

**Semester – II****Unique Course Number: FEC201****Course Name: Engineering Mathematics-II**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC2011	Use Gamma & Beta function to evaluate improper integrals
FEC2012	Solve the different types of differential equations of first order first degree.
FEC2013	Solve the higher-order linear differential equations with constant coefficients.
FEC2014	Solve multiple integrals using a transformation of coordinates, change of order of integration.
FEC2015	Determine the length of the plane curve, Utilize the DUIS technique to solve Definite integrals & Evaluate Triple integrals using a transformation of coordinates.
FEC2016	Determine the area bounded by the region R using double integration.

Unique Course Number: FEC202**Course Name: Engineering Physics-II**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC2021	Recall the basic laws and principles of Optics, Electricity, Magnetism and Nanoscience.
FEC2022	Discuss the principles of diffraction of light, LASERs, Optical fibers and Nanotechnology.
FEC2023	Understand and describe the concepts pertaining to Electrodynamics, Relativity and Sensors.
FEC2024	Develop and utilize the concepts of diffraction of light, LASERs, Optical fibers and Nanotechnology for interpretation in various applications.
FEC2025	Apply the theory of Electrodynamics, Relativity and Sensors for explaining respective applications.
FEC2026	Demonstrate the use of concepts learnt in practical applications.

Unique Course Number: FEC203**Course Name: Engineering Chemistry -II**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC2031	Explain the concept of Engineering Chemistry such as calorific value, knocking, and spectroscopy.
FEC2032	Distinguish the range of electromagnetic spectrum and illustrate the concept of emission spectroscopy.
FEC2033	Illustrate the effect of different factors on engineering material as well as environment.
FEC2034	Identify the types of corrosion and suggest control measures in industries.
FEC2035	Select the greener path following the principles of green chemistry.
FEC2036	Explain the process to determine the quality of fuel and calculate the amount of oxygen required for complete combustion.

Unique Course Number: FEC204

Course Name: Engineering Graphics

Unique CO Number	Students will be able to, Course Outcome (CO) Statement
FEC2041	Explain the basic concepts of Engineering Graphics such as types of lines, dimensioning system, types of projections.
FEC2042	Apply the knowledge of projections to solve simple application-based problems on projection of lines, solids & for generating engineering Curves such as cycloid, involute for gear tooth profile & helical curve.
FEC2043	Illustrate the methodology of projections to project the solid & converting pictorial view into two dimensional views.
FEC2044	Interpret the problem statement or a pictorial view to convert into a 2-dimensional view.
FEC2045	Use the knowledge of Orthographic projections to generate 2 dimensional views with or without section.
FEC2046	Interpret the drawing to convert two dimensional views into isometric view.

Unique Course Number: FEC205

Course Name: C programming

Unique CO Number	Students will be able to, Course Outcome (CO) Statement
FEC2051	Explain and exemplify the elementary C concepts through programs, algorithms and flowcharts.
FEC2052	Demonstrate decision making and branching statements in C.
FEC2053	Demonstrate decision making and looping statements in C.
FEC2054	Apply the concept of modularity on the given problem statement.
FEC2055	Demonstrate the use of homogeneous and heterogeneous data types in C.

Unique Course Number: FEC206

Course Name: Professional Communication and Ethics- I

Unique CO Number	Students will be able to, Course Outcome (CO) Statement
FEC2061	Eliminate barriers and use verbal and nonverbal cues at social and workplace situations.
FEC2062	Employ Listening strategies to comprehend wide ranging vocabulary, grammatical, structures, tone and pronunciation.
FEC2063	Prepare effectively for speaking at social, academic and business situations.
FEC2064	Use reading strategies for faster comprehension, summarization and evaluation of texts.
FEC2065	Acquire effective writing skills for drafting academic, business and technical documents.
FEC2066	Successfully interact in all kinds of settings, displaying refined grooming and social skills.

Unique Course Number: FEL201 Course Name: Engineering Physics-II Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL2011	To perform the experiment based on diffraction grating to find the wavelength of laser light.
FEL2012	To perform the experiment to measure divergence of the laser beam.
FEL2013	To perform the experiment to find numerical aperture of an optical fiber
FEL2014	To measure distance using an ultrasonic distance meter.
FEL2015	To perform the experiment on RTD and understand static and dynamic characteristics.
FEL2016	Design and implement miniature projects related to physics.

Unique Course Number: FEL202 Course Name: Engineering Chemistry-II Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL2021	Explain the principle of experiments.
FEL2022	Select appropriate apparatus instruments and procedure for the experiment.
FEL2023	Perform stepwise procedure of experiment.
FEL2024	Infer the conclusion from the experimental observations.
FEL2025	Assess the quality of material with the help of experimental data.
FEL2026	Apply principle of green chemistry for sustainable development.

Unique Course Number: FEL203 Course Name: Engineering Graphics Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL2031	Explain the theory of AutoCAD software.
FEL2032	Recognize Annotations, layering & other functions of AutoCAD software.
FEL2033	Apply knowledge of AutoCAD software to draw missing view.
FEL2034	Use AutoCAD software to draw orthographic projections.
FEL2035	Use AutoCAD software to draw Sectional orthographic projections.
FEL2036	Use AutoCAD software to draw isometric projection and generate 3D modeling.

Unique Course Number: FEL204 Course Name: C programming Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL2041	Demonstrate the use of operators in C.
FEL2042	Implement Conditional Statements in C.
FEL2043	Implement Looping constructs in C.
FEL2044	Decompose a problem into functions and synthesize a complete program.
FEL2045	Solve the given problem using C data type like array and strings.
FEL2046	Illustrate the concept of structures and pointers.



Unique Course Number: FEL205

Course Name: Professional Communication and Ethics- I Lab

Unique CO Number	Students will be able to, Course Outcome (CO) Statement
FEL2051	Listen and comprehend all types of spoken discourse successfully.
FEL2052	Speak fluently and make effective professional presentations.
FEL2053	Read large quantities of text in a short time to comprehend, summarize and evaluate content.
FEL2054	Draft precise business letters, academic essays and technical guidelines.
FEL2055	Dress finely and conduct themselves properly in social, academic and professional situations.
FEL2056	Understand the nuances of non –verbal communication while communicating.

Unique Course Number: FEL206

Course Name: Basic Workshop practice-II

Unique CO Number	Students will be able to, Course Outcome (CO) Statement
FEL2061	Develop the necessary skills required to handle / use different tools for carpentry, sheet metal working and brazing.
FEL2062	Design and model of a Cross-Lap joint.
FEL2063	Demonstration of a wood-turning job.
FEL2064	Demonstrate and simulate different software for PCB designing and electrical connections for different loads.
FEL2065	Develop the necessary skills required to handle / use different tools to design, fabricate and assemble PCB.
FEL2066	Design and modeling of a sheet metal job along with brazing operations.