



# **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 CIVIL 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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto:principal@sec.ac.in)

## CE25C01 Introduction to Civil Engineering

### Course Outcomes

- **CO1:** Explain core Civil engineering concepts.
- **CO2:** Apply basic engineering calculations in Civil Engineering systems.
- **CO3:** Identify practices followed in infrastructure construction.
- **CO4:** Analyze the role, functioning, and interrelationship of building components, materials, and infrastructure systems in civil engineering projects with reference to safety, sustainability, and standards.
- **CO5:** Evaluate emerging trends, ethical practices, and sustainable solutions in civil engineering through case studies, industrial visits, and independent learning.

### 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	–	–	1	1	–	–	–	–	3	1	–
CO4	2	3	2	2	–	2	2	–	–	–	–	2	2	1
CO5	1	2	2	–	2	3	3	–	2	1	3	2	3	3
Avg.	2	2	2	2	2	2	2	1	2	1	3	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](http://www.sec.ac.in) Email: [principal@sec.ac.in](mailto: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