Academic Year 2019-20
Semester – II

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

Unique CO Number	Course Outcome (CO) Statement
1.FEC201.1	Choose and utilize Gamma & Beta function to evaluate improper integrals
1.FEC201.2	Demonstrate the ability to evaluate definite integrals numerically using Trapezoidal, Simpson $1/3^{rd}$ & Simpson $3/8^{th}$ rule.
1.FEC201.3	Identify the different types of differential equations and choose the analytical or numerical method to solve first order first degree differential equations.
1.FEC201.4	Solve and analyze the higher order linear differential equations with constant coefficients
1.FEC201.5	Evaluate multiple integrals using a transformation of coordinates, change of order of integration.
1.FEC201.6	Compute area, mass of lamina and volume by using double and triple integrals.

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

Unique CO Number	Course Outcome (CO) Statement
1.FEC202.1	Recall the basic laws and principles of Optics, Electricity, Magnetism and Nano-science.
1.FEC202.2	Discuss the principles of diffraction of light, LASERs, Optical fibers and Nanotechnology.
1.FEC202.3	Understand and describe the concepts pertaining to Electrodynamics, Relativity and Sensors.
1.FEC202.4	Develop and utilize the concepts of diffraction of light, LASERs, Optical fibers and Nanotechnology for interpretation in various applications.
1.FEC202.5	Apply the theory of Electrodynamics, Relativity and Sensors for explaining respective applications.
1.FEC202.6	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
1.FEC203.1	Explain the concept of Engineering Chemistry such as calorific value, knocking, and types of spectroscopy
1.FEC203.2	Distinguish the range of electromagnetic spectrum and illustrate the concept of emission spectroscopy

1.FEC203.3	Illustrate the effect of corrosive environment on engineering material and summarizing 12 principles of green chemistry
1.FEC203.4	Identify the types of corrosion and suggest control measures in industries.
1.FEC203.5	Select the greener path following the principles of green chemistry
1.FEC203.6	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	Course Outcome (CO) Statement
1.FEC204.1	Apply the basic principles of projections of lines and planes
1.FEC204.2	Apply the basic principles of projections in projection of solids.
1.FEC204.3	Apply the basic principles of sectional views in section of solids
1.FEC204.4	Apply the basic principles of projections in converting 3 D view to 2D drawing
1.FEC204.5	Read a given drawing
1.FEC204.6	Visualize an object from the given two views.

Unique Course Number: FEC205　　　　　　　　　　**Course Name: C programming**

Unique CO Number	Course Outcome (CO) Statement
1.FEC2051.	Illustrate the basic programming used in computer programming
1.FEC205.2	Illustrate the concept of data types, variables and operators using C
1.FEC205.3	Design and implement control statement and looping constructs in C
1.FEC205.4	Apply function concept on problem statements
1.FEC205.5	Demonstrate the use of arrays, strings, structures and union.
1.FEC205.6	Demonstrate the dynamic memory allocation by the use of Pointers.

Unique Course Number: FEC206　　　　　**Course Name: Professional Communication and Ethics- I**

Unique CO Number	Course Outcome (CO) Statement
1.FEC206.1	Eliminate barriers and use verbal/non-verbal cues at social and workplace situations.
1.FEC206.2	Employ listening strategies to comprehend wide-ranging vocabulary, grammatical structures, tone and pronunciation.
1.FEC206.3	Prepare effectively for speaking at social, academic and business situations.
1.FEC206.4	Use reading strategies for faster comprehension, summarization and evaluation of texts.
1.FEC206.5	Acquire effective writing skills for drafting academic, business and technical documents.
1.FEC206.6	Successfully interact in all kinds of settings, displaying refined grooming and social skills

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

Unique CO Number	Course Outcome (CO) Statement
1.FEL201.1	To perform the experiment based on diffraction grating to find the wavelength of laser light.
1.FEL201.2	To perform the experiment to Measure divergence of laser beam.
1.FEL201.3	To perform the experiment to find numerical aperture of an optical fiber
1.FEL201.4	To perform the experiment based on photodiode to study I/V characteristics and plot the reverse biased characteristics of the same.
1.FEL201.5	To perform the experiment using Ultrasonic distance meter for measurement of distance
1.FEL201.6	Design and implement miniature projects related to physics.

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

Unique CO Number	Course Outcome (CO) Statement
1.FEL202.1	Determine the % of moisture content present in the solid fuel and to explain its effect on calorific value
1.FEL202.2	Estimate acid value of oils and discuss its importance in selecting lubricating oil
1.FEL202.3	Estimate the electrode potential of metal and identify its ability to resist corrosion
1.FEL202.4	Identify the factors controlling the rate of corrosion of metal
1.FEL202.5	Differentiate between greener and non greener chemical processes.
1.FEL202.6	Document their observations and interpretation after performing the experiment satisfactorily

Unique Course Number: FEL203   **Course Name: Engineering Graphics**

Unique CO Number	Course Outcome (CO) Statement
1.FEL203.1	Use different commands from the draw toolbar.
1.FEL203.2	Use different Command from modify toolbar and application to line problem.
1.FEL203.3	Read orthographic projection.
1.FEL203.4	Draw orthographic projections using Autocad.
1.FEL203.5	Draw Sectional orthographic projections using Autocad.
1.FEL203.6	Draw isometric projection using Autocad.

Unique Course Number: FEL204   **Course Name: C programming**

Unique CO Number	Course Outcome (CO) Statement
1.FEL204.1	Demonstrate the use operators in C
1.FEL204.2	Implement Conditional Statements in C
1.FEL204.3	Implement Looping constructs in C

1.FEL204.4	Decompose a problem into functions and synthesize a complete program.
1.FEL204.5	Solve given problem using C data type like array and strings
1.FEL204.6	Illustrate the concept of structures and pointers

Unique Course Number: FEL205   Course Name: Professional Communication and Ethics- I

Unique CO Number	Course Outcome (CO) Statement
FEL2051	Learn and comprehend all types of spoken discourse successfully
FEL2052	speak fluently and make effective professional presentation
FEL2053	Read large quantities of text in short times to comprehend, summaries and Evaluate
FEL2054	Draft precise business letters. Academic essays and technical Guidelines
FEL2055	Dress finely and conduct themselves with panache in social, academic and professional situation

Unique Course Number: FEL206   Course Name: Basic Workshop practice-II

Unique CO Number	Course Outcome (CO) Statement
1.FEL206.1	Develop the necessary skills required to handle / use different tools for carpentry, sheet metal working and brazing
1.FEL206.2	Design and model of a T-Lap joint.
1.FEL206.3	Demonstration of a wood turning job.
1.FEL206.4	Develop the necessary skills required to handle / use different tools to design , fabricate and assemble PCB
1.FEL206.5	Demonstrate and simulate different software for PCB designing and electrical connections for different load.
1.FEL206.6	Design and model of a chalk box.