical and Culinary hygiene; WASH (WAter, Sanitation and Hygiene) programme

14. Rural Community Health: Village health sanitation & Nutritional committee (Roles & Responsibilities). About Accredited Social Health Activist (ASHA), Village Health Nutrition Day, Rogi Kalyan Samitis

15. Commuatily & Personal Hygiene: Environmental Sanitation and Sanitation in Public places

16. Public Awareness through Digital Media - An Introduction to Mobile Apps of Government of India: NHP, Swasth Bharat, No More Tension, Pradhan Mantri Sanskshit Mantrtva Abhiyan (PM Suman Yojana), My Hospital (Meri aspataal), India fights Dengue, JSK Helpline, Ayushman Bharat, Arogya Setu, Covid 19 AP

REFERENCES

1. Bamji, M.S., K. Krishnaswamy & G.N.V. Brahmam (2009) Textbook of Human Nutrition(3rd edition) Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
2. Swaminathan (1995)Food & Nutrition(Vol I, Second Edition) The Bangalore Printing &Publishing Co Ltd., , Bangalore
3. Vijaya Khader (2000)Food, nutrition & health. Kalyan Publishers, New Delhi
4. Srilakshmi, B., (2010)Food Science, (5th Edition) New Age International Ltd., New Delhi

Head of the Department
Department of Microbiology
School of Arts & Science
Post Graduate to be University, Thanjavur

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TN.

APPLICATION FORM

1. Full Name .....
2. Programme .....
3. Discipline .....
4. Institution Name .....
5. Date of Birth .....
6. Sex (M/F) .....
7. E-mail .....
8. Mobile No .....
9. Permanent Address .....

Signature of the Applicant

Submission of Application Form:

Interested candidates may submit the duly filled in application form to the Coordinator, School of Arts and Science, PRIST Deemed to be University, Thanjavur, Tamil Nadu.

Application may be mailed to:

Course Co-Ordinator
Department of Microbiology
PRIST Deemed to be University, Thanjavur
E-mail: microbiology@prist.ac.in

About the University

Thanjavur Multigrade Institute of Science and Technology (TMIST) is a premier institution in Tamil Nadu. The institute offers undergraduate and postgraduate courses in Engineering, Science, Education, Management, Arts, and Law, as well as research programmes.

Facilities Available

The University is housed in an extensive campus spread over 100 acres, with state-of-the-art classrooms, modern laboratories, and infrastructure to fully complete the course. Students of science have their own study, as maintaining the research programs. Computer Library with internet facilities for students, Sound facilities, Health centre, Sports complex, etc.,

Department of Microbiology

Microbiology covers a very broad area and can be divided into three areas of the major areas of life: Biology of Viruses.

The Microbiology is fascinating to study because the genetics, biochemistry, cell biology, molecular biology, for the cultivar can provide much more interest. Research in Microbiology.

School of Arts and Science
Department of Microbiology

Certificate Course
in
Hygiene & life
For admission in the
Academic Year
2021-22



PRIST Deemed to be University
Thanjavur, Tamil Nadu

Importance of Hygiene & life

Better hygiene leads to better health, confidence and overall growth. Good hygiene is critical for preventing the spread of infectious diseases and helping children lead long, healthy lives.

Course Content

- Basics of Cleaning
- Personal Hygiene
- Importance of Hygiene
- Hygiene in Food Industry
- Hygiene

What does the Program

- To provide knowledge on different health risk issues and types of hygiene practices.
- To impart knowledge on different health care programmes taken up by the state.
- To make student understand the basic principles of health such as BMI, BSA, BSA and BMR.
- To enable students with practical knowledge on hygiene.

Level of Knowledge Expected

Students undertaking Hygiene & life course should have a level of maturity and motivation to learn and work in a team. They should have a keen interest in Science and should be willing to participate in practical work and study for at least 10 hours per week outside of scheduled class time.

Duration of the programme

Course Outcomes

On completion of the course, the students will be able to understand:

- What is a Healthy life?
- How can we live more healthy lifestyles on a daily basis?
- What motivates us to lead a healthy life?
- Is there a distinction between "good" diet or should we accommodate our whole diet?

Eligibility criteria & the Selection

The candidate shall be eligible for the admission to the course.

Certification

The candidate successfully completing the course the course shall be awarded a certificate on the effect to the appropriate body by School of Arts and Science, Department of Microbiology, PRIST Deemed to be University, Thanjavur, Tamil Nadu.

Head of the Department
Department of Microbiology
School of Arts & Science
Prist Deemed to be University, Thanjavur

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur, Tamil Nadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Institution Deemed to be University
U/s 3 of the UGC Act, 1956

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF MICROBIOLOGY
Certificate Course in Biofertilizer Production Technology

ACADEMIC YEAR 2021-2022

Subject Code: 21516BPT

Totals: 45 hours

Course objectives:

To demonstrate the low cost media preparation and impart training of eco friendly agricultural inputs in biofertilizer production.

Course Outcomes:

- Ability to distinguish the types of biofertilizers and methods of application in farmers field.
- Development of integrated managements for best results using nitrogenous and phosphate biofertilizers.

Syllabus:

Unit I:

Introduction,History and concept of Bio fertilizers status scope and importance of Bio fertilizers,Classification of Bio fertilizers,Nitrogen fixation.

Unit II:

Structure and characteristic features of bacterial Biofertilizers- Azospirillum, Azotobacter, Bacillus, Pseudomonas, Rhizobium and Frankia, Cyanobacterial biofertilizers- Anabaena, Nostoc, Hapalosiphon and fungal biofertilizers-VAM mycorrhiza and ectomycorrhizal.

Unit III:

Production technology Strain selection, sterilization, growth and fermentation,equipment, mass production of carrier based and liquid bio fertilizers, FCO specifications and quality control of bio fertilizers.

Unit IV:

Application technology for seeds, seedlings, tubers, sets etc.Biofertilizers -Storage, shelf life, quality control and marketing. Factors influencing the efficacy of bio fertilizers.

REGISTRAR
Pennalyah Ramalayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Head of the Department
Department of Microbiology
School of Arts & Science
Prist Deemed to be University, Thanjavur.

Dean of Arts & Science
Prist Deemed to be University
Thanjavur - 613 403



Certificate Course
on
Biofertilizer Production Technology
For admission in the Academic Year
2021-22

Signature of the Applicant

Instructions of Application Form

Course Content

Objective the Program

Importance of Biofertilizer Production Technology

Level of Knowledge Expected

Eligibility criteria & Fee Structure

Certificates

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology
(Institution Deemed to be University)
THANJAVUR - 613 403

Head
Department of
School of Arts & Sciences
Post Declared to be University, Thanjavur.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021 – 2022

This is to inform all UG and PG students that the value added programme classes for academic year 2021-2022 will be commenced from 3.08.2021 . Hence requesting all the registered students to attend the classes without fail.

Branch name	Year	Course offered
ENGLISH	All UG & PG	Certificate Course on **Spoken English & Bussiness Communication**
ENGLISH	All UG & PG	Diploma Course on **Journalism, Radio Jockey, Functional English**

HOD
HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed
THANJAVUR

DEAN
Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

CERTIFICATE COURSE ON JOURNALISM

Eligibility : Students studying any degree programme

Course duration : 6 months
Every week- 3 hrs
15 weeks-45 hrs

Examination : Theory & Practical exam
Duration: 1.30 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam

JOIN and BECOME A JOURNALIST

SEAL
DEPT OF ENGLISH
PRIST UNIVERSITY
THANJAVUR-613 403

REGISTRAR
Pennaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
u/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

Dean of Arts & Science
PRIST Deemed-to-be-University
613-403, Thanjavur

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

CERTIFICATE COURSE ON

JOURNALISM

Objectives: To become a journalist

Course Content:

UNIT I: Journalism, Ethics, Press, News

UNIT II: Quality of reporters, kinds of reporting

UNIT III: Editing, News Editor, Subeditor

UNIT IV: Features & its role

UNIT V: Language of journalism

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY
THANJAVUR-614 904

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, Tamil...

Dean of Arts & Letters
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

2021 – 2022

CERTIFICATE COURSE ON

JOURNALISM

Objectives: To become a journalist

Course Content:

Develop excellent interview, writing, and digital media skills to compete in today's fast paced mass media environment.

Course Content:

UNIT I: Journalism, Ethics, Press, News

UNIT II: Quality of reporters, kinds of reporting

UNIT III: Editing, News Editor, Subeditor

UNIT IV: Features & its role

UNIT V: Language of journalism

HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904.

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (Deemed
(Institution Deemed to be U
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

1642

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

DIPLOMA COURSE

IN

FUNCTIONAL ENGLISH

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR-613 403, TAMIL NADU

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY

Eligibility : Students studying any degree programme

Course duration : 1year
Every week -3 hrs
30 weeks-90 hrs

Examination : Practical exam
Duration: 3 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam

JOIN
and
BECOME AN ORATOR

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

DIPLOMA IN FUNCTIONAL ENGLISH

Objectives To introduce corrective measures to eliminate grammatical errors in speaking and writing.

Theoretical and conceptual understanding of the elements of grammar.

To enhance the learners' ability of communicating accurately and fluently.

Outcome

Ability to analyze various grammatical units of English and design a language component coherently to meet desired needs within the realistic constraints.

Develop spoken and writing Proficiency

Unit I- Organs of speech, phonetics

Unit II – Introduction to grammar (what is grammar, its importance etc); different approaches to grammar: traditional, generative, transformative, and communicative.

Unit III- Articles & determiners. Forms & functions of nouns, pronouns, prepositions.

Unit IV- Verbs (transitive & intransitive, regular & irregular), tense & aspect, auxiliaries, negatives, questions, agreement & concord.

Unit-V- Forms & functions of adjectives, adverbs, agreement & concord.

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY
THANJAVUR-614 904

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956)
THANJAVUR - 613 403, TAMIL NADU

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021– 2022

DIPLOMA IN FUNCTIONAL ENGLISH

Objectives

- To introduce corrective measures to eliminate grammatical errors in speaking and writing. Theoretical and conceptual understanding of the elements of grammar.
- To enhance the learners' ability of communicating accurately and fluently.

Outcome

- Ability to analyze various grammatical units of English and design a language component coherently to meet desired needs within the realistic constraints.
- Develop spoken and writing Proficiency

Unit I- Organs of speech, phonetics

Unit II – Introduction to grammar (what is grammar, its importance etc); different approaches to grammar: traditional, generative, transformative, and communicative.

Unit III- Articles & determiners. Forms & functions of nouns, pronouns, prepositions.

Unit IV- Verbs (transitive & intransitive, regular & irregular), tense & aspect, auxiliaries, negatives, questions, agreement & concord.

Unit-V- Forms & functions of adjectives, adverbs, agreement & concord.

HOD

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

DEAN

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

REGISTRAR
Pennalyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613403-TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

Diploma course

in Radio Jockey

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL NADU

HEAD
DEPARTMENT OF ENGLISH
PRIST UNIVERSITY
THANJAVUR-613 403

Eligibility : Students studying any degree programme

Course duration : 1year
Every week -3 hrs
30 weeks-90 hrs

Examination : Practical exam
Duration: 3 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam

JOIN
and
BECOME AN ORATOR

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu.

ABOUT THE UNIVERSITY

PRIST University, formerly known as Pennaiyah Ramajayam Institute of Science and Technology, was established as a Deemed University in the year 1985 under the Ramajayam Educational Trust. The Trust was founded in the year 1985 by Late Thiru. P. Ramajayam, a philanthropist and an educationist. The Trust has been running a number of educational institutions in the fields of Arts, Science, Engineering, Technology, Education, Management, Medicine, Dentistry, Nursing, Pharmacy, Physiotherapy, Law, Agriculture, Horticulture, Fisheries, Veterinary Science, Animal Husbandry, Dairy Technology, Food Technology, Biotechnology, Information Technology, Computer Applications, Rural Development, Social Work, Hotel Management & Catering Technology, Fashion Technology, Aeronautical Engineering, Mass Communication, Journalism, Physical Education, Sports Science, Yoga, Naturopathy, Siddha, Ayurveda, Homeopathy, Unani, Tamil, English, Languages, Commerce, Business Administration, Economics, Mathematics, Statistics, Physics, Chemistry, Biochemistry, Microbiology, Biotechnology, Genetics, Botany, Zoology, Environmental Sciences, Geography, Geology, Psychology, Sociology, Social Work, Criminology, Forensic Science, Defence Studies, Museology, Archaeology, Tourism, Hotel Management,

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021 – 2022
DIPLOMA IN RADIO JOCKEY

Objectives

Make Confident, Creative and personality ability to do multi-tasking by handling public relations
To Roles ranged from supervising producers and appeared on a number of TV shows for making people aware of career choices as a Radio Jockey

Outcome

To enhance correct breathing techniques, pronunciation, modulation, projection etc.
To Enrich correct body language and flow of language

Unit-I- Effectively make airlines, weather and railway announcements
Unit-II- Effectively write/present interesting Radio Scripts & how to read the news on Radio & TV
Unit-III- How to get over the fear of public speaking & "Professional Presentation" correct body language
Unit-IV- Narration, cartoon and lip sync dubbing (Theory only)
Unit-V- E-Book Narration- How to narrate & explore the upcoming E- book market boom.

HOD
HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

DEAN

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Pennalyah Ramalayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613 403-TAMIL NADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

CERTIFICATE COURSE

ON

Eligibility : Students studying any degree programme

Course duration : 6 months
Every week- 3 hrs
15 weeks-45 hrs

Examination : Practical exam
Duration: 1.30 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam.

JOIN
and
SPEAK FLUENTLY

REGISTRAR
Ponnaiyah Ramajeyam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act, 1956
THANJAVUR - 613 403, TAMIL NADU

HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY
THANJAVUR

Thanjavur - 613 403, Tamilnadu

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-613 004

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

CERTIFICATE COURSE

SPOKEN ENGLISH

Objectives: To speak fluently
To gain confidence to communicate

Course Content:

UNIT I: Phonetics

UNIT II: LSRW TRAINING

UNIT III: Speak about a movie, book, incident, thing, person, place, or any current issue

UNIT IV: Story narration

UNIT V: Conversation

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021 - 2022

CERTIFICATE COURSE

SPOKEN ENGLISH

Objectives: To speak fluently

To gain confidence to communicate

Course Outcome:

Develop your pronunciation skills

learn more and practice the different features of pronunciation and the sounds of English

Course Content:

UNIT I: Phonetics

UNIT II: LSRW TRAINING

UNIT III: Speak about a movie, book, incident, thing, person, place, or any current issue

UNIT IV: Story narration

UNIT V: Conversation

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act 1956
THANJAVUR - 613 403, TAMIL

1676

PRIST
DEEMED TO BE UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

CERTIFICATE COURSE

IN

BUSSINESS COMMUNICATION

Eligibility : Students studying any degree programme

Course duration : 1year
Every week -3 hrs
30 weeks-90 hrs

Examination : Practical exam
Duration: 3 hrs

Award of Certificate:
Certificates will be awarded after passing t practical exam.

JOIN
and
BECOME AN ORATOR

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ
u/s 3 of the UGC Act,1956
THANJAVUR - 613 403, T.N.

HEAD
DEPT OF ENGLISH
PRIST UNIVERSITY
THANJAVUR-613 403

Dean of Arts & Science
PRIST Deemed to be University
Thanjavur - 613 403, T.N.

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

CERTIFICATE COURSE IN BUSSINESS COMMUNICATION

Objectives

Exchanging information, knowledge, ideas, thoughts and messages between individuals or groups in organizations.

Outcome

Applies the knowledge by speaking confidently and communicating effectively in different business situations.

Unit- I- Introduction

Importance of communication skills in Business Management

Types of communication

The media and tools of communication.

Unit II – Verbal and Non-verbal Communication

Personal language and body language.

Types of managerial speeches: occasional speech; thematic speech.

Group Communication in: group discussions, meetings, seminars, and conferences.

Art of facing interviews in: selection or placement, appraisal, disciplinary committees

Unit III – Written Communication Skills

Formats for business letters and memos, Job applications, Preparing a

Follow-up messages and letters, Writing effective Business Reports

Digital Communication-Using Web sources of knowledge Sharing.

Unit IV – Recruitment and Employment Correspondence

letter of Acceptance,

Letter of Resignation and Promotion, Testimonials and References.

Unit V – Business and Social Etiquette

Workplace hierarchy, appropriate business attire, Telephone Etiquette, table etiquette.

Language lab class for practical communication.

REGISTRAR
Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)
Institution Deemed to be University
U/S 3 of the UGC Act, 1956
THANJAVUR - 613 403, T.N.

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

Dean of Arts
PRIST Deemed to be University
Thanjavur

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR - 613 403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021– 2022
CERTIFICATE COURSE IN BUSSINESS COMMUNICATION

Objectives

Exchanging information, knowledge, ideas, thoughts and messages between individuals or groups in organizations.

To convey information effectively and efficiently to achieve the goals and objectives of the organization.

Outcome

Applies the knowledge by speaking confidently and communicating effectively in different business situations.

Projecting an image and shaping attitudes, stimulating a want or desire

Unit- I- Introduction

Importance of communication skills in Business Management

Types of communication

The media and tools of communication.

Barriers and Gateways to communication.

Unit II – Verbal and Non-verObjectives

Exchanging information, knowledge, ideas, thoughts and messages between individuals or groups in organizations.

Unit III – Written Communication Skills

Formats for business letters and memos, Job applications, Preparing a professional resume and cover letter

Follow-up messages and letters, Writing effective Business Reports

Digital Communication-Using Web sources of knowledge Sharing.

Unit IV – Recruitment and Employment Correspondence

Drafting the Employment Notice, joining Interview, an offer of employment, letter of Acceptance,

Workplace hierarchy, appropriate business attire, Telephone Etiquette, table etiquette.

Language lab class for practical communication.

HOD

HEAD
DEPT. OF ENGLISH
PRIST UNIVERSITY,
THANJAVUR-614 904

DEAN

PRIST Deemed to be University
Thanjavur - 613 403, Tamilnadu

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL...

1679

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613403-TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

Diploma In Teaching English to Speakers of Other Languages.

Eligibility : Students studying any degree programme

Examination : Practical exam
Duration: 3 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam

HOD
Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be Univ...
...u/s 3 of the UGC...
THANJAVUR-613 403

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

Vallam, Thanjavur - 613 403.

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

Diploma In Teaching English to Speakers of Other Languages.

Objectives:

To equip teachers with the skills and methods to teach English effectively to non-native speakers

Understanding the complexities of language acquisition

Course Outcome:

Better speaking skills, increased vocabulary, and more learning skills

Develop conversation skills and talk on topics such as friendship, annoying habits

Course Content:

UNIT – I Acronyms, Getting to Know your ELLs, Getting to Know your ELLs.

UNIT – II Language Acquisition Theory, Language Acquisition Theory.

UNIT- III Proficiency Levels: Teaching and Correcting, Teaching: Listening, speaking

UNIT- IV Determining teacher expectations, Differentiated Instruction

UNIT- V Materials Evaluation and adaptations, Classroom Management/Target Language Use

HOD
Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL...

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613403-TAMILNADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021 – 2022
Diploma In Teaching English to Speakers of Other Languages.

Objectives:

To equip teachers with the skills and methods to teach English effectively to non-native speakers

Understanding the complexities of language acquisition

Course Outcome:

Better speaking skills, increased vocabulary, and more learning skills

Develop conversation skills and talk on topics such as friendship, annoying habits

Course Content:

UNIT – I Acronyms, Getting to Know your ELLs, Getting to Know your ELLs.

UNIT – II Language Acquisition Theory, Language Acquisition Theory.

UNIT- III Proficiency Levels: Teaching and Correcting, Teaching: Listening, speaking

UNIT- IV Determining teacher expectations, Differentiated Instruction

UNIT- V Materials Evaluation and adaptations, Classroom Management/Target Language Use

HOD
Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University)
U/s 3 of the UGC Act.1956
THANJAVUR - 613 403, TAMIL NADU

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

1687

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613403 - TAMILNADU

SCHOOL OF ARTS AND SCIENCE

DEPARTMENT OF ENGLISH

Certificate course in English Phonology

Eligibility : Students studying any PG degree programme

Examination : Practical exam
Duration: 1:30 hrs

Award of Certificate:
Certificates will be awarded after passing the practical exam

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
u/s 3 of the UGC Act,1956)
THANJAVUR - 613 403. TAMIL NADU

Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

ABOUT THE UNIVERSITY

PRIST University, Ponnaiyah Ramajayam Institutions, made a foray into the Academic Domain, with the establishment of Sri Ram Institute of Computer Science and Technology in 1985. Over time, various institutions of higher learning such as Arts and Science College, College of Engineering and Technology, College of Education, Research Institution, Polytechnic College are added feathers to the PRIST crown. Today, PRIST commands a massive student base, spread across a whole array of campuses such as Puducherry, Trichy, Kumbakonam, Chennai and Madurai. The Academic research extends right from school education up to the level of the Ph.D Doctoral programmes in a rich array of disciplines such as Medicine, Engineering, Arts & Science, education, Pharmacy, Management, and Technology etc.

ABOUT THE DEPARTMENT

The Department of English under Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) was established at Vallam, Thanjavur in the year 2008. The Department of English runs B.A, M.A., M.Phil., and Ph.D degree in English. It imparts English language skills to the rural students. The Department brings out the hidden talents of the students. Students are encouraged to pursue their higher studies and research works.

Certificate course in English Phonology

Objectives:

To introduce students to the basic concepts in Phonetics.

To teach the concepts of Voicing, Articulation and Prosody to aid the students in better pronunciation

Course Outcome:

To understand the basic concepts in Phonetics.

To perceive, identifying and transcribing speech sounds using IPA.

To pronounce English words and sentences more effectively

Course Content:

Unit I:- Introduction to the Basic Concepts: Language and Linguistics, Phonetics, Phonology

Unit II: - Anatomy of Speech Production: Speech Organs and their function

Concepts of Voicing and Articulation – Place and Manner

Unit III: - Consonants and Vowels: – Consonants and Consonant Clusters B. – Vowels – Difference from Consonants, Tongue Position, Length, Rounding and Nasality, Pure vowels, Diphthongs and Triphthongs

UNIT IV: - Prosody: Features – Pitch, Length, Loudness Stress – Word Stress and Sentence Stress (Connected Speech)

Dean
School of Arts & Science
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

HOD
Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act, 1956)
THANJAVUR - 613 403, TAMIL NADU

PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR-613403-TAMIL NADU

SCHOOL OF ARTS AND SCIENCE
DEPARTMENT OF ENGLISH
2021 – 2022

CERTIFICATE COURSE IN ENGLISH PHONETICS

Objectives:

To introduce students to the basic concepts in Phonetics

To teach the concepts of Voicing, Articulation and Phonology to the students in better pronunciation

Course Outcome:

To understand the basic concepts in Phonetics.

To perceive, identifying and transcribing speech sounds

To pronounce English words and sentences more effectively

Course Content:

Unit I:- Introduction to the Basic Concepts: Language and Linguistics, Phonetics, Phonology

Unit II: - Anatomy of Speech Production: Speech Organs and function Concepts of Voicing and Articulation – Place and Manner

Unit III: - Consonants and Vowels: – Consonants and Consonant Clusters B. – Vowels – Difference from Consonants, Tongue Position, Length, Rounding and Nasality, Pure vowels, Diphthongs and Triphthongs

UNIT IV: - Prosody: Features – Pitch, Length, Loudness Stress, Word Stress and Sentence Stress (Connected Speech)

UNIT –v Intonation – Rising, Falling, Fall-Rise, and Rise-Fall Accent – American, British and Indian

HOD
Department of English
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
Deemed to be University
Vallam, Thanjavur - 613 403.

REGISTRAR
Ponnaiyah Ramajayam Institute of
Science & Technology (PRIST)
(Institution Deemed to be University
U/s 3 of the UGC Act,1956
THANJAVUR - 613 403, TAMIL NADU

Dean
School of Arts
Ponnaiyah Ramajayam
Science & Technology
Deemed to be University
Vallam, Thanjavur