# SACRED HEART COLLEGE (AUTONOMOUS)

**Tirupattur – 635 601, Tamil Nadu, S.India**

*Ready for Every Good Work*

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A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

## Name of the Programme: B. Sc. Computer Science

| S No | Title of the Paper | Course Code | Course Objectives | Course Outcomes | Relevance |
|------|--------------------|-------------|-------------------|-----------------|-----------|
| 1 | PROBLEM SOLVING TECHNIQUES | CS120 | • To develop problem solving skills with top-down design principles.<br>• To become competent in algorithm design and program implementation.<br>• To develop skills to apply appropriate standard methods in problem solving | • Upon Completing the Course, Students will be able to:<br>• Develop programming techniques required to solve a given problem.<br>• Develop problem solving skill using top – down design principles.<br>• Design an algorithm for a problem.<br>• Develop techniques to handle array structure<br>• Develop techniques such as searching and sorting | Local |
| 2 | DIGITAL COMPUTER FUNDAMENTALS | CS221 | • To explore the Number System, Number Conversion from one Base to another Base and Complements.<br>• To understand the Logic Gates, Boolean Algebra and to design | • Perform conversions among different number systems, to be familiar with basic logic gates,<br>• Draw the Logic circuits and truth table for Boolean | Local |

| | | | | the Logical Circuits. <br> • To simplify the Boolean Functions using K-Map Method <br> • To Learn Combinational circuits as Adders and Subtractors, Encoders and Decoders. <br> • To Learn the different types of Flip-Flops such as SR Flip flop, JK Flip flop, T Flip flop and D Flip flop. | functions <br> • Simplify Boolean functions by using k-map method and Boolean Laws and Theorems. <br> • Design of combinational circuits such as Adder, Subtractor, Multiplexer, Encoder and Decoder etc. <br> • Understand the design of sequential Circuits such as Flip-Flops, Edge-trigger and master slave flip flops. | |
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| 3 | COMPUTER ORGANIZATION AND ARCHITECTURE | CS322 | | • To understand the basics of Computer Organization. <br> • To know the relationship between computer instruction and the Machine code execution. <br> • To know about the various types of CPU Organization and Addressing Modes. <br> • To recognize the need of interface between CPU and Input / Output devices. <br> • To think critically, independently, and quantitatively about Computer Memory. | • Study basic computer organization, design and micro-operations. <br> • Prepare machine code from the instructions <br> • Understand CPU organization and different types of addressing modes. <br> • Understand how the Input/ Output devices communicate with the computer <br> • Learn various methods and techniques of memory organization. | **Local** |
| 4 | COMPUTER GRAPHICS | CS544 A | | • Understand the Role and importance of Algorithms like Line drawing Algorithm, Circle drawing Algorithm, Character generating Algorithm. <br> • Understand 2D and 3D Transformations. <br> • Understand various Clipping | • To provide comprehensive introduction about computer graphics system, design and two-dimensional transformations. <br> • To make the students familiar with techniques of clipping, three dimensional graphics | **Local** |

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| | | | Algorithms like point clipping, line clipping and polygon clipping.<br>• Understand the importance of the User Dialogue and various input functions.<br>• Understand the Visible Surface Detection Methods. | and three dimensional transformations.<br>• Prepares the students for activities involving in design, development and testing of modeling, rendering, shading and animation | |
| 5 | MOBILE APPLICATIONS DEVELOPMENT | CS633 | • To develop a mobile application.<br>• To understand the concept of SQLite | Upon completion of this course, students should be able to:<br>• Describe the platforms upon which the Android operating System will run.<br>• Create a simple application that runs under the Android operating system.<br>• Access and work with the Android file system.<br>• Create an application that uses multimedia under the Android operating system.<br>• Access and work with database under the Android operating system. | **Local** |
| 6 | MICROPROCESSOR USING 8086/88 | CS636 | • To Understand the basic architecture of the Microprocessor<br>• To learn the instruction sets of the processor<br>• To write applications using assembly level language program<br>• To study the input/output interfaces of the processor<br>• To understand the importance of interrupts in programming | At the end of the course, students should be able to:<br>• Identify the types of instructions and the organization of registers and memory<br>• Describe the translation model of assembly language to machine language.<br>• Understand the micro-program by mapping the instructions.<br>• Recognize the types of | **Local** |

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| | | | | • computer organizations.<br>• Accept the better ways of Parallel and Vector processing. | |
| 7 | COMPUTER NETWORKS | CS637 A | • To learn the basic concepts of Computer Networks | • To explain how communication works in computer networks and to understand the basic terminology of computer networks<br>• To explain the role of protocols in networking and to analyze the services and features of the various layers in the protocol stack.<br>• To understand design issues in Network Security and to understand security threats, security services and mechanisms to counter it. | **Local** |