Malineni Lakshmaiah Women's Engineering College::pulladigunta
Department of Electronics and Communication Engineering
Course Outcomes

AY 16-17 **SEM-I**

C101	**ENGLISH -I**	4 0 0
C101.1	Listening and Reading language to gain knowledge in the areas of communication.	
C101.2	Reproduce with accurate grammatical structures to form sentence and paragraph	
C101.3	Selection of vocabulary aptly to the situation	
C101.4	Developing comprehension skills at reading strategies	
C101.5	Improving spoken skills for discussion and demonstration	
C102	**MATHEMATICS-I**	4 0 0
C102.1	Solve first order differential equations and applications	
C102.2	Solve linear differential equations of higher order.	
C102.3	Determine the maximum and minimum values of functions of two variables.	
C102.4	Apply Laplace transform and Inverse Laplace transform of various functions and to solve the Ordinary Differential Equation.	
C102.5	Solve the first and higher order partial differential equations	
C103	**MATHEMATICS-II(NUMERICAL METHODS AND COPLEX VARIABLES)**	4 0 0
C103.1	Evaluate approximating the roots of algebraic and transcendental equations by iterative methods.	
C103.2	Apply Newton's forward ,backward and Lagranges for equal and unequal intervals.	
C103.3	Evaluate the real definite integrals and solve the first order ordinary differential equations by numerical methods and know the concepts of special functions	
C103.4	Determine the limits and continuity of complex valued functions.Apply the concept of analyticity and results on harmonic and entire functions and basic concepts of complex integration.construct the complex valued functions using Milne-Thomson's method	
C103.5	Write the complex valued functions as Taylor and Laurent series, classify singularities and poles.Determine the residue of complex functions.Evaluvate complex integrals and improper integrals using residue theorem.	
C104	**APPLIED PHYSICS**	4 0 0
C104.1	Explain the need of coherent sources and the conditions for sustained interference.	
C104.2	Analyse the different properties of light.	
C104.3	Apply the concepts to learn the types of Lasers.	
C104.4	Illustrate the physical significance of wave function.	
C104.5	Interpret the direct and indirect band gap of Semiconductors.	

C105	**COMPUTER PROGRAMMING**	1 0 3
C105.1	Write the fundamentals of algorithms, flowcharts and C-Tokens	
C105.2	Use Suitable control structures for developing code in C	
C105.3	Implement C-programs using derived data types such as arrays, structures	
C105.4	Develop C-programs using pointer and its related concepts	
C105.5	Design Well structured modular programs using file handling functions	
C106	**ENGINEERING DRAWING**	1 0 3
C106.1	Construct polygons, curves and various types of scales using various drawing instruments.	
C106.2	Practice orthographic projections and to project the points and lines parallel to one plane and inclined to other and also the line inclined to both the reference planes	
C106.3	Develop the projections of the plane inclined to both the planes.	
C106.4	Develop the projections of the various types of solids in different positions inclined to one and both the reference planes.	
C106.5	Sketch 3D view through isometric views. The student will be able tore present and convert the isometric view to orthographic view and vice versa.	
C107	**ENGLISH COMMUNICATION SKILLS LAB -I**	0 0 3
C107.1	Understand public speaking skills for professional level and social purpose	
C107.2	To improve communication skills for academic purpose	
C107.3	Use verbal language of English for competitive purpose	
C107.4	Ability to produce language for pronunciation, stress pattern and intonation	
C107.5	Understanding oral communication methods and its techniques	
C108	**APPLIED/ENGINEERING PHYSICS LAB**	0 0 3
C108.1	Understand the quality of instruments on the procedure level.	
C108.2	Determine the spacer by using the films and parallel interference fringes.	
C108.3	Determine the rigidity modulus of a given metal wire.	
C108.4	Examine the acceleration due to of gravity by using Compound pendulum.	
C108.5	Analyze the wave nature of the light on the bases of Meldy's Method.	
C109	**APPLIED/ENGINEERING PHYSICS VIRTUAL LABS-ASSIGNMENTS**	0 0 2
C109.1	Analyze the types of Semiconductors using Hall Effect.	
C109.2	Analyze the different structures of the crystals.	
C109.3	Analyze the magnetic materials based on the Hysteresis loop .	
C109.4	Explain the working principle Of N.A of optical fiber.	
C109.5	Construct the Michelson's Interferometer based on the concept of	

	Interference	
C110	**ENGINEERING WORK SHOP AND IT WORK SHOP**	0 0 3
C110.1	Devolp on manufacturing of components using workshop trades including fitting,carpentary	
C110.2	Understand various basic electrical connections.	
C110.3	Identify various hardware components of a system	
C110.4	Assemble the computer	
C110.5	Use various Microsoft tools.	

AY 16-17 **SEM-II**

C111	**ENGLISH -II**	3	0	0
C111.1	Gain knowledge in the area of technology and science			
C111.2	Promotes life skills, social skills and communication			
C111.3	Makes to understand different cultural etiquettes			
C111.4	Understand the need of inventions and discoveries by reading about different scientists			
C111.5	Gain knowledge of environment and its sustainability			
C112	**MATHEMATICS-III**	3	0	0
C112.1	Determine the rank of a matrix and solve the system of linear algebraic equations.			
C112.2	Determine the Eigen values and Eigen vectors of a matrix and discuss the nature of quadratic forms.			
C112.3	Apply Double and Triple integration technique to find areas and volumes covered by region.			
C112.4	Determine the real integrals using special functions			
C112.5	Calculate the gradient, curl,divergence of vector and scalar functions and apply Green's,Stokes,Gauss divergence theorems to calculate linear, surface and volume integrals			
C113	**APPLIED CHEMISTRY**	3	0	0
C113.1	Identify the applications of polymers.			
C113.2	Analyze the Quality and composition of fuels.			
C113.3	Analyze the mechanism of corrosion and apply few corrosion control methods.			
C113.4	Illustrate the importance of advanced materials in Engineering.			
C113.5	Simulate the non conventional energy sources to produce electric power.			
C114	**ELECTRICAL AMD MECHANICAL TECHNOLOGY**	3	0	0
C114.1	Out line the working principle and operation characteristics of DC Machine and Transformers.			
C114.2	Illustrate principle of operation and characteristics of Alternators and 3-phase Induction motor.			
C114.3	Compare and analysis the construction and working of various measuring instruments.			
C114.4	Learn various modes of heat transfer.			
C114.5	Identify the engine parts and study the working of 2 stroke and 4 stroke engines.			
C114.6	Study of power transmission by drives, identify the parts of the lathe machine and basic knowledge on the manufacturing process.			
C115	**ENVIRONMENTAL STUDIES**	3	0	0
C115.1	Understand the principle of operation, construction and details of DC generators			
C115.2	Understand the principle of operation, construction and details of DC motors			
C115.3	Learn the principle of operation, construction and performance of			

	transformers	
C115.4	Study the principle of operation, construction and details of Synchronous machines	
C115.5	Learn the principle of operation, construction and performance of 3-phase Induction motors	
C116	**DATA STRUCTURES**	0 0 2
C116.1	Define data structures like array, stack, queues and linked list.	
C116.2	Explain insertion, deletion and traversing operations on data structures.	
C116.3	Identify the asymptotic notations to find the complexity of an algorithm.	
C116.4	Compare various searching and sorting techniques.	
C116.5	Choose appropriate data structure while designing the algorithms.	
C117	**APPLIED/ENGINEERING CHEMISTRY LAB**	0 0 3
C117.1	Estimate the unknown solutions by using volumetric titration method.	
C117.2	Analyse the quality of water.	
C117.3	Construct the Electro chemical cell.	
C117.4	Determine the PH of liquid samples.	
C117.5	Measure the strength of acids by conduct metric and potentio metric titrations.	
C118	**ENGLISH COMMUNICATION SKILLS LAB-II**	0 0 3
C118.1	Practice English language pertaining to LSRW skills	
C118.2	Comprehend English language used for debate, discussion and presentation	
C118.3	Able to use and express ideas in oral communication skills in the view of interviews	
C118.4	Comprehend how to develop writing skills	
C118.5	Helps to acquire vocabulary to avoid errors in the sentence constructions	
C119	**COMPUTER PROGRAMMING LAB**	0 0 2
C119.1	Make use of basic C programming language constructs and practice logical ability to solve problems in Linux environment.	
C119.2	Solve problems by using control structures and modularity.	
C119.3	Build programs using basic data structures include arrays, structures	
C119.4	Apply pointers and dynamic memory allocation for dealing real world problems.	
C119.5	Utilize files for developing C programs and understand the basic concepts of computer hardware and software.	

Malineni Lakshmaiah Women's Engineering College::pulladigunta
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CO-PO MAPPINGS

AY 16-17 **SEM-I**

C101(ENGLISH-I)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101.1										1		
C101.2										1		
C101.3										1		
C101.4										1		
C101.5										2		
C101										1.2		

C102(MATHEMATICS-I)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C102.1	2	2										
C102.2	2	2										
C102.3	2	2										
C102.4	3	2										
C102.5	2	2										
C102	2.2	2										

C103(MATHEMATICS-II)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C103.1	3	2										
C103.2	2	2										
C103.3	2	1										
C103.4	1	1										
C103.5	1	1										
C103	1.8	1.4										

C104(APPLIED PHYSICS)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104.1	3	2	1									
C104.2	2	3	1									
C104.3	3	2	1									
C104.4	3	2	1									
C104.5	2	3	1									
C104												
	2.6	2.4	1									

C105(COMPUTER PROGRAMMING)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C105.1	3	2	2									-
C105.2	2	2	3									-
C105.3	2	3	3									2
C105.4	2	2	-									3
C105.5	2	2	-									3
C105	2.2	2.2	2.6									2.6

C106(ENGINEERING DRAWING)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106.1	2		3									
C106.2	3	1										
C106.3			3		2							
C106.4		3	2									
C106.5			3		2							
C106	2.5	2	2.75		2							

C107(ENGLISH COMMUNICATION SKILLS LAB-I)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C107.1										2		
C107.2										1		
C107.3										1		
C107.4										1		
C107.5										1		
C107										**1.2**		

C108(APPLIED/ENGINEERING PHYSICS LAB)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C108.1				**3**	**1**	**2**						
C108.2				**3**	**1**	**2**						
C108.3.				**2**	**-**	**-**						
C108.4				**2**	**-**	**1**						
C108.5				**2**	**-**	**3**						
C108				**2.4**	**1**	**2**						

C109(APPLIED/ENGINEERING PHYSICS –VIRTUAL LABS ASSIGNMENTS)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C109.1				**1**	**3**	**2**						
C109.2				**2**	**3**	**1**						
C109.3				**2**	**3**							
C109.4				**2**	**3**	**1**						
C109.5				**2**	**3**	**1**						
C109				**1.8**	**3**	**1**						

C110(ENGINEERING WORK SHOP AND IT WORK SHOP)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C110.1	**2**		**3**			**2**						
C110.2	**3**	**1**				**3**						
C110.3			**3**		**2**							
C110.4		**3**	**2**									
C110.5			**3**		**2**							
C110	**2.5**	**2**	**2.75**		**2**	**2.5**						

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CO-PO MAPPINGS

A.Y 16-17 **SEM-II**

C111(ENGLISH -II)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111.1							1					
C111.2						2						
C111.3						1						
C111.4							2					
C111.5							1					
C111						1.5	1.3					

C112(MATHEMATICS -III)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112.1	2	2										
C112.2	2	2										
C112.3	2	2										
C112.4	2	2										
C112.5	3	2										
C112	2.2	2										

C113(APPLIED CHEMISTRY)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C113.1	3	2	2									
C113.2	2	3	2									
C113.3	3	2	3									
C113.4	2	2	2									
C113.5	3	3	3								2	2
C113	2.6	2.4	2.4								2	2

C114(ELECTRICAL AND MECHANICAL TECHNOLOGY)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C114.1	3	2										
C114.2	2	1										
C114.3	2	1										
C114.4	3					1						
C114.5	3	1										
C114	2.6	1.25				1						

C115(ENVIRONMENTAL SCIENCE)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C115.1	1						3					2
C115.2							2					3
C115.3	1						2					1
C115.4							3					
C115.5											3	2
C115	1						2.5				3	2

C116(DATA STRUCTURES)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116.1	3	2	2									-
C116.2	2	2	3									-
C116.3	2	3	3									2
C116.4	2	2	-									3
C116.5	2	2	-									3
C116	2.2	2.2	2.6									2.6

C117(APPLIED/ ENGINEERING CHEMISTRY LABORATORY)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C117.1	**3**	**2**	**2**									
C117.2	**3**	**3**	**2**									
C117.3	**2**	**2**	**2**									
C117.4	**2**	**2**	**2**									
C117.5	**3**	**2**	**2**									
C117	**2.6**	**2.2**	**2**									

C118(ENGLISH-COMMUNICATION SKILLS LAB-II)

O/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C118.1										1		
C118.2										1		
C118.3										1		
C118.4										1		
C118.5										1		
C118										**1**		

C119(COMPUTER PROGRAMMING LAB)

O/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C119.1	**3**	**2**	**2**	**2**								
C119.2	**2**	**2**	**2**	**2**	**3**							
C119.3	**2**	**2**	**2**	**2**	**3**							
C119.4	**2**	**2**	**2**	**2**	**3**							
C119.5	**2**	**2**	**2**	**2**	**3**							
C119	**2.2**	**2**	**2**	**2**	**3**							