

Holy Cross College (Autonomous), Nagercoil

Kanyakumari District, Tamil Nadu.

Accredited with A⁺ by NAAC - IV cycle – CGPA 3.35

Affiliated to

Manonmaniam Sundaranar University, Tirunelveli



Semester I & II

POs, PSOs & COs

DEPARTMENT OF COMPUTER SCIENCE



2023-2026

(With effect from the academic year 2023-2024)

Programme Educational Objectives (PEOs)

PEOs	Upon completion of B.A/B.Sc. degree programme, the graduates will be able to	Mission addressed
PEO 1	apply appropriate theory and scientific knowledge to participate in activities that support humanity and economic development nationally and globally, developing as leaders in their fields of expertise.	M1& M2
PEO 2	inculcate practical knowledge for developing professional empowerment and entrepreneurship and societal services.	M2, M3, M4 & M5
PEO 3	pursue lifelong learning and continuous improvement of the knowledge and skills with the highest professional and ethical standards.	M3, M4, M5 & M6

Programme Outcomes (POs)

POs	Upon completion of B.Sc. Degree Programme, the graduates will be able to:	Mapping with PEOs
PO1	obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science.	PEO 1
PO2	create innovative ideas to enhance entrepreneurial skills for economic independence.	PEO2
PO3	reflect upon green initiatives and take responsible steps to build a sustainable environment.	PEO 2
PO4	enhance leadership qualities, team spirit and communication skills to face challenging competitive examinations for a better developmental career.	PEO 1 & PEO 3
PO5	communicate effectively and collaborate successfully with peers to become competent professionals.	PEO 2 & PEO 3
PO6	absorb ethical, moral and social values in personal and social life leading to highly cultured and civilized personality	PEO 2 & PEO 3
PO7	participate in learning activities throughout life , through self-paced and self-directed learning to develop knowledge and skills.	PEO 1 & PEO 3

Programme Specific Outcomes (PSOs)

PSOs	Upon completion of the B.Sc. Computer Science Programme, the graduates will be able to:	Mapping with POs
PSO – 1	obtain sufficient knowledge and skills enabling them to undertake further studies in Computer Science and its allied areas on multiple disciplines linked with Computer Science.	PO1
PSO – 2	evaluate and apply emerging technologies in computer science to develop innovative solutions for real-world problems	PO2
PSO – 3	develop a range of generic skills helpful in team building, problem solving, technical ability, employment, internships, communication and societal activities.	PO4 & PO7

PSO – 4	communicate effectively, work collaboratively, and demonstrate ethical and professional attitudes in diverse settings.	PO5 & PO6
PSO – 5	sensitize various economic issues related to Development, Growth, International Economics, Sustainable Development and Environment	PO3

Mapping of PO'S and PSO'S

POs	PSO1	PSO 2	PSO3	PSO4	PSO5
PO 1	M	S	S	S	S
PO 2	S	M	S	S	S
PO 3	M	S	S	S	M
PO4	S	S	M	S	S
PO5	S	M	S	M	S
PO6	M	S	S	M	S
PO7	S	S	M	S	S

Course Outcomes

SEMESTER I Core Course I: Python Programming Course Code : SU231CC1

On the successful completion of the course, student will be able to:		
1.	remember fundamental python syntax and basic data types, and understand the concepts.	K1& K2
2.	understand the functionality and purpose of control structures and apply the concepts to identify patterns and relationships.	K2 & K3
3.	understand the purpose of functions, database and apply this to solve problems.	K2 & K3

K1 - Remember; **K2** - Understand; **K3** – Apply

SEMESTER I Core Lab Course I: Python Programming Lab Course Code : SU231CP1

On the successful completion of the course, student will be able to:		
1.	remember fundamental python syntax and basic data types , and understand the concepts.	K1&K2
2.	understand the functionality and purpose of control structures and apply the concepts to identify patterns and relationships.	K2&K3
3.	understand the purpose of functions , database and apply this to solve problems.	K2&K3

K1 - Remember; **K2** - Understand; **K3** – Apply

SEMESTER I Elective Course I: Numerical Methods Course Code: SU231EC1

On the successful completion of the course, student will be able to:		
1.	remember the numerical techniques of interpolation in various intervals and apply the numerical techniques of differentiation and integration for computer problems.	K1 & K2
2.	understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations.	K2 & K4
3.	apply this to solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with software applications.	K3 & K5
4.	analyze direct methods for solving linear systems.	K4 & K5
5.	evaluate methods for solving first and second order ordinary differential equations.	K3 & K5

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** – Evaluate

SEMESTER I
Non Major Elective NME I: Office Automation
Course Code : SU231NM1

On the successful completion of the course, student will be able to:		
1.	remember the fundamentals and understand the concepts.	K1&K2
2.	understand the functionality and purpose of commands and apply the concepts.	K2&K3
3.	understand the purpose of functions , database and apply this to solve problems.	K2&K3

K1 - Remember; **K2** - Understand; **K3** – Apply

SEMESTER I
Foundation Course (FC): Problem Solving Techniques
Course Code : SU231FC1
Course Outcomes

On the successful completion of the course, student will be able to:		
1	know the approach and algorithms to solve specific fundamental problems.	K1
2	understand the systematic approach to problem solving.	K2
3	apply the efficient methods to solve specific problems related to text processing	K3

K1 - Remember; **K2** - Understand; **K3** - Apply

SEMESTER I
SPECIFIC VALUE ADDED COURSE I: PROCEDURAL LANGUAGE
Course Code : SU231V01

On the successful completion of the course, student will be able to:		
1.	remember the basic fundamentals of C and understand the concepts.	K1& K2
2.	understand the functionality and purpose of control structures and apply the concepts in programming.	K2 & K3
3.	understand the various programming constructs and implement it to perform specific task.	K2 & K3

K1 - Remember; **K2** - Understand; **K3** – Apply

SEMESTER II

Core Course II: Data Structure and Algorithms

Course Code : SU232CC1

On the successful completion of the course, student will be able to:		
1.	recall the basic data structures like arrays, linked lists, stacks, queues, trees and graphs.	K1
2.	understand and apply basic sorting and searching algorithms.	K2 & K3
3.	apply data structures and algorithms to solve real-world problems in different domains like databases, and networking.	K3

K1 - Remember; **K2** - Understand; **K3** - Apply

SEMESTER II

Core Lab Course II: Data Structure and Algorithms Lab

Course Code : SU232CP1

On the successful completion of the course, student will be able to:		
1.	remember and implement basic data structures linked lists, stacks, queues, trees, graphs.	K1 & K3
2.	understand and implement sorting algorithms like bubble, merge, quick sort	K2 & K3
3.	applying hash tables and resolving collisions.	K3

K1 - Remember; **K2** - Understand; **K3** - Apply

SEMESTER II

Elective Course II: Discrete Mathematics

Course Code : SU232EC1

On the successful completion of the course, student will be able to:		
1.	remember the basic concepts of permutations, combinations, relations and graphs	K1 & K2
2.	understand the basic concepts of functions and relations.	K2
3.	apply basic counting techniques to solve combinatorial problems.	K3 & K5
4.	represent discrete objects and relationships using abstract mathematical structures	K4 & K5
5.	apply graphs in a wide variety of models	K3 & K5

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** – Evaluate

SEMESTER II

Non Major Elective NME II: Introduction to HTML

Course Code : SU232NM1

On the successful completion of the course, student will be able to:		
1.	recall and recognize HTML tags and their syntax.	K1 & K2
2.	understand the use of HTML elements like headings, paragraphs, lists and links.	K2
3.	apply the concepts in creating web pages and formatting it.	K3

K1 - Remember; **K2** - Understand; **K3** – Apply

SEMESTER II
Skill Enhancement Course SEC - I: Advanced Excel
Course Code : SU232SE1

On the successful completion of the course, student will be able to:		
1.	use a wide range of advanced excel functions.	K1
2.	understand data validation rules to control data entry	K2
3.	presenting data in the form of charts and graphs.	K3

K1 - Remember; **K2** - Understand; **K3** - Apply

SEMESTER I & II
Life Skill Training I: Catechism
Course Code: UG232LC1

1.

Course Outcome	Upon completion of this course the students will be able to
CO-1	understand the aim and significance of value education
CO-2	develop individual skills and act confidently in the society
CO-3	learn how to live lovingly through family values
CO-4	enhance spiritual values through strong faith in God
CO-5	learn good behaviours through social values

SEMESTER I & II
Life Skill Training I: Moral
Course Code: UG232LM1

Course Outcome	Upon completion of this course the students will be able to
CO-1	understand the aim and significance of value education
CO-2	develop individual skills and act confidently in the society
CO-3	learn how to live lovingly through family values
CO-4	enhance spiritual values through strong faith in God
CO-5	learn good behaviours through social values