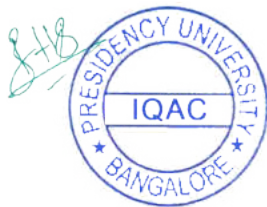




School of Engineering
Department of Electrical & Electronics Engineering
Value Added Course offered during the Odd Semester 2021-2022

Course Code:	EEEV013
Course Name:	Simulation of Power Electronics circuits using MATLAB Simulink, Python and LTSpice
Area of Specialization:	Electrcal Engineering
Course Description:	This course is designed to allow you to simulate any power electronics device in MATLAB/Simulink and LT Spice including rectifiers, dc-to-dc converters, and inverters. The course also has a basic introduction on Python programming to help you with writing control code for electrical circuits. The course uses the free and open source circuit simulator Python Power Electronics. After going through this course, you will be able to create professional electrical power converter circuits for Electric vehicle applications.
Course Outcome:	On successful completion of the course, the student shall be able to: CO.1.Recognize the importance of MATLAB, LT spice and its capabilities CO.2.Explain the simulation of AC-DC circuits using Simulink in MATLAB and LT spice. CO.3.Explain the simulation DC-DC and DC-AC converters using Simulink in MATLAB CO.4.Show the power electronics model for EV battery charging usingMATLAB Simulink
Course Content:	Module No 1: Basics of MATLAB Simulink,Generation of dfferent signals,phase delay, duty ratio of pulse Generators, Introduction to LT spice [5- Hours] Module No 2: MATLAB Simulink of AC-DC Converters, Single phase half wave, full wave, semi controlled and uncontrolled rectifiers, three phase full wave controlled rectifiers with different loads [8- Hours] Module No 3: MATLAB Simulink of DC-DC Converters, buck, boost converters, single phase inverters, three phase inverters with different load conditions, pulse width modulation techniques. [9- Hours] Module No 4: Buck converter using LT Spice, introduction to python, Basic RLC circuits using python, bidirectional converter model for charging battery of EV and current scenario of power electronic applications. [8- Hours]
Instructor In-charge:	Mr. K Srekanth Reddy





PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School : SOE **Name of the Department:** ECE
Name of the Faculty Member : Dr. Rajiv Ranjan Singh/Ms. Renuka Bhagwat
Title of the Value Added Course : AI for Everyone
Course Duration : 30 hours, August 2021 to Jun 2022
Course Code : ECE V 002

Introduction to the Course:

The course has been designed to impart the knowledge about AI. This course is suitable for people with non-technical background too. Therefore, for students who may not have expertise will also benefit by doing this course. Besides, the course deals how it could be used by organizations in better way.

Prerequisites: Fundamentals of Probability and Statistics, Linear Algebra. Some programming experience in C or Python.

Course Outcomes: On successful completion of the course the students shall be able to:

1. Explain the meaning behind common AI terminology, including neural networks, machine learning, deep learning, and data science
2. Spot opportunities to apply AI to problems in your own organization
3. Build machine learning and data science projects
4. Work with an AI team and build an AI strategy in a company

Course Content:

The main purpose of this course is to provide the most fundamental knowledge to the students so that they can understand what is AI. The main topics: Fundamentals of AI, Problem solving, Reasoning, Planning, Natural language understanding, Computer vision, Automatic programming, machine learning. Algorithms for knowledge representation and reasoning; pattern recognition; fuzzy logic; and neural networks. Building AI Projects. Building AI In a Company and finally AI and Society.





PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School: School of Engineering.

Name of the Department: Mechanical Engineering

Area of Specialization: Thermal Engineering

Name of the Faculty Member/Members: Mr. Neeraj

Title of the Value Added Course: Refrigeration and Air-conditioning

Course Code: MECV-011

Course Duration: [30 hours]

Introduction to the Course:

The course is designed to give an in-depth study of theory of refrigeration and air-conditioning and their applications. The techniques of analysis and design of refrigeration and air-conditioning systems will also be discussed. process. These high precision machines demand technical skills in metrology and computer programming that enable the metrologist or engineer to successfully complete the programming for quick and automated inspection processes in industries. There are not enough highly trained engineering personnel available to meet the industry demand in this advanced manufacturing sector

Course Outcomes: On successful completion of the course the students shall be able to:

- CO1 Illustrate the fundamental principles and applications of refrigeration and airconditioning system
- CO2: Present the properties, applications and environmental issues of different refrigerants
- CO3: Operate and analyze the refrigeration and air conditioning systems...



Content:

Refrigerants:

Vapour Compression system

Absorption refrigeration system:

Refrigeration system components:

Psychrometry:

Human comfort:

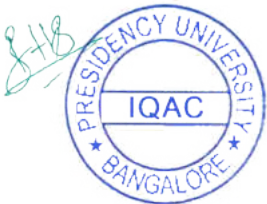
Load analysis:

Duct design and air distribution.

Name & Signature of the Faculty Member

Neeraj

Mr. Neeraj



A black and white photograph of a handwritten signature in black ink on a light background.

Approval by the HOD





PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School: School of Engineering

Name of the Department: Civil Engineering

Area of Specialization: Civil, Geotechnical

Name of the Faculty Member: Mr. Jagdish B Biradar

Title of the Value Added Course: Preparation of soil investigation Report

Course Duration: [30 hours] [From 21/06/2021 to 10/8/2021]

Course Code: CIV V 014

Introduction to the Course (Course Description):

Soil investigations provide the engineer with knowledge of the subsurface conditions at the site of an engineering project. It allows the engineer to work out safe and economical design of a project and inform the construction engineer about the material and conditions he will encounter in the field.

Course Outcomes:

On successful completion of the course the students shall be able to:

01: Classify the stages involved in subsurface exploration.

02: Apply the concept of suitability and extent of boring methods.

03: Demonstrate the ability to obtain disturbed and undisturbed soil samples for visual identification and appropriate laboratory tests.

Course Content: [Briefly mention all the important topics to be covered in this course]

Module 1: Introduction, Planning a Sub-Surface Exploration Programs, Stages in Sub-surface Explorations, Reconnaissance, Depth of Exploration, Lateral Extent of Exploration, Open Excavation Methods of Exploration, Borings for Exploration, Auger Boring, Wash Boring, Rotary Drilling, Percussion Drilling, Core Drilling. [Comprehension][12hrs]

Module 2: Types of Soil Samples, Design Features Affecting the Sample Disturbance, Split- Spoon Samplers, Scraper-Bucket Sampler, Shelby Tubes and Thin Walled Samplers, Piston Samplers, Denison Sampler, Hand-Carved Samples, Standard Penetration Test, Cone Penetration Test, [Application] [10hrs]

Module 3: In-situ Vane Shear Test, In-situ Test Using a Pressure Meter, Observation of Ground Water table, Geophysical Methods, Seismic Methods, Electrical Resistivity Methods, Soil investigation Report. [Application][08hrs]



Name: Mr. Jagdish B Biradar

Signature of the Faculty Member

Approval by the HOD.





School	: School of Engineering
Department	: Department of Petroleum Engineering
Area of Specialization	: Petroleum Refining (Downstream)
Course Type	: Value Added Course (VAC)
Course Title	: Introduction to Distillation Column Design
Course Code	: PET V010
Course Duration	: 30 Hours
Academic Year / Semester	: 2021-2022 / ODD
Course Instructor In-charge	: Mr. Ankur Neog
Course Instructor(s)	: Mr. Ankur Neog (Department of PET)

Course Description:

This course gives particular emphasis on the design aspect of the distillation column and the problems that occur and how to solve them. It provides an opportunity to develop a working knowledge of key techniques that can promote trouble-free operation and reduce distillation cost.

Course Outcomes (COs):

On successful completion of the course, the student shall be able to:

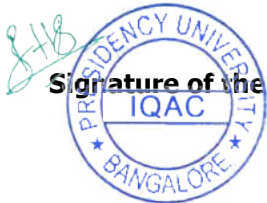
- CO1: Explain the basic concepts of Distillation.
- CO2: Classify the different types of distillation Column.
- CO3: Solve the different types of distillation Column Problems.
- CO4: Recognize the different types of distillation problems.

Course Content:

- Module 1: Introduction to Distillation** - Definition, Types of distillation, Non-reactive distillation, and its classification, Phase equilibria for a single component, Phase equilibria for two components.
- Module 2: Types of Distillation Columns** - Types of distillation columns- Batch distillation, Continuous distillation, Stripping and rectifying columns, Types of column internals- Bubble caps, Sieve trays, Valve trays, Random packing, Structured packing.
- Module 3: Modelling of Distillation Column** - Modelling at steady state (static behaviour) - Rectifying section operating line, stripping section operating line, Feed stage consideration.
- Module 4: Distillation Column Troubleshooting** - General appraisal of problems, Problems of the column, Problems outside the column, Auxillary equipment.

Signature of the Instructor In-charge:

Signature of the HOD:





PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School: School of Management

Name of the Department: Management

Area of Specialization: General Management

Name of the Faculty Member: Dr. Bipasha Maity

Title of the Value Added Course: Developing Environmental Sustainability Mindset

Course Duration: [30 hours] [From AY2021]

Course Code: VMGMT1003

Introduction to the Course: This course is an introduction to ecological, economic, political, and sociocultural perspectives on relationships between humans and the rest of the natural world. Environmental Management is concerned not only with the impact of humankind on the planet but also with the patterns of human behavior necessary to preserve and manage the environment in a self-sustaining way. Study is linked to the areas of new thinking in environmental management, environmental economics and the quest for alternative technologies. It provides students an interdisciplinary survey of the broad range of contemporary environmental issues and concepts. In this course, students will be in the mindset for developing more sustainable communities and lifestyles in the face of local and global change.

Prerequisites of the course: Basic understanding of environmental issues

Course Outcomes: On successful completion of the course the students shall be able to

- 01. Knowledge of the functioning of the natural system which makes life possible on Earth**
- 02. An awareness of the need for management and human responsibility to keep the system in a healthy condition if life as we know it is to continue.**
- 03. An understanding of sustainable development and management to meet the needs of the present without compromising the ability of future generations to meet their own needs.**
- 04. A sound mindset will be created for further study, personal development and participation in local and global environmental concerns**



Course Content:

Module1: Concepts in Environmental Management-Sustainable Development, Stakeholder concept major, Environmental problems, Environmental Resources. Environmental Conflict

Module2: Environmental law and Environmental Impact Assessment-The Earth summit, Environmental Governance in India since 1972, Environmental protection and fundamental rights, Public participation

Module 3: Emergence of Industrial Response for Environmental Issues in India- Regulatory and Economic instrument, Corporate Environmental Responsibility, ISO.

Module 4: Environmental Ethics, Solid waste management and Hospital waste management: Disposal of garbage, Effects of Garbage Dumping, Solid waste management. (Case Studies)

Reference

1. Krishnamoorthy, B. (2017). Environmental Management Text and Cases, Third Edition, PHI Learning.

Name &Signature of the Faculty Member

Approval by the HOD.





PRESIDENCY UNIVERSITY


(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Department of Media Studies

Value Added Courses to be offered during the Odd Semester 2021-2022

Course Code:	BAJV001
Course Name:	Smartphone Filmmaking
Area of Specialization:	Media studies
Course Description:	The students will learn the basics of filmmaking, such as storytelling, shot composition, lighting, audio, and editing. You will also learn how to use editing software to cut your videos together and add effects. By the end of this course, you will be able to use your smartphone to make high-quality videos that tell stories, capture attention, and engage viewers. No prior filmmaking experience is required. However, some familiarity with your smartphone's camera and editing software would be helpful. The course will be delivered over 10 weeks. Each week, you will watch video lectures, complete exercises, and participate in discussion forums. Your performance in the course will be assessed based on your participation in discussion forums, completion of exercises, and submission of a final project.
Course Outcome:	On successful completion of the course the students shall be able to: 1] Understand the smartphone filmmaking and its role in various contexts [Knowledge] 2] Interpret the role of smartphone filmmaking in today's media industry [Comprehension] 3] Describe the role of smartphone filmmaking in persuasion and dissemination of information among individuals and groups [Analysis] 4] Enumerate various type of smartphone filming techniques and their usage. [Comprehension] 5] Evaluate the interplay of smartphone filmmaking and Society leading to development activity. [Application]
Course Content:	Module 1 Introduction to Smartphone Filmmaking (6 Hours) Topics: <ul style="list-style-type: none">• Overview of smartphone filmmaking as a creative medium.• Exploring the potential of smartphones for filmmaking.• Discussion on the importance of storytelling in filmmaking. Module 2 Essential Filmmaking Techniques (6 Hours) Topics: <ul style="list-style-type: none">• Understanding shot types and compositions.• Exploring camera angles and movements.• Learning about lighting and sound considerations for smartphone filmmaking

	<p>Module 3 Filming Techniques and Tips: (6 Hours) Topics:</p> <ul style="list-style-type: none"> • Exploring advanced filming techniques like time-lapse, slow-motion, and hyperlapse. • Discussing framing, focus, and exposure adjustments. • Providing tips for achieving professional-looking shots with smartphones. <p>Module 4 Introduction to Kinemaster: (6 Hours) Topics:</p> <ul style="list-style-type: none"> • Overview of the Kinemaster editing software for smartphones. • Exploring the features and capabilities of Kinemaster <p>Module 5 Editing Basics: (6 Hours) Topics:</p> <ul style="list-style-type: none"> • Learning how to import and organize video clips in Kinemaster. • Understanding the timeline, trimming, and splitting clips. • Exploring transitions, text overlays, and audio adjustments.
Instructor In-charge:	Padmavati S.

Signature of Course Instructor	
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PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School: School of Engineering

Name of the Department: Computer Science and Engineering

Area of Specialization: Database Connectivity

Name of the Faculty Member : Dr. M. ISLABUDEEN

Title of the Value Added Course: Database (MySQL) Connectivity using JAVA and PHP

Course Duration: [30 hours] [From Feb 18 to March 22]

Course Code: CSEV118

Introduction to the Course: The Course is intended to teach the students the basic concepts of database (MySQL) connectivity using JAVA and PHP. As part of the Course, students will gain the knowledge of concepts such as installation of XAMPP Server, Database server connectivity and creating, accessing and deleting the information in the Tables in the database, creating a simple and dynamic web pages using HTML, PHP and MySQL Server.

Prerequisite: Basic knowledge in SQL, JAVA and PHP

COURSE OUTCOMES: On successful completion of the course the students shall be able to:

CO1:	Install Relational Database (MySQL) with PHP and JAVA. [Comprehension]
CO2:	Apply basic MySQL commands using PHP to create real-time applications. [Application]
CO3:	Apply basic MySQL commands using JAVA to create real-time applications. [Application]

Course Content: [Briefly mention all the important topics to be covered in this course]

Database (MySQL) Connectivity using PHP

Introduction to MySQL - Installation of PHP and MySQL - An Introduction to the PHPMyAdmin Interface - Creating a New Database - Creating a new Table and entering



the value of the field - SQL Query displayed in the PHPMyAdmin window - Connecting to the database and inserting data - mysql_connect(), Selecting a database within a connected database server - mysql_select_db().

Writing data into the database (INSERT and UPDATE Queries), mysql_query() - Run specific queries on our database. Getting data from the database table and displaying it - SELECT QUERY - mysql_num_rows() - ORDER BY - mysql_fetch_assoc() - Getting, Changing and updating the existing values of the database with HTML form - DELETE QUERY

Database (MySQL) Connectivity using JAVA

Installation of MySQL in the specific folder - Basic statements (show, create, use, desc, insert, update, select, delete, drop) - JDBC (java.sql, java.sql.DriverManager, java.sql.Driver, java.sql.Connection) - Common JDBC Components (DriverManager, Driver, Connection, Statement, ResultSet, SQLException) - getConnection() - Statement types (Statement, PreparedStatement, Callable Statement) - createStatement(), execute(), executeQuery(), executeUpdate(), getMaxRows(), set method with other datatypes - SQL Data types - ResultSet (next(), getResultSet(), get method with different datatypes - Exception handling for Database connectivity

Dr. M. ISLABUDEEN

Name & Signature of the Faculty Member

Signature of Assoc. Dean





PRESIDENCY UNIVERSITY

(Established under the Presidency University Act, 2013 of the Karnataka Act 41 of 2013)

Name of the School: School of Design

Area of Specialization: Apparels and Fashion

Name of the Department: Fashion Design

Name of the Faculty Member: SANDEEP K N

Title of the Value-Added Course: Defence Protective Gears and their Speciality Applications

Course Duration: [30 hours]

Course Code: SODV0021

Introduction to the Course:

The objective of this value-added course is to offer a basic understanding of fibres, yarns/filaments and fabrics as the major resources and products of textiles and apparel industries. The course offers a fundamental understanding about the differences between normal textile substrates and speciality fabrics used in novel applications. The course mainly focuses on the defence related applications using speciality yarns like Nomex and Kevlar.

Course Outcomes: On successful completion of the course the students shall be able to:

1. Define fibres, yarns and fabrics in various applications.
2. Discuss the differences and relationship between normal and speciality fabrics.
3. Discuss end uses and properties of speciality fabrics like Nomex and Kevlar.

Course Content:

1. Discussions regarding various fibres, yarns, filaments and fabrics, their features and applications
2. Constructions, features and real-time applications of Nomex and Kevlar
3. Documentaries related to the difference between normal and speciality fabrics
4. Properties and end-uses of Nomex and Kevlar
5. Related documentaries/videos, etc.

(Sandeep K.N)

Name & Signature of the Faculty Member



Approval by the HOD





PRESIDENCY UNIVERSITY

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Approved by AICTE, New Delhi



Itgalpur, Rajankunte, Yelahanka, Bengaluru – 560064

Course Name: Application of Statistical Software for Social Science Research

Resource person: Dr Vishal Sharma

Course Code: 21VACGEN08

Duration: 30 hours

Course description

Course is descriptive and practical in nature, students will be able to gain insight about variables, types of variables, usage and applicability of statistical variables and its applicability in decision making. Course will help the students to understand techniques of statistical analysis through SPSS software.

SYLLABUS

MODULE I

(15 Sessions)

- Basic categories of research, what is a variable, Categorical versus continuous
- Independent versus dependent variables
- Non repeated versus repeated measures variables
- Measurement scales
- Common statistical programs
- Orientation to SPSS program
- What is under each menu

MODULE II

(15 Sessions)

- Creating a new data set
- Valid variable names
- Variable view
- Adding value labels
- Reading in an existing data set (Excel)

Reference books

- SPSS Inc, SPSS Reference Guide, SPSS Incorporated, 1990, the University of Michigan, 12 Jan 2010
- The SPSS Book: A Student Guide to the Statistical Package for the Social Sciences Paperback – Import, 1 July 2001, by [Matthew J](#)

Dr. Balu L
Head of the Department

