

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

**A+, Accredited by NAAC & NBA (ECE & CSE)**

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

## Department of Computer Science and Design

### Course Outcomes for year 2022-2023 (3<sup>rd</sup> semester)

CO Numbers	Course Outcomes
21MAT31.1	To solve ordinary differential equations using Laplace transform.
21MAT31.2	Demonstrate Fourier series to study the behavior of periodic functions and their applications in system communications, digital signal processing and field theory.
21MAT31.3	To use Fourier transforms to analyze problems involving continuous-time signals and to apply Z-Transform techniques to solve difference equations.
21MAT31.4	To solve mathematical models represented by initial or boundary value problems involving partial differential equations.
21MAT31.5	Determine the extremals of functional using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.

CO Numbers	Course Outcomes
21CS32.1	Observe data structure definition, classification and data structure operations and <b>Demonstrate</b> dynamic memory allocations.
21CS32.2	Develop the operations of stack queues and <b>Implement</b> the algorithms for stack applications.
21CS32.3	<b>Explain</b> the SLL, DLL and CLL by its operations and <b>Implement</b> the algorithms for its applications such as polynomials and sparse matrix.
21CS32.4	<b>Construct</b> the operations of trees and <b>Implement</b> the algorithms for the given problems using binary trees, BST.
21CS32.5	<b>Manipulate</b> the applications of graphs, methods for hash table

CO Numbers	Course Outcomes
21CS33.1	Understand the transistor biasing techniques, various op-amp based circuits, regulated power supplies and DAC/ADC
21CS33.2	Apply various techniques to simply a given Boolean expressing and implement the circuit using basic gates/MUX
21CS33.3	Understand delays in gates and hazards- detection and overcoming it and also basic principles and usage of MUX, decoders and PLCs
21CS33.4	Apply VHDL coding principles to design simple digital circuits. And also to understand working of various flip-flops
21CS33.5	Apply the knowledge of JK flip-flops and shift registers to design counters



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CO Numbers	Course Outcomes
21CS34.1	Explain the basic structure of computers, performance of processor, memory organization, machine instructions and assembly language.
21CS34.2	Analyse and Choose appropriate interrupt hardware for communication with I/O devices.
21CS34.3	Explain different types of memory architecture and illustrate the concept of virtual memory.
21CS34.4	Apply the knowledge of arithmetic operations and analyze simple arithmetic and logic units.
21CS34.5	Explain the functions processing unit, organization of processor and pipelining.

CO Numbers	Course Outcomes
21CSL35.1	Develop and develop use eclipse/NetBeans IDE to design, debug java projects based on data types , operators and decision making statements.
21CSL35.2	Design, Develop and Analyze the necessity for object oriented programming paradigm. programs on oops concept, method overloading, constructors, package.
21CSL35.3	Design, Develop and implement multi- thread programming e, string operation
21CSL35.4	Design, Develop and implement programs on Exception handling, file operation, window based applications in java

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Dept. of Computer Science and Design  
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Mijar, Moodbidri - 574 225



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### Course Outcomes for year 2022-2023 (4<sup>th</sup> semester)

CO Numbers	Course Outcomes
21MAT41.1	Apply the concepts of logic for effective computation and relating problems in the Engineering domain.
21MAT41.2	Analyze the concepts of functions and relations to various fields of Engineering. Comprehend the concepts of Graph Theory for various applications of Computational sciences.
21MAT41.3	Apply discrete and continuous probability distributions in analyzing the probability models arising in the engineering field.
21MAT41.4	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.
21MAT41.5	Construct joint probability distributions and demonstrate the validity of testing the hypothesis.

  

21CS42.1	Understand the notion of an algorithm, asymptotic notations and divide and conquer
21CS42.2	Analyze the recursive and non-recursive algorithms and divide and conquer.
21CS42.3	Understand the algorithm design techniques using greedy method.
21CS42.4	Understand the algorithm design techniques using dynamic programming
21CS42.5	Explain the algorithm design techniques using backtracking, branch and bound and NP-complete and NP-hard problems

  

21CS43.1	Identify the differences between Microcontrollers and Microprocessor and Understand the Internal Architecture of Microcontroller
21CS43.2	Understand the ARM Instruction Set and explain C-Compilers and optimization techniques.
21CS43.3	Apply the knowledge gained from programming on ARM to different applications
21CS43.4	Analyze various characteristics and quality attributes of embedded Systems.
21CS43.5	Understand the basic concepts of operating Systems and Demonstrate the need of real time operating system for embedded system applications

  

21CS44.1	<b>Relate</b> the fundamentals of OS and process management concepts.
21CS44.2	<b>Apply</b> suitable technique for process scheduling and synchronization
21CS44.3	<b>Apply</b> various concepts of deadlock detection, prevention and memory management strategies.
21CS44.4	<b>Illustrate</b> the concept of virtual memory management and file systems.
21CS44.5	<b>Extend</b> the concepts of secondary storage structures and Linux OS using case studies.

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CO Numbers	Course Outcomes
21CSL46.1	Apply various Python fundamentals like data types, operators, flow control and functions with illustrative programs.
21CSL46.2	Develop programs to implement string handling functions, data structures like list, tuple and dictionary with illustrative programs.
21CSL46.3	Experiment with regular expressions (RE), reading, writing and organizing files with illustrative programs.
21CSL46.4	Build the concepts of classes, methods, objects, inheritance, polymorphism and overriding with illustrative programs.
21CSL46.5	Apply Python program for demonstration of working with excel spreadsheets, web scraping, PDF, Word and JSON files with illustrative programs.

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