



COURSE OUTCOMES

B.Tech. VII Sem

Course Name : Data Science and Cloud Computing (PEC-IV)	
Code : BEETC702PE-T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Identify the basic concepts and technologies involved in dealing with Data science process and demonstrate knowledge of data-related concepts.
CO2	Formulate a comprehensive Data Management for exploring and fixing data, also develop strategies using Application Programming Interfaces (APIs) for data manipulation.
CO3	Use various applied statistical techniques in R to compare different types of statistical data and big data analytics, interpreting and evaluating the results.
CO4	Construct effective data visualizations using conventional methods, retinal variables, and mapping encodings, and justify their importance in conveying insights from data.
CO5	Utilize Python for data visualization and basic numerical operations, demonstrating ability in using relevant libraries and modules for practical data science applications.

Course Name : Microwave & Radar Engineering (PEC-IV)	
Code : BEETC702PE-T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Explain the working of microwave tubes and slow wave structure.
CO2	Develop scattering matrix of various Tees & Explain various microwave components
CO3	Recognize the fundamentals of various solid state microwave devices.
CO4	Define, Explain, & measure various microwave measurements.
CO5	Describe the fundamentals of RADARs and discuss its factors influencing radar & solve its problems.



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Course Name : Optical Communication (PEC-V)	
Code : BEETC703T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Explain advantages, disadvantages & application of optical fiber and classify about optical fibers.
CO2	Explain optical fiber joints and connection & classify attenuation, absorption, dispersion of optical fiber.
CO3	Classify and explain various optical sources, couplers, Detector and Receiver.
CO4	Explain analog and digital links.
CO5	Explain W DFA and optical amplifier.

Course Name : Biomedical Engineering (PEC-V)	
Code : BEETC703PE	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Analyze the biomedical signals.
CO2	Describe x-ray, MRI, CT, VR technologies and infra-red imaging.
CO3	Explain Biomedical sensors & understand the measurements
CO4	Describe different medical instruments & their applications.
CO5	Understand hospital information system & relevant training , simulation technologies.

Course Name : Bioengineering (Open Elective)	
Code : BEETC704OE	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Analyze the biomedical signal
CO2	Explain biomedical sensor and compare the measurements.
CO3	Describe X-ray, MRI, CT, VR technologies and infra red imaging
CO4	Discuss different medical instruments , their applications.
CO5	Summarize hospital information & recognize relevant training as well as simulation technologies.



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Course Name : Intellectual Property Rights	
Code : BEETC706A	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Read about the concepts of Intellectual property rights.
CO2	Distinguish and understand the world of intellectual property.
CO3	Explain why it needs to be protected ? How it is protected?
CO4	Analyze, discuss and debate about the latest legal problems confronting the world and the solutions being offered.
CO5	Consider new and upcoming areas of intellectual property (IP) like biotechnology , domain names , creative commons etc.

Course Name : Audio and Video Engineering Lab	
Code : BEETC-701P	
After completion of the practical students will be able to: –	
CO1	Analyze color TV systems
CO2	Compare different TV standards
CO3	Distinguish advanced TV technology
CO4	Analyze audio and video recording , display and relevant consumer applications.

Course Name : Web Technologies Lab	
Code : BEETC-702P	
After completion of the practical students will be able to: : –	
CO1	Create Web pages using HTML and CSS
CO2	Understand the concept of Javascripts
CO3	Identify difference between JSP and servlet
CO4	Design web application.



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B.Tech. VII Sem

Course Name : Microwave and Radar Engineering Lab	
Code : BEETC-702P	
After completion of the practical students will be able to: : –	
CO1	Understand the use of active and passive microwave devices.
CO2	Understand the use of microwave power devices.
CO3	Demonstrate the use of different power distribution Tees.
CO4	Understand and demonstrate the process of Radar Engineering.

Course Name : Data Science and Cloud Computing Lab	
Code : BEETC-702P	
After completion of the practical students will be able to: : –	
CO1	Identify the basic concepts and technologies involved in Data science
CO2	Apply data management techniques for exploring and fixing data.
CO3	Understand the different types of statistical data analysis.
CO4	Apply and use different technologies for data visualization

Course Name : Project	
Code : BEETC-705P	
After completion of the practical students will be able to: –	
CO1	To choose an appropriate topic for study in his specialization domain and will be able to clearly formulate and state a research problem
CO2	Compile the relevant literature and frame hypotheses for research as applicable
CO3	plan a research design including the sampling, observational, statistical and operational designs if any
CO4	Compile relevant data, interpret and analyze it and test the hypotheses wherever applicable
CO5	Arrive at logical conclusions and propose suitable recommendations on the research problem
CO6	Create a logically coherent project report and will be able to defend his / her work in front of a panel of examiners



COURSE OUTCOMES

B.Tech. VIII Sem

Course Name : CMOS VLSI Design (PEC-VI)	
Code : BEETC801PE	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Describe and interpret the basic concepts of MOS Transistors.
CO2	Construct the ability to design a system, component or process as per needs and specifications.
CO3	Analyze inverter design, characteristics and applications and performance parameters of CMOS Circuits.
CO4	Evaluate circuits using different CMOS styles and measure performance of the complex logic structures.

Course Name : Artificial Intelligence (PEC-VI)	
Code : BEETC801PE	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Develop an understanding what is involved in AIML.
CO2	Understand learning algorithms of AIML.
CO3	Understand the deep learning.
CO4	Apply the knowledge for the selection of tool and languages for problem solving
CO5	Understand the use of AIML for real world problems.

Course Name : MEMS (PEC-VI)	
Code : BEETC801PE	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Apply the principles behind the operation of MEMS devices
CO2	Choose a micromachining technique for a specific MEMS fabrication process
CO3	Understand recent advancements in the field of MEMS and devices



COURSE OUTCOMES

B.Tech. VIII Sem

Course Name : VLSI Signal Processing (PEC-VII)	
Code : BEETC802T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Learn various methodologies to optimize power delay and area of VLSI design
CO2	Build Real Time processing system.
CO3	Design of algorithm structure for DSP algorithms based on algorithm transformation

Course Name : Android Mobile Application Development (PEC-VII)	
Code : BEETC802T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Identify various concepts of mobile programming that make it unique from programming for other platforms.
CO2	Critique mobile applications on their design pros and cons
CO3	Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces
CO4	Program mobile applications for the Android operating system that use basic and advanced phone features.
CO5	Deploy applications to the Android marketplace for distribution.



COURSE OUTCOMES

B.Tech. VIII Sem

Course Name : Satellite Communication (PEC-VII)	
Code : BEETC802T	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Do research with capabilities in the design, development and manufacture of satellite communication systems used in a wide spectrum of applications.
CO2	Experience real world experience from household appliances to sophisticated satellite communication, from electronic ignition to neural networks and signal processing chips & to integrate academic discipline with project-based engineering applications, classroom learning theory
CO3	Able for Acquisition of technical competence in specialized areas of Satellite Communication engineering.
CO4	Able to identify, formulate and model problems and find Satellite Communication engineering solutions based on a system approach.

Course Name : Project Phase II	
Code : BEETC803P	
Upon completion of this course, students will demonstrate the ability to: –	
CO1	Analyze or Design the Electronics /telecommunication /allied Engineering problems by using appreciate methodology in a team work.
CO2	Interpret the communication skills of team members.
CO3	Use of Modern tools in the field of Electronics Engineering