Lokmanya Tilak Jankalyan Shikshan Sanstha's
PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING
Harpur Nagar, Umred Road (Near Bada Tajbagh), Nagpur-24
(Approved by AICTE, New Delhi, Govt. of Maharashtra
and affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)
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NAAC Accredited

Department of Computer Science & Engineering

Course Outcomes

B. Tech. Third Semester (CBCS)

Course Name: Applied Math's III	
Code: BECSE301T	
At the end of the course student will be able to :	
CO1	Explain numerical methods, matrices for the solution of linear and non-linear equations, and the solution of differential equations, among other mathematical processes and activities.
CO2	Analyze real world scenarios to recognize when matrices and probability are appropriate, formulate problems about scenarios, and creatively model these scenarios, in order to solve the problems using multiple approaches.
CO3	Organize, manage and present data in clear and concise manner.
CO4	Develop an ability to identify, formulate and solve real world problems.
CO5	Explain the impact of scientific and engineering solutions in global and societal context
CO6	Create the groundwork for post graduate courses, specialized study and research in computational mathematics.

Course Name: Object Oriented Programming in JAVA	
Code: BECSE302T	
At the end of the course student will be able to :	
CO1	Identify classes, objects, members of class and relationships among them for specific problem.
CO2	Demonstrate the concept of garbage collection, polymorphism, inheritance etc.
CO3	Demonstrate numeric (algebraic) and string based computation.
CO4	Implement modularity as well as basic error handling techniques.
CO5	Develop, design and implement small multithreaded programs using Java language.
CO6	Apply appropriate problem-solving strategies for the implementation of small/medium scale Java applications.

Course Name: Operating System	
Code: BECSE303T	
At the end of the course student will be able to :	
CO1	Explain the basic concepts of operating system
CO2	Explain the process management policies and scheduling algorithm
CO3	Design the various memory management techniques.
CO4	Analyze process synchronization techniques
CO5	Illustrate file system concepts
CO6	Evaluate deadlock detection and prevention mechanism

Course Name: Computer Architecture and Digital System	
Code: BECSE304T	
At the end of the course student will be able to :	
CO1	Explain the basic concept of digital system, and apply for problem solving
CO2	Describe the computer architecture and addressing modes
CO3	Illustrate various instructions formats
CO4	Describe the arithmetic operations
CO5	Design and evaluate various memory management system
CO6	Illustrate I/O mapped and memory mapped operations.

Course Name: Ethics in IT	
Code: BECSE305T	
At the end of the course student will be able to :	
CO1	Acquire knowledge about ethical values and principles
CO2	Explain key issues of privacy protection policies
CO3	Apply Intellectual Property Rights and related law in reality
CO4	Explain the core values that shape the ethical behavior of an engineer /IT professional
CO5	Identify the multiple ethical interests at stake in a real-world situation.
CO6	Develop cognitive skills in solving social problems

Course Name: Universal Human Values	
Code: BECSE306T	
At the end of the course student will be able to :	
CO1	Become more aware of themselves, and their surroundings (family, society, nature)
CO2	Become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
CO3	They would have better critical ability
CO4	Become sensitive to their commitments towards what they have Explain. (human values, human relationships, and human society)

Course Name: Environmental Science	
Code: BECSE307T	
At the end of the course student will be able to :	
CO1	Identify different types of air pollutions as well as explain their causes, detrimental effects on environment and effective control measures.
CO2	Recognize various source of water pollutants and interpret their causes and design its effective control measure.
CO3	Illustrate various types of pollutants and waste management.
CO4	Analyze various social issues related to environmental and challenges in implementation of environmental laws.

B. Tech. Fourth Semester (CBCS)

Course Name:Discrete Mathematics and Graph Theory	
Code: BECSE401T	
At the end of the course student will be able to :	
CO1	Apply graph theory models of data structures and state machines to solve problems of connectivity and constraint satisfaction.
CO2	Gain an introduction into how mathematical models for engineering are designed, analyzed and implemented in industry and organizations.
CO3	Reason mathematically about basic data types and structures (such as numbers, sets, graphs, and trees) used in computer algorithms and systems; distinguish rigorous definitions and conclusions from merely plausible ones.
CO4	Analyze real world scenarios to recognize when Logic, sets, functions are appropriate, formulate problems about the scenarios, creatively model these scenarios (using technology, if appropriate) in order to solve the problems using multiple approaches.
CO5	Apply knowledge of mathematics, physics and modern computing tools to scientific and engineering problems.
CO6	Apply their knowledge in life-long learning.

Course Name:Data Structure and Program Design	
Code: BECSE402T	
At the end of the course student will be able to :	
CO1	Analyze the complexity of algorithms and sorting techniques.
CO2	Apply the concept of stack and queues to solve real world problem.
CO3	Describe and implement linked list operation.
CO4	Demonstrate different methods for traversing trees.
CO5	Utilize the concepts of graphs to build solution. Design and implement searching techniques and hashing function

Course Name:Database Management Systems	
Code: BECSE403T	
At the end of the course student will be able to :	
CO1	Explain basic database concepts and data modeling techniques used in database design.
CO2	Describe the concept of functional dependency and Perform the calculus with Design database by using different normalization technique.
CO3	Illustrate query processing and Perform optimization on query processing.
CO4	Explain the concept of transaction processing and different recovery technique used in RDBMS.
CO5	Implement advanced databases which are used real time system.

Course Name:Computer Networks	
Code: BECSE404T	
At the end of the course student will be able to :	
CO1	Describe the functions of each layer in OSI model along with basic networking concepts.
CO2	Explain physical layer functionality and its working along with transmission media with real time applications.
CO3	Describe the functions of data link layer and explain the protocols used in data link layer.
CO4	Classify the routing protocols and analyze how to map IP addresses. Identify the issues related to transport layer, congestion control
CO5	Describe Quality of Service, DNS, Application layer protocols & Network security issues.

Course Name:Theory of Computation	
Code: BECSE405T	
At the end of the course student will be able to :	
CO1	Design finite automata and its minimization along with Moore and Mealy machines.
CO2	Apply regular expression and create grammar for the same.
CO3	Explain context free grammar and various normal forms of CFGs.
CO4	Create Push Down Automata for the given CFG and inter-conversion of the same.
CO5	Create Turning Machine for the grammar and Deal with Recursive and Recursively Enumerable Languages.

Course Name:System Programming	
Code:BECSE406T	
At the end of the course student will be able to :	
CO1	Identify the relevance of different system programs.
CO2	Describe the various data structures and passes of assembler design.
CO3	Identify the need for different features and designing of macros
CO4	Distinguish different loaders and linkers and their contribution in developing efficient user applications.
CO5	Describe the concepts of phases of compiler, LEX and YACC

Course Name:Computer Workshop-II-Lab	
Code:BECSE407P	
At the end of the course student will be able to :	
CO1	Declare python operators, numeric data types and string operations
CO2	Implement tuple, conditional blocks and loops in python
CO3	Apply functions, modules, and packages using python
CO4	Handle exceptions, sorting algorithms and various data structures
CO5	Implement various file operations using python and Implement concepts of object oriented programming and python database connectivity