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   : Ms. Akshaya M Ganorkar

Tile of the Value Added Course   : Fundamentals of FPGA design and Modelling

Course Duration   : 30 hours, September 2020 to December 2020

Course Code   : **ECE V 019**

Introduction to the Course:

This course will build the foundation for FPGA design along with practical design skills. Provides opportunity to learn what an FPGA is and how this technology was developed, how to select the best FPGA architecture for a given application, how to use state of the art software tools for FPGA development, and solve critical digital design problems using FPGAs. Student shall use FPGA development tools to complete many design examples. Basics of HDLs will help to model a circuit for various applications.

Prerequisites: Basics of Digital designs,

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

1. Understand the basics of Programmable logic devices and architectures.
2. Understand basics of Verilog HDL.
3. Design an example using sophisticated FPGA design tools.
4. Summarize FPGA Architectures: SRAM, FLASH, and Anti-fuse and their use based on applications.

Course Content:

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Name of the School: School of Engineering

Name of the Department: Mechanical Engineering

Area of Specialization: Material science/ Surface engineering

Name of the Faculty Member/Members: Dr. Lokesh GN

Tile of the Value Added Course: Unconventional Machining

**Duration: [30 hours]**

Course Code: MECH/007

Introduction to the Course:

Unconventional machining process is a special type of machining process in which there is no direct contact between the tool and the work piece. In unconventional machining, a form of energy is used to remove unwanted material from a given work piece. In several industries, hard and brittle materials like tungsten carbide, high speed steels, stainless steels, ceramics etc., find a variety of applications. Such materials are machined with the help of conventional machining processes, either the tool undergoes extreme wear (while machining hard work piece) or the work piece material is damaged (while machining brittle work piece). This is because, in conventional machining, there is a direct contact between the tool and the work piece. Large cutting forces are involved and material is removed in the form of chips. Huge amounts of heat is produced in the work piece. This induces residual stresses, which degrades the life and quality of the work piece material. Hence, conventional machining produces poor quality work piece with poor surface finish. To overcome all these drawbacks, Advanced machining processes plays a vital role to machine hard and brittle materials in order to get better dimensional accuracy.

Prerequisites of the course: Manufacturing Process, Material science

Course Objective:

1. To learn about the various techniques used in nanofabrication and characterization
2. To learn about different imaging techniques
3. To learn about the basic function of the equipment and how samples are
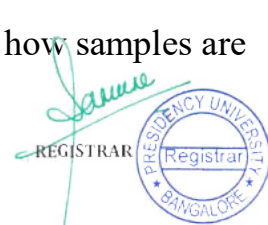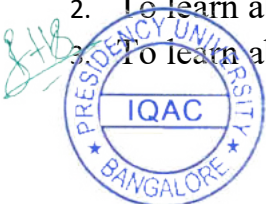
prepared and measured

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

1. Summarize the needs and classification of unconventional machining process.
2. Explain the working principle of energy based machining process.
3. Compare the merits, demerits and applications of unconventional machining process.
4. Select the material and tool with respect to the process and parameters.

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

Module 1:
Introduction: Limitation of conventional manufacturing processes, need of unconventional manufacturing process and its classification. Principle and working and applications of unconventional machining process

Module 2:
Mechanical energy based Unconventional machining: Abrasive jet machining (AJM), Water jet machining (WJM), Abrasive water jet machining (AWJM), Ultrasonic machining (USM).
Electro thermal energy based Unconventional machining: Electro-discharge machining (EDM), Wire- electro discharge machining (WEDM).

Module 3;
Chemical energy based: Electrochemical machining (ECM), Chemical machining,
High energy density methods: Laser beam machining (LBM), Electron beam machining (EBM), Plasma arc machining (PAM)
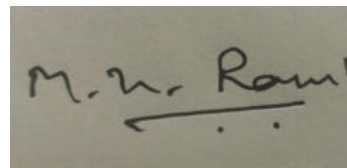Hybrid machining: Electro chemical discharge machining (ECDM), Ultrasonic assisted EDM, Electro chemical discharge grinding, Electro discharge coating.
Micro fabrication: Lithography, Thin film deposition like oxidation, PVD, CVD etc., Etching.

Name of the Faculty Member

(Dr. Lokesh GN)   Approved by HOD

PRESIDENCY UNIVERSITY

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Name of the School: School of Management   **Name of the Department: Management**

Area of Specialization: General Management

Name of the Faculty Member: Dr. Nalin Kumar C

Tile of the Value Added Course: Doing Business and Competitiveness

Course Duration: [30 hours] [From 30 September 2020 to 30 December 2020]

Course Code: SOMV009

Introduction to the Course: The course aims to expose participants to conceptual frameworks and various perspectives related to strategic management. The participants would learn to analyze competitive situations, develop strategy, use various strategic tools and skillsets, and strategy implementation issues that are generally faced in Business.

Prerequisites of the course: Nil

Course Outcomes: On successful completion of the course the students shall be able to:
1. Demonstrate a clear understanding of the concepts, tools & techniques used by executives in developing and executing strategies
2. To demonstrate the capability of making their own decisions in a dynamic business landscape.
3. Develop their capacity to think and execute strategically.

Course Content:

Module1: Digital Commerce and Economy

Module 2: Entrepreneurship and Business Development.

Module 3: Business & Market Intelligence

Approval by the HOD.

PRESIDENCY UNIVERSITY

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Name of the School: School of Engineering

Name of the Department: Computer Science and Engineering

Area of Specialization: HUMAN COMPUTER INTERACTION

Name of the Faculty Member: ANITHA PREMKUMAR

Tile of the Value Added Course: User Interface Design (UID)

 Course Duration: [30 hours]

Course Code: CSE V 117

Introduction to the Course:

The Course is intended to introduce students about the basic concepts of user interface design. It will cover the theory and methods that exist in the field. It stresses the importance of good interfaces and the relationship of interface design to effective human interaction with computers. It helps in categorizing the interfaces based on the processes, methods and programming used. Students will be applying knowledge gained through the observation of several categories of design patterns used in contemporary apps and websites.

Course Pre-requisites:

Basic knowledge of HTML and web design.

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

   1) Identify the factors influencing user interfaces;
   2) Apply guidelines, principles, theories and methodologies for designing interfaces;
   3) Explain user interfaces based on design process and construction;

Course Content:

Module: 1: Interface design

Design – Good and Bad design – Interaction design –Design Guidelines – Design Principles – Design Theories – The process of design –Prototyping and Construction - Conceptual design – Physical design – The four pillars of design – Development methodologies – Participatory design   **[10]**
[Application Level]

Module: 2: Evaluating interface design

Evaluating interface design – Evaluation, Goals of evaluation, Expert Reviews, Usability testing and Laboratories, Acceptance Tests, Evaluating during Active Use, Ethonography, Ergonomics. **[10] [Comprehension Level]**

Module: 3: Usability of Interactive System

Usability of Interactive Systems: Introduction, Usability Requirements, Usability measures, Usability Motivations, Universal Usability.   [**Comprehension Level**]   **[10]**

Reference Materials:

1) Textbook
a) Ben Shneiderman and Catherine Plaisant*, "Designing the User Interface".* Addison Wesley.

2) Reference Book(s)
1. Yvonne Rogers, Helen sharp, Jenny Preece, *"Interaction Design: Beyond Human Computer Interaction"*, Wiley.

2. The Essentials of Interaction Design, Fourth Edition by Cooper, Reimann, Cronin, & Noessel (2014).

Anitha Premkumar

Name & Signature of the Faculty Member   **Approval by the HOD.**

VALUE ADDED COURSE

BY SCHOOL OF LAW PRESIDENCY UNIVERSITY

ACADEMIC YEAR- 2020-2021

Contemporary Issues in Human Rights

COURSE INSTRUCTOR: - Rajkumar

Course Objectives:

1. To recognize the human rights discourse
2. To identify the roles and responsibilities of various human rights organisations at a global and domestic level
3. To make focus on Human rights in the Indian context
4. To learn the various International Conventions
5. To enable the students understand relevance of ICJ

Course Outcomes:

On successful completion of this course the student should be able to:

CO 1: Explain familiarity with prevailing policy and law in the field of human rights

CO 2: Identify emerging jurisprudential trends.

CO 3: Analyse theoretical grounding in human rights law that enables practice

CO 4: Identify lacuna in the Indian Human Rights Laws .

HUMAN RIGHTS

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CO 3: Analyse theoretical grounding in human rights law that enables practice

CO 4: Identify lacuna in the Indian Human Rights Laws .

HUMAN RIGHTS

UNIT-I Historical development of the concept of human rights: **L- 5 Hours**

Human rights in the Indian tradition: ancient, medieval, and modern

Human rights in the Western tradition

Concept of natural law

Concept of natural rights

Human rights in legal tradition: International Law and National Law

UNIT- II UN and Human Rights: **L-5Hours**

Universal Declaration of Human Rights (1948) individual & group rights

Covenant on Political and Civil Rights (1966)

Covenant on Economic, Social and Cultural Rights (1966)

IL0 and other Conventions and Protocols dealing with human rights.

UNIT- III Role of Regional Organizations: **L - 10 Hours**

European Convention on Human Rights

American Convention on Human Rights

African Convention on Human Rights

SAARC

UNIT- IV Impact and implementation of international human rights norms in India:
                                                              L- 10 Hours

Human rights norms reflected in fundamental rights in the Constitution

Directive Principles: legislative and administrative implementation of international human rights norms

Implementation of international human rights norms through judicial process

The Supreme Court, High Courts and other courts

Statutory commissions-human rights, women's, minority and backward class
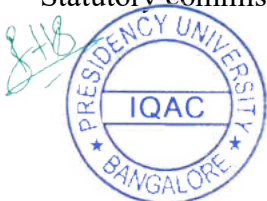
Text Books:

•   S.K. Avesti and R.P. Kataria, Law Relating to Human Rights, Ch IV, V, VIII, XIV, XXIX and XXXIX (2000) Orient, New Delhi

•   S.K. Varma, Public International Law (1998), Prentice-Hall, New Delhi

References Books:

•   The Human Rights Watch - Global Report on Women's Human Rights (2000), Oxford

•   Ermacora, Nowak and Tretter, International Human Rights (1993), Sweet & Maxwell.

•   Wallace, International Human Rights: Text & Materials (1996), Sweet & Maxwell

•   Muntarbhorn, The Status of Refugees in Asia (1992), Oxford.

•   Frank Cass, Human Rights and Global Diversity (2001), London

•   Nirmal. C.J. (ed.), Human Rights in India (2000), Oxford.