



SACRED HEART COLLEGE (AUTONOMOUS)

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Ready for
Every Good Work

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 Course	Course Code	Name of the Program	Activities with direct bearing on Employability/ Entrepreneurship/ Skill development	Year of introduction
Principles of Compiler Design		M Sc Computer Science	Skill Development: Content: The Phases, Compiler construction tools, Grammars, Writing a grammar	2021-22
Advanced Java Programming		M Sc Computer Science	Skill Development Contents : AWT, Swing, JDBC, Network in java, Collections, JSP & Servlet, Clientside programming Activities : Hands on programming using AWT ans swing with JDBC, Quiz on collections, Application Development using AWT or swing with JDBC, web application development using JSP and Servlet	2021-22

a. Web Services		M Sc Computer Science	Skill Development Contents : XML technology, SOAP, WSDL, UDDI, XML in E-Business and CMS Activities : Assignments, Quiz, Seminar	2021-22
b. Data Mining and Warehousing		M Sc Computer Science	Skill Development Content: Classification and Prediction, Cluster Analysis, Applications and Trends in Data Mining, Skill Development : Introduction, Data Preprocessing Activities: Class performance, Assignment , Demonstration, Applications to real life situation,Experiential Learning	2021-22
c. Business Intelligence		M Sc Computer Science	Skill Development Contents : Complex business problem, adaptive business intelligence and prediction methods, modern optimization techniques, Computational intelligence Activities : Assignments, Quiz, Seminar	2021-22

Practical – I: Advanced Java Programming		M Sc Computer Science	Skill Development Contents : AWT, Swing, JDBC, Network in java, Collections, JSP & Servlet, Clientside programming Activities : Practical programs on all topics, Windows and web Application Development using AWT, Swing, JDBC, JSP and Servlet	2021-22
Distributed Operating System		M Sc Computer Science	Skill Development Content: Model, Issues, Message passing, Remote procedure call, Deadlock, Proces. Activities: Written assignment and case study in different operating systems	2021-22
Enterprise Java Programming		M Sc Computer Science	Skill Development Contents : MVC Frameworks - JSF, Struts, EJB, Hibernate, Spring Frameworks Activities : Quiz on MVC, Web Application Development using JSF and Struts, Hands on programming using EJB and Hibernate, Seminar on Spring	2021-22
a. Object Oriented Analysis and Design		M Sc Computer Science	Skill Development Content: User Interface Design, Introducing the	2021-22

			UML Diagrams,	
b. Software Testing and Quality Assurance		M Sc Computer Science	<p>Skill Development</p> <p>Contents : Testing basics, Test case design, Level of Testing, software quality and quality control</p> <p>Activities : Assignments, Quiz, Testing tool demonstration and Supplementary learning</p>	2021-22
c. Wireless Sensor Networks		M Sc Computer Science	<p>Skill Development</p> <p>Contents : Wireless sensor network architecture, Data Link layer, Network layer, Transport layer, Tools for WSN.</p> <p>Activities : Assignments, Quiz, Network Tool demonstration and Supplementary learning</p>	2021-22
Practical - IV: Enterprise Java Programming		M Sc Computer Science	<p>Skill Development</p> <p>Contents : MVC, Frameworks - JSF, Struts, EJB, Hibernate, Spring Frameworks</p> <p>Activities : Demonstrating programs, Practical exercises, Application Development</p>	2021-22

Technical Aptitude		M Sc Computer Science	<p>Skill Development: Content: Computer Science field subjects and its familiar topics overview. Activities: Seminars, quiz, tools demonstration,</p>	2021-22
Internet Of Things		M Sc Computer Science	<p>Skill development : Content: IoT and M2M, IoT Sensors, IoT Design Methodology, IoT Systems Connection and Working Process. Skill Development : Introduction To Internet Of Things, Domain Specific IoTs. Activity: Brain Storming, Assignment , Demonstration, Quiz, programming skills , Seminars and Discussions, Experiential Learning</p>	2021-22
Artificial Intelligence		M Sc Computer Science	<p>Skill Development: Content: AI Problems and Characteristics, Search Techniques, Game playing, Fuzzy logic, Problem solving Activities: Seminars, Group Discussions, Analyse AI</p>	2021-22

			algorithms / Employability	
Design and Analysis of Algorithms		M Sc Computer Science	Skill Development Contents : Pseudo Code design, Divide and conquer method, Dynamic programming, backtracking, branch and bound methods Activities : Demonstration of algorithms, Problem solving Assignments, Quiz, Seminar, Supplementary learning	2021-22
a. Semantic Web and Applications		M Sc Computer Science	Skill Development: Content: Semantic Web vision, Describing web resources, Web ontology language(OWL), Logic and inference rule; Activities: Seminars, Group Discussions, Quiz	2021-22
b. Ethical Hacking & Cyber Forensics		M Sc Computer Science	Skill Development: Content: Types of Computer Forensics, Data Recovery, Electronic Evidence, Threats. Activities: Seminars, Group Discussions, Quiz	2021-22

c. Cloud Computing		M Sc Computer Science	Skill Development: Content: Cloud computing services and application design, development, multimedia cloud, Cloud security and applications. Activities: Use online cloud computing tools, Seminars, Assignments	2021-22
Practical-VII: Design and Analysis of Algorithms		M Sc Computer Science	Skill Development Contents : Pseudo Code design, Divide and conquer method, Dynamic programming, backtracking, branch and bound methods Activities : Writing observation & Execution of algorithms for all the methods through programming	2021-22
Software Project – I		M Sc Computer Science	Skill Development Activities : Real time application development	2021-22
Career Building Skills		M Sc Computer Science	Skill Development Contents : Attitude & altitude, Time is money, Team building, leadership, Interpersonal skill, Presentation skill, Business correspondance, Interview, Group Dynamics Activities : Seminar,	2021-22

			classroom Activities, Assignments	
Big Data Analytics		M Sc Computer Science	Skill Development Content: Classification of Digital Data, VVV, Evolution of Big Data, Challenges with Big Data, Classification of Analytics, Introducing Hadoop, Activities: Group Discussion on VVV, Assignment - Classification of Digital Data	2021-22
Data Science with Python		M Sc Computer Science	Skill Development Contents : Data Analysis and its packages using python, numpy, pandas, matplotlib. Activities : Demonstration of data analysis using numpy and pandas, Assignments on matplotlib, Quiz, Seminar	2021-22
a. Cryptography and Network Security		M Sc Computer Science	Skill Development Content: Employability : Network Security, System Level Security Skill Development Introduction, Public Key Cryptography, Authentication And	2021-22

			Hash Function Activity: Brain-Storming, Discussion on cyber security and IT Act and its impact in real life, Case studies	
b. Social Network Analysis		M Sc Computer Science	Skill Development Contents : Clustering and classification, Social media mining, Extraction & Mining in web social networks Activities : Seminar, quiz, assignments, case studies	2021-22
c. Soft Computing		M Sc Computer Science	Skill Development Contents : Artificial Neural Networks, Fuzzy Systems, Genetic algorithms, Hybrid Systems. Activities : Seminar, quiz, assignments, case studies	2021-22
Practical - IX: Data Science with Python		M Sc Computer Science	Skill Development Contents : Data Analysis and its packages using python, numpy, pandas, matplotlib. Activities : Execution of data analysis using numpy and pandas through Practicals, data visualization using matplotlib	2021-22
Research Investigation		M Sc Computer Science	Skill Development Activities : Reading Journals and Books,	2021-22

			writing Research paper.	
Software Project – II		M Sc Computer Science	Skill Development Activities: Project implementation and documentation, viva-voce	2021-22