



G.VENKATASWAMY NAIDU COLLEGE (Autonomous), KOVILPATTI.

Affiliated to Manonmaniam Sundaranar University – Tirunelveli.

(Re-Accredited with 'A' Grade by NAAC)

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(Under the Management of The Kuppasamy Naidu Charity Trust for Education and Medical Relief, Coimbatore-37)

Programme Outcomes - Department of Computer Science (PG)

GPO No.	Programme Outcomes
PO1	Scientific knowledge: Ability to apply mathematics, logic, and statistics to the design, development, and analysis of software systems.
PO2	Problem analysis: Ability to understand, design, and analyze precise specifications of algorithms, procedures, and interaction behavior.
PO3	Design/development of solutions: Ability to design components, systems and/or processes to meet required specifications.
PO4	Conduct investigations of complex problems: Ability to be equipped with a range of fundamental principles of Computer Science that will provide the basis for future learning and enable them to adapt to the constant rapid development of the field.
PO5	Modern tools usage: Ability to demonstrate competence in the practical art of computing in by showing in design an understanding of the practical methods, and using modern design tools competently for complex real-life IT problem.
PO6	The software engineer and society: Ability to develop creative and effective responses to intellectual, professional and social challenges.
PO7	Environment and sustainability: Ability to apply decision making methodologies to evaluate solutions for efficiency, effectiveness and sustainability.



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Programme Specific Outcomes - Department of Computer Science (PG)

PSO No.	Intended Programme Specific Outcomes
PSO1	Demonstrate mastery of Computer Science in the following core knowledge areas <ul style="list-style-type: none">• Programming Languages and Data Structures• Databases, Software Development and Maintenance• Computer Hardware and Architecture
PSO2	Apply problem-solving skills and the knowledge of computer science to solve real world problems.
PSO3	Develop technical project reports and present them orally among the users.



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M.Sc., Computer Science

First Semester

Core - 1 **Advanced Android Programming (P21CS101)**

CO No.	Course Outcome
CO1	Familiarized with Android Architecture
CO2	Apply User Interface and develop activity for Android App
CO3	Analyze and implement Database Application and Content
CO4	Evaluate android apps
CO5	Creative android app development

Core - 2 **Digital Image Processing (P21CS102)**

CO No.	Course Outcome
CO1	Able to understand basic concepts of image processing
CO2	Apply the trends of Image processing and Analyze general terminology of digital image processing.
CO3	Analyze how to use built-in image processing functions in MATLAB
CO4	Evaluate image processing algorithms in practical applications
CO5	Create new real time applications using Matlab

Core- 3 **Research Methodology (P21CS103)**

CO No.	Course Outcome
CO1	Learning basic ideas on Research Methodology
CO2	Understand how to write thesis
CO3	Apply the methods & models used in research Methodology
CO4	Gathering & Analysing Concept in Research Methodology
CO5	Evaluate research methodology software



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Core Lab -1

Advanced Android Programming Lab (P21CS1P1)

CO No.	Course Outcome
CO1	Remember and Understand android features
CO2	Apply anatomy of an Android app
CO3	Analyze the android geo location based services
CO4	Illustrate - android wifi features & advanced development
CO5	Demonstrate database link

Core Lab -2

Digital Image Processing Lab (P21CS1P2)

CO No.	Course Outcome
CO1	Able to understand basic concepts of image processing
CO2	Apply the trends of Image processing and Analyze general terminology of digital image processing.
CO3	Analyze how to use built-in image processing functions in MATLAB
CO4	Evaluate image processing algorithms in practical applications
CO5	Create new real time application in Matlab

EEC- 1

Hadoop (P21CS1EEA)

CO No.	Course Outcome
CO1	Learning basic ideas on big data and Hadoop
CO2	Gain Knowledge about Hadoop applications & data storage
CO3	Apply data in Hadoop, Map Reduce Programming
CO4	Analyze the features of Hadoop
CO5	Evaluate the application of Hadoop



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EEC- 1

Enterprise Resource Planning (P21CS1EEB)

CO No.	Course Outcome
CO1	Understand software project planning and management.
CO2	Apply Measure and enhance Software Quality
CO3	Categorize risk and analyze resources.
CO4	Evaluate cost and contract management.
CO5	Create Select appropriate project approach for problem at hand.

Second Semester

Core – 5

Data analytics with python programming (P21CS205)

CO No.	Course Outcome
CO1	Understand and demonstrate the usage of built-in objects in Python
CO2	Apply the significance of python program development environment and apply it to solve real world applications
CO3	Analyze skill to implement Python programming for data science
CO4	Evaluate numerical programming, data handling and visualization through NumPy, Pandas and Matplotlib modules.
CO5	Hands-on Python experience for professional advancements

Core – 6

Advanced Java programming (P21CS206)

CO No.	Course Outcome
CO1	More understanding of Java and Applets
CO2	Knowledge of Java Servlet Pages
CO3	To be familiarize with Remote Method Innovation
CO4	To understand the Java Servlets and Database connectivity.
CO5	To know more about the Enterprise Java Bean (EJB) Programming



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Core Elective – 1 Distributed Operating System(P21CS2E1A)

CO No.	Course Outcome
CO1	Define the distributed operating system, architecture, goal of DOS and its designing issues.
CO2	Apply the technique of inter-process communication
CO3	Analyze the need of local clock instead of global clock and the different mutual exclusion and deadlock algorithms.
CO4	Evaluate the distributed file system and shared memory architecture
CO5	Develop the idea about the designing policy of different distributed operating system

Core Elective – 1 Compiler Design (P21CS2E1B)

CO No.	Course Outcome
CO1	Identify the basics principles of compiler design
CO2	Apply the various parsing techniques and different levels of translation
CO3	Analyze the various parsing techniques.
CO4	Evaluate intermediate code generation and run-time environment.
CO5	Implement front-end of the compiler and code generator.

Core Elective –1 Advanced DBMS (P21CS2E1C)

CO No.	Course Outcome
CO1	Understood the basic principles of database management systems
CO2	Apply knowledge over various database models, schemes and SQL statements.
CO3	Analyze knowledge over various oracle features like Joins, Cursors, Triggers, etc.
CO4	Can evaluate the database
CO5	Create database for real-time application



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Core Lab – 3

Cryptography and Network Security Lab (P21CS2P3)

CO No.	Course Outcome
CO1	Understand and analyze the network techniques
CO2	Apply various cipher based algorithms
CO3	Analyze and check the cryptographic algorithms
CO4	Evaluate error correction codes
CO5	Develop and evaluate signature techniques

Core Lab– 4

Data Analytics with Python Programming Lab (P21CS2P4)

CO No.	Course Outcome
CO1	Understand basic program using list and dictionary.
CO2	Apply exception handling.
CO3	Analyze inheritance in object oriented programming.
CO4	Evaluate pattern matching using regular expression
CO5	Develop web applications and database program.

Core Lab– 5

Advanced Java Programming Lab (P21CS2P5)

CO No.	Course Outcome
CO1	learn the Internet Programming, using Java Applets
CO2	create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings
CO3	apply event handling on AWT and Swing components
CO4	learn to access database through Java programs, using Java Data Base Connectivity (JDBC)
CO5	create dynamic web pages, using Servlets and JSP.



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Core -7

Computer Science for Competitive Exams (P21CS207)

CO No.	Course Outcome
CO1	Remember the desired changes in student's attitude
CO2	Understand the acquisition of knowledge
CO3	Apply the learning skills of the students
CO4	Analyze social and efficient member of society
CO5	Evaluate the knowledge of students

Third Semester

Core - 7

Internet of Things and Its Applications (P20CS307)

CO No.	Course Outcome
CO1	Understand the concepts of iot and its present Developments
CO2	Apply the architecture of iot
CO3	Analyze the iot Protocols
CO4	Build iot real time applications
CO5	Create the various applications of iot

Core - 8

Digital Marketing (P20CS308)

CO No.	Course Outcome
CO1	Understand the confluence of marketing, operations, and human Resources in real-time delivery.
CO2	Demonstrate cognitive knowledge of the skills required in conducting online research and research on online markets,
CO3	Inspect and evaluate issues in adapting to globalized markets That are constantly changing and increasingly networked.
CO4	Estimate the traditional marketing mix with in the context of a Changing and extended range of digital strategies and tactics.
CO5	Develop the importance of conversion and working with digital Relationship marketing.



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Core - 9

Soft Computing (P20CS309)

CO No.	Course Outcome
CO1	Understand the concepts of fuzzy sets, knowledge Representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic
CO2	Apply the fundamental theory and concepts of neural networks, Identify different neural network architectures, algorithms, applications and their limitations.
CO3	Analyze appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications
CO4	Evaluate the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory
CO5	Create different applications of these models to solve Complex problems.

Core Elective – 2

Software Testing (P20CS3E2A)

CO No.	Course Outcome
CO1	Understand about software tester and his work
CO2	Apply software testing knowledge and engineering concepts
CO3	detect the errors and practice software oriented testing projects
CO4	Justify software testing technique and tools for industry standards.
CO5	Develop the idea about the designing software and testing the software.



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Core Elective - 2

Remote Sensing (P20CS3E2B)

CO No.	Course Outcome
CO1	Understand the physics of remote sensing
CO2	Construct different platforms & sensors
CO3	Examine the remote sensing data errors and analyze the data products and their sources
CO4	Judge the principles of thermal & microwave remote sensing
CO5	Formulate spectral signature and visual image Interpretation

Core Elective – 2

Natural Language Processing (P20CS3E2C)

CO No.	Course Outcome
CO1	Understand the tag given text with basic Language features
CO2	Develop an innovative application using NLP components
CO3	Inference a rule based system to tackle morphology/syntax of A language
CO4	Determine a tag set to be used for statistical processing for Real-time applications
CO5	Compile and contrast the use of different statistical Approaches for different types of nlp applications.

Core Lab: 5

Internet of Things and Its Applications Lab (P20CS3P5)

CO No.	Course Outcome
CO1	Understand the practical knowledge of using iot Components like sensors, processors.
CO2	Develop projects on Raspberry Pi & Arduino.
CO3	Examine and understanding of using different protocols
CO4	Support API gateway service on iot Tool Kit
CO5	Implement more effective hands on with iot elements



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Open Elective

E-Commerce (P20CS3OE)

CO No.	Course Outcome
CO1	Understand the role of E-commerce and its uses
CO2	Apply the infrastructure for E-commerce.
CO3	Analyze the various tools and software used for Ecommerce
CO4	Evaluate the different security and marketing strategies in Ecommerce
CO5	Create the web based design and its applications

Skill Enhancement Course - I XML Programming (P20CS3S1)

CO No.	Course Outcome
CO1	Understand the basics of XML technology
CO2	Apply the security features of web services and service Composition
CO3	Analyze the background of distributed information system
CO4	Evaluate and design a web service based application
CO5	Make use of web service extensions to develop solutions

Self-Study Course

SQL (P20CS3SS)

CO No.	Course Outcome
CO1	Remember the essential notions of SQL Programming
CO2	Understand the concepts of SQL & directives
CO3	Analyze different controllers of SQL and apply
CO4	Evaluate the forms using Triggers
CO5	Create the services, apply database operations