The COs of 21 Scheme subject wise for the academic Year 2022-2023

III Semester (2021 Batch)

Course Code: **BSC**
Subject Code **21MAT31**

Subject Name **Transform Calculus, Fourier Series and Numerical Techniques**

Course Outcomes:

CO1 To have an insight into solving ordinary differential equations by using Laplace transform techniques

CO2 Learn to use the Fourier series to represent periodical physical phenomena in engineering analysis.

CO3 To enable the students to study Fourier Transforms and concepts of infinite Fourier Sine and Cosine transforms and to learn the method of solving difference equations by the z-transform method.

CO4 To develop the proficiency in solving ordinary and partial differential equations arising in engineering applications, using numerical methods

CO5

Course Code: **IPCC**
Subject Code **21CS32**

Subject Name **Data Structures and Applications**

Course Outcomes

CO1 Explain the fundamentals of data structures and their applications essential for implementing solutions to problems.

CO2 Illustrate representation of data structures: Stack, Queues, Linked Lists, Trees and Graphs.

CO3 Design and Develop Solutions to problems using Arrays, Structures, Stack, Queues, Linked Lists.

CO4 Explore usage of Trees and Graph for application development.

CO5 Apply the Hashing techniques in mapping key value pairs.

Course Code: **IPCC**
Subject Code **21CS33**

Subject Name **Analog and Digital Electronics**

Course Outcomes

CO1 Explain the use of photo electronics devices, 555 timer IC, Regulator ICs and uA741

CO2 Make use of simplifying techniques in the design of combinational circuits.

CO3 Illustrate combinational and sequential digital circuits

CO4 Demonstrate the use of flip-flops and apply for registers

CO5 Design and test counters, Analog-to-Digital and Digital-to-Analog conversion techniques.

Course Code: PCC

Subject Code **21CS34**

Subject Name **Computer Organization and Architecture**

Course Outcomes

CO1 Understand the organization and architecture of computer systems, their structure and operation

CO2 Illustrate the concept of machine instructions and programs

CO3 Demonstrate different ways of communicating with I/O devices

CO4 Describe different types memory devices and their functions

CO5 Explain arithmetic and logical operations with different data types

Course Code: **PCC**

Subject Code **21CSL35**

Subject Name **Object Oriented Programming with JAVA Laboratory**

Course Outcomes

CO1 Demonstrate the use of Eclipse/Netbeans IDE to create Java Applications.

CO2 Using java programming to develop programs for solving real-world problems.

CO3 Reinforce the understanding of basic object-oriented programming concepts.

Course Code: **AEC**
Subject Code **21CSL381**

Subject Name **Mastering Office**

Course Outcomes

CO1 Understand the basics of computers and prepare documents and small presentations.

CO2 Attain the knowledge about spreadsheet/worksheet with various options.

CO3 Create simple presentations using templates various options available.

CO4 Demonstrate the ability to apply application software in an office environment.

CO5 Use MS Office to create projects, applications.

IV Semester (2021 Batch)

Course Code: **BSC**
Subject Code **21CS41**

Subject Name **Mathematical Foundations for Computing**

Course Outcomes

CO1 Apply the concepts of logic for effective computation and relating problems in the engineering domain
CO2 Analyze the concepts of functions and relations to various fields of engineering. Comprehend the concepts of graph theory for various applications of computational sciences
CO3 Apply discrete and continuous probability distributions in analyzing the probability models arising in the engineering filed

CO4 Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data

CO5 Construct join probability distribution and demonstrate the validity of testing and hypothesis

Course Code: **IPCC**
Subject Code **21CS42**

Subject Name **Design and Analysis of Algorithms**

Course Outcomes

CO1 Explain the methods of analyzing the algorithms and to analyze performance of algorithms.
CO2 State algorithm's efficiencies using asymptotic notations.

CO3 Solve problems using algorithm design methods such as the brute force method, greedy method, divide and conquer, decrease and conquer, transform and conquer, dynamic programming, backtracking and branch and bound

CO4 Choose the appropriate data structure and algorithm design method for a specified application
CO5 Introduce P and NP classes.

Course Code: **IPCC**
Subject Code **21CS43**

Subject Name **Microcontroller and Embedded System**

Course Outcomes

CO1 Understand the fundamentals of ARM-based systems, including programming modules with registers and the CPSR.

CO2 Use the various instructions to program the ARM controller.

CO3 Program various embedded components using the embedded C program.

CO4 Identify various components, their purpose, and their application to the embedded system's applicability.

CO5 Understand the embedded system's real-time operating system and its application in IoT.

Course Code: **PCC**
Subject Code **21CS44**

Subject Name **Operating System**

Course Outcomes

CO1 Demonstrate the need for OS and different types of OS

CO2 Apply suitable techniques for management of different resources

CO3 Use processor, memory, storage and file system commands

CO4 Realize the different concepts of OS in platform of usage through case studies

Course Code: **AEC**
Subject Code **21BE45**

Subject Name **Biology For Engineers**

Course Outcomes

CO1 Elucidate the basic biological concepts via relevant industrial applications and case studies
CO2 Evaluate the principles of design and development, for exploring novel bioengineering projects
CO3 Corroborate the concepts of biometrics for specific requirements
CO4 Think critically towards exploring innovative bio based solutions for socially relevant problems

Course Code: **PCC**
Subject Code **21CSL46**

Subject Name **Python Programming Laboratory**

Course Outcomes

CO1 Demonstrate the use of IDLE or PyCharm IDE to create Python Applications
CO2 Using Python programming language to develop programs for solving real-world problems
CO3 Implement the Object-Oriented Programming concepts in Python.
CO4 Appraise the need for working with various documents like Excel, PDF, Word and Others
CO5 Demonstrate regular expression using python programming

Course Code: **AEC**
Subject Code **21CSL481**

Subject Name **Web Programming**

Course Outcomes

CO1 Learn Web tool box and history of web browsers.

CO2 Learn HTML, XHTML tags with utilizations.

CO3 Know CSS with dynamic document utilizations.

CO4 Learn JavaScript with Element access in JavaScript.

CO5 Logically plan and develop web pages.