



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 Email: principal@sec.ac.in

DEPARTMENT OF MECHANICAL ENGINEERING

COURSE OUTCOMES

REGULATION - 2025



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 Email: principal@sec.ac.in

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



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 Email: principal@sec.ac.in

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



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 Email: principal@sec.ac.in

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
Avg.	2	2	2	2	3						2	2	2	2



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 Email: principal@sec.ac.in

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



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 Email: principal@sec.ac.in

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	–
CO3	1	2	2	–	3	–	–	–	–	–	–	2	3	–
CO4	–	–	–	–	–	3	3	2	–	–	–	–	–	3
CO5	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



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 Email: principal@sec.ac.in

ME25C01 Engineering Drawing

Course Outcomes

- **CO1:** Explain the advantages of engineering drawing in engineering applications
- **CO2:** Apply the concepts of projections in formulating various solid parts in engineering systems.
- **CO3:** Analyze the various view and interpret the engineering drawings.
- **CO4:** Use CAD tools for creation of various models.
- **CO5:** Critically think and develop innovative models.

CO–PO–PSO Mapping

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



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 Email: principal@sec.ac.in

ME25C03 Introduction to Mechanical Engineering

Course Outcomes

- **CO1:** Explain core mechanical engineering concepts.
- **CO2:** Apply basic engineering calculations in mechanical systems.
- **CO3:** Identify common manufacturing processes for engineering applications.
- **CO4:** Analyze the behavior and performance of mechanical systems, machine elements, and energy conversion devices using fundamental principles of mechanics, materials, and thermal engineering.
- **CO5:** Evaluate manufacturing processes, modern mechanical tools, and ethical practices to propose sustainable and efficient solutions for real-world mechanical engineering problems.

CO–PO–PSO Mapping

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