



PSN INSTITUTE OF TECHNOLOGY & SCIENCE

Melathediyoor, Tirunelveli - 627 152

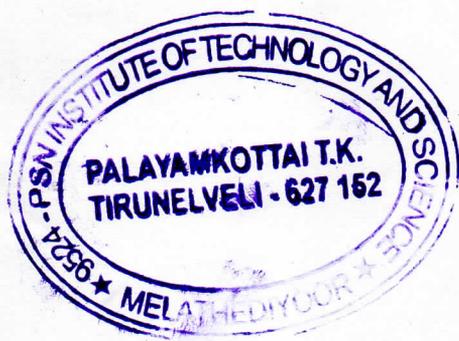
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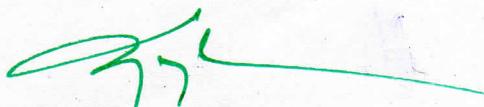
NUMBER OF ADD ON /CERTIFICATE /VALUE ADDED PROGRAMS OFFERED DURING THE LAST FIVE YEARS

2020-21

TOTAL COURSES: 08

COURSE NAME	COURSE CODE	DATE	DURATION	STUDENTS ENROLLED	STUDENTS COMPLETED
STAAD PRO	CE017	07/12/2020 to 12/12/2020	36 HOURS	31	31
UNIX PROGRAMMING	CS012	07/12/2020 to 12/12/2020	35 hours	73	73
SOLAR PV SYSTEM DESIGN	EE3601	07/12/2020 to 12/12/2020	36 HOURS	43	43
FULLSTACK WEB DEVELOPMENT APPLYING AWS	EC9507	07/12/2020 to 12/12/2020	36 HOURS	40	40
INSTALLING AND SERVICING OF REFRIGERATION AND AIR-CONDITIONING SYSTEMS	MERAC20	07/12/2020 to 12/12/2020	35 HOURS	53	53
PRODUCT DESIGN USING SOLID WORKS WITH 3D PRINTING	MT3952	07/12/2020 to 12/12/2020	36 HOURS	77	77
RENEWABLE ENERGY SYSTEMS	MA003	07/12/2020 to 12/12/2020	30hours	48	48
DATA ANALYTICS FOR OPERATION MANAGEMENT	IEM020	07/12/2020 to 12/12/2020	36 HOURS	30	30




Dr. M. KATHIRVEL, B.E., M.B.A., M.E., Ph.D.
PRINCIPAL,
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Melathediyoor, Tirunelveli - 627 152

BROCHURE

PSN INSTITUTE OF TECHNOLOGY AND SCIENCE

TIRUNELVELI

APPROVED AND ACCREDITED AFFILIATED TO ANNA UNIVERSITY
COIMBATORE

STAAD PRO

Staad Pro

Date: 07-12-2020 to 12-12-2020

Time: 10am

Venue: Seminar Hall

RESOURCE PERSON

BIBIN J.C

MR.C.MUPPUDATHI MUTHU

HOD/CIVIL

PSNITS

DR.M.KATHIRVEL

PRINCIPAL

PSNITS

DEPARTMENT OF CIVIL ENGINEERING VALUE ADDED COURSE

CE017- STAAD PRO

Total hours: 36 hours

COURSE OBJECTIVE

This course will enable students to
To understand analyzing & designing structures like =
buildings, towers, bridges,
industrial, transportation, and utility structures.

SYLLABUS

UNIT - I

7 hours

Introduction to STRUCTURAL ENGINEERING -
Introduction to STAAD.Pro.V8i- Getting familiar with
STAAD window -Model generation using STAAD
editor- Introduction to Snap Node/Beam Editor Model
generation using Node/Beam Editor Introduction to
Translational Repeat Model generation using
Translational Repeat

UNIT -II

7 hours

Assigning Properties- Assigning Supports -Assigning
Loads- Structure Analysis- Simply Supported Beam
Analysis of Framed Structure -Applying Floor Loads

UNIT -III

7 hours

Wind Analysis -Seismic Analysis- Creating Load
Combinations - Dynamic Analysis- Response
Spectrum Analysis -Introduction to FEM- Analysis of
Framed Structure Including Slabs.

UNIT -IV

7 hours

Column & Beam -Design Reinforced Concrete Design
- Slab Design- Circular Water Tank Design
Rectangular Water Tank Design- Moving Loads

UNIT -V

8 hours

Staircase Analysis -Steel Design- Pushover Analysis-
Shear Wall Design -Lift Room Modeling-
Transmission Line Tower- Bridge Deck Design Using
STAAD.Beava

COURSE OUTCOME

The students should be able to:

1. Student will be able for carrying out flexible zooms and multiple views
2. Student will know to make isometric & perspective views and 3D shapes
3. Student will learn how to generate graphs/text input

Contact Details:

Mr.C.Mupudathi Muthu
The HOD/CIVIL
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SCIENCE
TIRUNELVELI

Mobile : 7339002802



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Brochure

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Value Added Course

UNIX PROGRAMMING

DATE : 07-12-2020 to 12-12-2020

Resource Person

Mr. Berlin John J , Asst. Professor, PSN ITS

Mr. Bala Karthik K
Course Coordinator

Dr. Kathirvel M
PRINCIPAL

CS012-UNIX PROGRAMMING

Total Hours: 35 Hrs

Objective:

- To demonstrate advanced knowledge of networking .
- To understand the key protocols which support the Internet
- To demonstrate advanced knowledge of programming for network communications
- To have a detailed knowledge of the TCP/UDP Sockets
- To create applications using techniques such as multiplexing, forking, multithreading
- To make use of different types of I/O such as non-blocking I/O and event driven I/O
- To make use of various solutions to perform inter-process communications

SYLLABUS:

Module--1: Overview of UNIX OS - File /O - File Descriptors — File sharing - Files and directories — File types - File access permissions — File systems — Symbolic links -Standard I/O library — Streams and file objects — Buffering - System data files and information - Password file — Group file — Login accounting — system identification

Module--2 : Environment of a UNIX process — Process termination — command line arguments - Process control — Process identifiers - Process relationships terminal logins — Signals threads

Module— 3: Introduction - Message passing (SVR4)- pipes — FIFO — message queues - Synchronization (SVR4) — Mutexes — condition variables — read — write locks — filelocking — record locking — semaphores — Shared memory (SVR4).

Module — 4: Introduction — transport layer — socket introduction - TCP sockets — UDP sockets - raw sockets — Socket options - I/O multiplexing - Name and address conversions, -SVGa-CGP.

Module—5: Debugging Techniques-TCP Echo client server-UDP echo client server Ping-Trace route-client server applications-Like file transfer and chat

OUTCOMES:

- Understand the key protocols which support the Internet.
- Be familiar with several common programming interface for network communication.
- Have a detailed knowledge of the TCP/UDP Sockets.
- Create applications using techniques such as multiplexing, forking, multithreading.
- Make use of different types of IO such as non-blocking I/O and event driven IO
- Apply knowledge of UNIX and Linux operation Systems to build a robust client server

CONTACT:

Mr. Bala Karthick K (course coordinator)

Phone: 9003941541

Mr. Arunkumar K (Resource Person)

Phone: 9094533580



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VALUE ADDED COURSE ON

SOLAR PV SYSTEM DESIGN

MR.S.KANNAN,

ATHIYA INTERNATIONAL INSTITUTE OF NDT,
TUTICORIN.

DATE : 07/12/2020 - 12/12/2020

VENUE : SEMINAR HALL



MR.T.A. SUNIL RAJ,
HOD/EEE,
PSNITS.



DR.M. KATHIRVEL,
PRINCIPAL,
PSNITS.

SOLAR PV SYSTEM DESIGN

Total Hours: 36Hrs

Objective:

To develop a comprehensive technological understanding in solar PV system components To provide in-depth understanding of design parameters to help design and simulate the performance of a solar PV power plant To pertain knowledge about planning, project implementation and operation of solar PV power generation.

SYLLABUS

Unit I – Basics of Solar Photovoltaics

Solar Technologies: Crystalline technology, thin film technology, Bi-facial technology, Comparison between PV module technologies. Solar PV Module: Rating of Solar PV Module, PV Module Parameters and Efficiency of PV Module. Solar photovoltaic system configuration: Grid Connected solar Power Plant, Grid interactive solar power plant, Off-Grid / Hybrid solar power plant, Schemes of solar power plant.

Unit II – Components of a Solar PV System

Solar panels: Connection of PV Module in Series and Parallel, Estimation and Measurement of PV Module Power, Selection of PV Module. Inverters: Types of solar inverter, Selection of string / central / off grid inverter, Selection of power conditioning unit (PCU), Sizing of solar inverter for roof top and grid connected projects. Batteries: Battery function, Types of Batteries, Battery parameters, Selection of Battery, Charge Controllers: Functions, PWM charge controllers, MPPT charge controller

Unit III – Design Guide for Solar PV System

Introduction: Energy calculations of a system, Preliminary Planning, Calculating the Energy Yield for a PV Grid Connected System, Specific Yield. Load calculations:

of Module / Array, Sizing of Storage Battery, Sizing of Charge Controller, Sizing of Wire/ Cable, Sizing of Inverter Sizing of DC- DC Converter.

Unit IV – Computer Simulations

Simulation of Solar PV system: Modelling of solar PV energy conversion system using MATLAB/Simulink, Solar PV Characteristics, Maximum power point tracking. Case Study: Design of 100kW, 500kw and 1MW solar power plant, economic calculations, performance measurements.

Unit V – Experimentation

Off grid solar PV system: Demonstration, irradiance and temperature measurement, plotting of characteristics Curves, performance analysis, Maximum power point tracking, Determination of characteristics Curves using solar array simulator, Cost Estimation of a Solar PV Energy Conversion System

OUTCOMES:

Solar energy system design builds upon the introduction to PV systems from solar energy basics course, which included basic systems components and functions, as well as some basic system sizing using simplifying assumptions. You should at this point have a basic understanding of electrical power and energy, be able to calculate the energy needs of a site as well as energy production potential for a PV system at a given location under optimal conditions.

CONTACT:

MR. T. A. SUNIL RAJ,
HOD/EEE,
PSNITS
PHONE: 9943337656

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taluk, Tirunelveli -627152

BROCHURE

DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING

VALUE ADDED COURSE ON FULL STACK WEB DEVELOPMENT APPLYING AWS

RESOURCE PERSON

**Mr. Murugan
TRAINER
ISNAP AUTOMATION &
ELECTRONICS**

DATE: 07.12.2020 TO 12.12.2020
TIME: 09:00 AM to 04:00 PM
VENUE: SEMINAR HALL

psnits.principal@gmail.com

www.psnits.ac.in

04634-279084,85,86

TITLE:EC9507- FULL STACK WEB DEVELOPMENT APPLYING AWS

OBJECTIVE:

·TO LEARN THE CORE CONCEPTS OF BOTH
THE FRONTEND AND BACKEND
PROGRAMMING COURSE.

·TO GET FAMILIAR WITH THE LATEST WEB
DEVELOPMENT TECHNOLOGIES

·TO LEARN ALL ABOUT SQL AND NOOSQL
DATABASE.

·TO LEARN COMPLETE WEB DEVELOPMENT
PROCESS.

SYLLABUS

UNIT 1

WEB DESIGN

HTML 5, CSS 3, JAVASCRIPT, BOOTSTRAP,
PAYMENT GATEWAY INTEGRATION, DOMAIN AND
HOSTING, WEBSITE DEPLOYMENT AND GO LIVE.

UNIT 2

INDUSTRIAL ADVANCE CONCEPTS

SVN, JENKIN, JIRA, POSTMAN API, GIT, MAVEN,
GRADLE, JUNIT, SPLUNK, JSON, XML, JAR, WAR,
APACHE TOMCAT EXTERNAL SERVER
DEPLOYMENT, SPRING BOOT JMS ACTIVEMQ
|RABITMQ, APACHE KAFKA, JUNIT-
MOCKITO, SWAGGERUI, CODEANALYSISUSINGSON
ARQUE, CODECOVERAGEWITHJACOCO
DOCKER, KUBERNETES, JWT, OAUTH, PRINCIPLES
OF SOLID, DEVOPS- CI/CD, AGILE METHODOLOGY,
DATA STRUCTURE AND ALGORITHMS, JAVA
ADVANCED TOOLS AS PER LATEST RELEASES.

UNIT 3

AWS

WHAT IS AWS, AWS CLOUD
D FEATURES, INTRODUCTION TO AWS SERVICES
AMAZON CLOUD SERVICES, CREATE EC2
INSTANCE IN AWS, AWS ELASTIC BEANSTALK,
DEPLOY AND SCALE WEB APPLICATIONS, DEPLOY
SPRING BOOT APPLICATION ON AWS ELASTIC
BEANSTALK, UPLOAD AND DEPLOY WEB
APPLICATIONS IN A SIMPLIFIED, FAST WAY, AWS
ADVANCED RESEARCH AND DEVELOPMENT- LIVE
DEPLOYMENT, AWS INTERVIEW QUESTIONS &
ANSWERS AS PER INDUSTRIAL PRACTICES.

UNIT 4

FRAMEWORK

HIBERNATE: HIBERNATE INTRODUCTION ,
HIBERNATE BASICS , HIBERNATE ARCHITECTURE ,
HIBERNATE SESSION, HIBERNATE
SESSIONFACTORY , HIBERNATE CONFIGURATION,
HIBERNATE CONFIGURATION OFFLINE, HIBERNATE
WITH HBM , HIBERNATE WITH ANNOTATION,
HIBERNATE VALIDATOR , HIBERNATE CRUD,
HIBERNATE ASSOCIATION MAPPING1. ONE TO ONE
MAPPING 2. ONE TO MANY MAPPING 3. MANY TO
ONEMAPPING 4. MANY TO MANYMAPPING,
HIBERNATE AGGREGATION, HIBERNATE NAMED
QUERIES , HIBERNATE NATIVE SQL , HQL-
HIBERNATE QUERYLANGUAGE, HIBERNATE HQL-
CRITERIA QUERY LANGUAGE, HIBERNATE
APPLICATION WITH MYSQL DB- CRUD, DIFF. SAVE(),
SAVEORUPDATE(), UPDATE(), PERSIST() AND
MERGE(), DIFF. GET() AND LOAD(), HIBERNATE VS.
JPA, HIBERNATE APPLICATION WITH MYSQL DB,
SERVLET, JSP-USER INTERFACE-CRUD, HIBERNATE,
MYSQL, SERVLET, JSP, APACHE TOMCAT LOGIN
APPLICATION, HIBERNATE, MYSQL, SERVLET, JSP,
APACHE TOMCAT SIGN UP | SIGN IN APPLICATION,
HIBERNATE APPLICATION WITH MYSQL DB,
SERVLET, JSP-USER INTERFACE-DIFFERENT DATE
PATTERNS WITH TIME ZONES, HIBERNATE, MYSQL,
SERVLET, JSP, APACHE TOMCAT ADVANCED
CUSTOM PROJECT IMPLEMENTATION,
PROGRAMMING PRACTICES, CONCEPT & INTERVIEW
PREPARATION.SPRING FRAMEWORK :SPRING
FRAMEWORK INTRODUCTION , SPRING BASICS ,
SPRING FRAMEWORK FEATURES , INVERSION OF
CONTROL, DEPENDENCY INJECTION , BEANS
SCOPE, SINGLETON, PROTOTYPE, REQUEST,
SESSION, GLOBAL-SESSION, AUTO WIRING.

UNIT 5

INDUSTRIAL SOFTWARES

JDK 17, ECLIPSE, INTELLIJ IDEA, APACHE TOMCAT,
APACHE MAVEN , GRADLE, MYSQL , SQLYOG ,
MONGODB, POSTMAN API, NODE.JS, DOCKER,
GITBASH, SUBLIME, VISUAL STUDIO CODE.

COURSE OUTCOMES:

CO1: WORKING WITH A WEBSITE FROM THE
BEGINNING TO THE LAUNCH.

CO2: CREATING, BUILDING & PROTOTYPING
WEBSITES.

CO3: DESIGNING THE USER INTERFACES AND USER
INTERACTIONS THROUGH ROBUST FRONT END
ARCHITECTURE.

CO4: MANAGING DATABASES AND SERVER
ADMINISTRATION DUTIES.

FACULTY COORDINATOR

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PROF N.PATCHIRAJA

9688421458

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DEPARTMENT OF
MECHANICAL ENGINEERING ORGANIZING

Value added Course
"MERAC20-INSTALLING
& SERVICING OF REFRIGERATION
& AIR-CONDITIONING SYSTEMS"

(From 07/12/2020 to 12/12/2020)

RESOURCE PERSON

1. Mr. G. XAVIOUR

SENIOR ENGINEER, COOL BREEZE TECHNOLOGY KANYAKUMARI

2. Mr. M. STEPHEN

AP MECHANICAL

ORGANISED BY

Mr. S. SANTHOSH KUMAR

AP MECHANICAL



Mr. J. POOPATHI
HOD/MECHANICAL

Dr. M. KATHRIVEL
PRINCIPAL

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2020 -2021
VALUE ADDED COURSE SYLLABUS
MERAC20 - INSTALLING AND SERVICING
OF REFRIGERATION AND
AIRCONDITIONING

Total Hrs: 35 Hrs

Objectives:

- Explains the basics of refrigeration and the types of refrigeration
- Elaborates the major components of Refrigerator
- Describes the types of refrigerants used in refrigerator
- Elaborates about the maintenance and trouble shooting of refrigerator
- Enumerates the step by step procedure of repairing and servicing of refrigerator

Module - 1 Fundamentals of Refrigeration

7 Hours

Introduction - Basic Terminology Thermodynamics
- Laws of Thermodynamics-Process of Refrigeration - Methods of Producing Low Temperature - Air Cycle-Refrigeration - Vapour.

Module - 2

7 Hours

Care and Maintenance of Refrigerator-Basic Safety Precautions - External parts of a Refrigerator - Installation Process - Refrigerator with water and Ice Dispenser - Care of Refrigerator - Maintenance of Refrigerator - Maintenance of Freezer

Module -3

7 Hours

Trouble-Shooting of Refrigerator -Technical Safety - Problems of Refrigerator - Trouble shooting the Refrigerator- Basic Electrical Circuits of Automobile

Module - 4

7 Hours

History of Air-Conditioning-Types of System — Need for Air-conditioning ~ application of Air Conditioning- Types of Coolers — Major system components — Major system controls.

Module - 5

7 Hours

Refrigerant Charging and Leakage Tests Testing and replacing of the Refrigerator Parts - Servicing of Refrigerator Parts ~Charging of Refrigerant - Effects of Undercharging the Refrigerant Level in refrigeration equipment - Refrigerant Leak Test

Course Outcomes:

Students will gain the ability to implement the latest advancements in sustainable practices within refrigeration systems.

Contact Details:

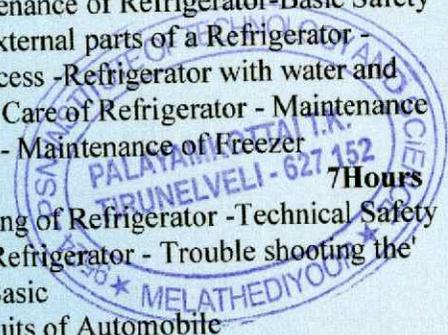
Mr. J. Poopathi

HOD — Mechanical Engineering PSN Institute of Technology and science Tirunelveli.

Mobile :9489620710

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DEPARTMENT OF MECHATRONICS ENGINEERING

VALUE ADDED COURSE ON

PRODUCT DESIGN USING SOLIDWORKS WITH 3D PRINTING

RESOURCE PERSON

Mr.N.Chrath Chander Natrajan,
Trainer, Max Cad,
Coimbatore.

DATE : 07/12/2020 to 12/12/2020

VENUE : Mechatronics Lab

N.Thanga Selvin AP/MTS

HOD/MTS
PSN ITS

Dr.M.Kathirvel

Principal
PSN ITS

MT3952-PRODUCT DESIGN USING SOLIDWORKS WITH 3D PRINTING

Total Hours: 36Hrs

Objective:

- Understand the underlying concepts of 3D modeling
- Create concept to intermediate solid models using SolidWorks software
- Compose an assembly of multiple parts
- Detail out blueprints based on solid models or assemblies
- The objective of this course is to impart students to the fundamentals of various 3D Printing Techniques for application to various industrial needs.

SYLLABUS

Module - 1: SKETCHER AND PART DESIGN

Sketch entities & Sketch tools. Smart Dimensions & Add Relations. Part Design: Boss/Base features & Cut Features. Pattern/ Mirror & Placed Features. Reference Geometries. Materials & Design Table

Module - 2 ASSEMBLY DESIGN

Insert Components, New Part, New Assembly Mate, and Move, Rotate parts & Assembly Features Interference detection & Exploded View

Module - 3 DRAFTING

Standard 3D View, Model view & Projection view Model Items, Annotations, Balloons, and Tables Define Title Block Table & Printing

Module - 4 INTRODUCTION TO 3D PRINTING

Module 5 3D SOLID BASED PRINTING

Laminated object manufacturing (LOM): Models and specifications, Process, Working principle, Applications, Advantages and disadvantages, Case studies.

Fused Deposition Modelling (FDM): Models and specifications, Process, Working principle, Applications, Advantages and disadvantages, Case studies, practical demonstration

OUTCOMES:

- Demonstrate competency with multiple drawing and modification commands in SolidWorks
- Create 3D solid models
- Create 3D assemblies incorporating multiple solid models
- Apply industry standards in the preparation of technical mechanical drawings
- Use software tools for 3D printing
- Prepare 3D printed modules
- Construct products using LOM and FDM technologies

CONTACT:

- Mr. Ramachandran. K (course coordinator)

Mr. Charath Chander Natarajan (Resource Person)
Phone: 9500919691



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**DEPARTMENT OF MECHANICAL AND
AUTOMATION ENGINEERING**
Value Added course

RENEWABLE ENERGY SYSTEMS

DATE : 07-12-2020 to 12-12-2020

Venue : Computer Lab

Resource Person

Mr. GANAPATHYNELLAINAYAGAM,

Dept : MECH

Asst. Professor, SRCE

Mr. MARI MUTHU.N

HOD / M&A

Course Coordinator

Dr. Kathirvel M

PRINCIPAL

MA003 RENEWABLE ENERGY SYSTEMS

OBJECTIVES

- Awareness about renewable Energy Sources and technologies.
- Adequate inputs on a variety of issues in harnessing renewable Energy.
- Recognize current and possible future role of renewable energy sources.

OUTCOMES

- Ability to create awareness about renewable Energy Sources and technologies.
- Ability to get adequate inputs on a variety of issues in harnessing renewable Energy.
- Ability to recognize current and possible future role of renewable energy sources.
- Ability to explain the various renewable energy resources and technologies and their applications.
- Ability to understand basics about biomass energy.
- Ability to acquire knowledge about solar energy.

CO-ORDINATOR
N. MARIMUTHU, AP/MECH&AUTO.
CONTACT:
PH: 9789467025
E-MAIL: nmarimuthu@psnit.ac.in

SYLLABUS

UNIT I RENEWABLE ENERGY (RE) SOURCES

Environmental consequences of fossil fuel use, Importance of renewable sources of energy, Sustainable Design and development, Types of RE sources, Limitations of RE sources, Present Indian and international energy scenario of conventional and RE sources.

UNIT II WIND ENERGY

Power in the Wind - Types of Wind Power Plants (WPPs)-Components of WPPs-Working of WPPs- Siting of WPPs-Grid integration issues of WPPs

UNIT III SOLAR PV AND THERMAL SYSTEMS

Solar Radiation, Radiation Measurement, Solar Thermal Power Plant, Central Receiver Power Plants, Solar Ponds - Thermal Energy storage system with PCM- Solar Photovoltaic systems: Basic Principle of SPV conversion - Types of PV Systems- Types of Solar Cells, Photovoltaic cell concepts, Cell module, array, PV Module I-V Characteristics, Efficiency & Quality of the Cell, series and parallel connections, maximum power point tracking, Applications.

UNIT IV BIOMASS ENERGY

Introduction-Bio mass resources - Energy from Bio mass: conversion processes-Biomass Cogeneration-Environmental Benefits, Geothermal Energy: Basics, Direct Use, Geothermal Electricity, Mini/micro hydro power: Classification of hydropower schemes, Classification of water turbine, Turbine theory, Essential components of hydroelectric system.

UNIT V OTHER ENERGY SOURCES

Tidal Energy: Energy from the tides, Barrage and Non Barrage Tidal power systems, Wave Energy: Energy from waves, wave power devices, Ocean Thermal Energy Conversion (OTEC)- Hydrogen Production and Storage- Fuel cell: Principle of working- various types - construction and applications, Energy Storage System- Hybrid Energy Systems




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DEPARTMENT OF INDUSTRIAL ENGINEERING
AND
MANAGEMENT

Value Added course

DATA ANALYTICS OPERATION MANAGEMENT

DATE : 07-12-2020 to 12-12-2020

Venue : Computer lab

Resource Person

Mr. Arumugasamy S, Asst. Professor, PSN ITS

MR. GREESH KUMAR S

HOD / IEM

Course Coordinator

Dr. KATHARVEL M

PRINCIPAL

DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT VALUE ADDED COURSE Academic year -2019-2020 SYLLABUS OF THE COURSE

Total hours :35hrs

Course Objectives:

- To enable the students to use Excel for advanced data analysis
- To equip the students to with automation skills on excel sheet
- To enable the students to use excel for informed decision making
- To equip basic computer skill that will enhance their employability in general

UNIT I

7 Hours

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

7 Hours

Functionality Using Ranges: Using Ranges, Selecting Ranges, Entering Information Into a Range, Using AutoFill
Creating Formulas; Using Formulas, Formula Functions — Sum, Average, if, Count, max, min, Proper, Upper, Lower, Using AutoSum, Advance Formulas: Concatenate, Vlookup, Hlookup, Match, Countif, Text, Trim

UNIT III

7 Hours

Spreadsheet Charts: Creating Charts, Different types of chart, Formatting Chart Objects, Changing the Chart Type, Showing and Hiding the Legend, Showing and Hiding the Data Table
Data Analysis: Sorting, Filter, Text to Column, Data Validation

UNIT IV

7 Hours

Pivot Table-creating-manipulating-toolbar-changing data field-displaying-selecting pivot option

UNIT V

7 Hours

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
Making Macros: Recording Macros, Running Macros, Deleting Macros

Course Outcomes:

- By studying this course, students will able to make meaningful representation of data in the form of charts and pivot tables -
- By studying this course, students will able to draw using spreadsheets and use interpretation to make decision.
- By studying this course, students will able to generate word documents with appropriate formatting, layout, proofing
- By studying this course, student's will able to manage data for generating queries, forms and reports in a database.

Contact Details:

Mr. S.Greesh Kumar
Head of the Department
Department of Industrial Engineering and
Management
PSN Institute of Technology and Science
Melathediyoor. Mobile :7339002802

