



# **SUDHARSAN ENGINEERING COLLEGE**

**(Approved by AICTE, New Delhi, affiliated to Anna University, Chennai & Accredited by NAAC)**

Sathiyamangalam, Kulathur (TK), Pudukkottai District – 622 501

Mobile No: 98434 90901 Website: [www.sec.ac.in](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto:principal@sec.ac.in)

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

### **(CYBER SECURITY)**

## **COURSE OUTCOMES**

### **REGULATION - 2025**



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## EN25C01 – English Essentials – I

### Course Outcomes

- **CO1:** Listen and comprehend spoken English, take and draft notes.
- **CO2:** Apply vocabulary and grammar appropriately to communicate in written and spoken forms.
- **CO3:** Analyze texts in different contexts using appropriate reading strategies.
- **CO4:** Communicate thoughts and ideas in real life situations.
- **CO5:** Develop communication skills relevant to engineering and technology.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	–	–	–	–	–	–	–	–	1	2	–	–	–	–
CO2	–	–	–	–	–	–	–	–	1	3	–	–	–	–
CO3	–	2	–	1	–	–	–	–	–	1	2	1	1	1
CO4	–	–	–	–	–	–	–	–	3	3	–	–	–	1
CO5	1	2	–	–	–	–	–	–	3	3	2	1	2	2
Avg.	1	2		1					2	2	2	1	1	1



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## PH25C01 – Applied Physics – I

### Course Outcomes

- **CO1:** Explain the physics concepts in various applications.
- **CO2:** Apply the principles of wave optics and laser physics in practical systems.
- **CO3:** Analyze the behavior of materials under different conditions.
- **CO4:** Conduct experiments in groups and interpret the data.
- **CO5:** Evaluate experimental results and theoretical models in applied physics to assess the performance and limitations of optical and material systems.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	–	–	–	–	–	–	–	–	–	1	–	–
CO2	3	2	2	–	2	–	–	–	–	–	–	2	2	–
CO3	2	3	–	1	–	–	–	–	–	–	–	1	2	–
CO4	2	2	–	3	2	–	–	–	2	1	–	–	1	2
CO5	2	3	2	3	2	–	–	–	–	–	2	2	3	3
Avg.	2	2	2	2	2				2	1	2	2	2	2



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## MA25C01 – Applied Calculus

### Course Outcomes

- **CO1:** Explain the meaning of derivative, integral, and their geometric and physical interpretations.
- **CO2:** Apply differentiation and integration techniques to compute maxima, minima, and area.
- **CO3:** Analyze the behavior of single and multivariable functions using derivatives and partial derivatives.
- **CO4:** Utilize modern computational software and online platforms to deepen understanding, perform complex calculations and visualize mathematical concepts.
- **CO5:** Evaluate and solve real-world engineering and scientific problems by integrating concepts of calculus, including derivatives, integrals, and multivariable functions, and justify the solutions using appropriate mathematical reasoning and computational tools.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	–	–	–	–	–	–	–	–	–	1	–	–
CO2	3	3	1	–	–	–	–	–	–	–	–	2	1	–
CO3	2	3	–	1	–	–	–	–	–	–	–	1	2	–
CO4	2	2	–	2	3	–	–	–	–	–	2	–	3	2
CO5	2	3	2	2	3	–	–	–	–	–	2	2	3	3



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COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
Avg.	2	2	2	2	3						2	2	2	2

## CY25C01 – Applied Chemistry – I

### Course Outcomes

- **CO1:** Understand the importance of chemistry applications with underlying mechanisms.
- **CO2:** Apply the chemistry concepts in widely used devices.
- **CO3:** Analyze the effect of various chemical parameters on performance of engineering systems.
- **CO4:** Perform experimentations as a group and interpret the results.
- **CO5:** Communicate findings through case studies and reports.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	–	–	–	–	–	–	–	–	–	1	–	–
CO2	3	2	2	–	1	–	–	–	–	–	–	1	2	–
CO3	2	3	–	1	–	–	–	–	–	–	–	1	2	–
CO4	2	2	–	3	2	–	–	–	2	1	–	–	1	2
CO5	1	1	–	–	–	–	–	–	3	3	2	–	1	3
Avg.	2	2	2	2	2				3	2	2	1	2	3



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## CS25C01 – Computer Programming in C

### Course Outcomes

- **CO1:** Explain the potential usage of ‘C’ in engineering applications
- **CO2:** To apply the concepts of ‘C’ in solving engineering problems and formulate new projects.
- **CO3:** To interpret the data and effectively communicate in groups.
- **CO4:** Adapt new programming concepts and technologies in the profession.
- **CO5:** Design, implement, and evaluate efficient C-based programs to solve real-world engineering problems by applying appropriate programming constructs, algorithms, and debugging techniques.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	–	–	–	–	–	–	–	–	–	1	–	–
CO2	3	3	2	–	2	–	–	–	–	–	–	3	2	–
CO3	–	1	–	–	–	–	–	–	3	3	–	–	–	2
CO4	1	–	–	–	3	–	–	–	–	–	3	–	2	3
CO5	2	3	3	2	3	–	–	–	2	1	2	3	3	3



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COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
Avg.	2	2	3	2	3				3	2	3	2	2	3

## CS25C03 – Essentials of Computing

### Course Outcomes

- **CO1:** Describe the basic components and functioning of computers, number systems, and data representation.
- **CO2:** Apply computational thinking and problem-solving techniques to design simple algorithms for real-world problems
- **CO3:** Design and represent solutions using flowcharts, pseudocode, and basic visual programming tools.
- **CO4:** Demonstrate the ability to independently learn new computing tools and practices essential for life-long learning
- **CO5:** Analyze and implement basic computational solutions by translating algorithms into simple programs and evaluate their correctness and efficiency for real-world problem scenarios.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	–	–	–	–	–	–	–	–	–	1	–	–
CO2	3	3	1	–	–	–	–	–	–	–	–	2	1	–
CO3	2	2	2	–	2	–	–	–	–	–	–	2	3	–
CO4	1	–	–	–	2	–	–	–	–	–	3	–	1	3



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COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO5	2	3	2	2	3	–	–	–	2	1	2	3	3	2
Avg.	2	2	2	22	2				2	1	3	2	2	

## ME25C04 – Makerspace

### Course Outcomes

- **CO1:** Demonstrate proper use and handling of basic hand and power tools.
- **CO2:** Carry out electrical wiring installations and repairs, applying safety measures in domestic applications.
- **CO3:** Develop solid innovative models through software.
- **CO4:** Adapt and follow safety protocols in the work environment.
- **CO5:** Design, fabricate, and evaluate functional prototypes by integrating mechanical, electrical, and digital fabrication tools while demonstrating teamwork, creativity, and problem-solving skills.

### CO–PO–PSO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	–	–	–	2	–	–	–	–	–	–	–	1	–
CO2	2	2	–	–	2	2	2	–	–	–	–	–	1	–



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COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C03	1	2	2	–	3	–	–	–	–	–	–	2	3	–
C04	–	–	–	–	–	3	3	2	–	–	–	–	–	3
C05	2	3	3	2	3	2	2	–	3	2	2	3	3	3
Avg.	2	2	3	2	3	2	2	2	3	2	2	3	2	3