

		C212.6 Design cylinders and torsions to support a given load.	3		3									3	2			
		Average	3	2.3	2.25									2.83	2.16			
ME303PC	MATERIALS SCIENCE AND METALLURGY	C213.1 ability to Understand the basics of materials	3										2		2			
		C213.2 ability to Understand Estimate the analysis of phases and lever rule	2					2						3		3		
		C213.3 ability to Understand increase the components and phases	3				3									3	3	
		C213.4 ability to Understand the statistical or microscopic analysis of physical explanations	3				2											
		C213.5 ability to Understand the utility of the knowledge heat treatment and types of heat treatments	3	3			2											
		Average	2.8	3			2.3			2					2.5		3	2.5
ME304PC	PRODUCTION TECHNOLOGY	C214.1 Describe the types, materials, allowances and defects in casting	3	3	3	3	3											
		C214.2 Explain the patterns, design of gating system and solidification.	3	2	2	2	2										2	
		C214.3 Distinguish between the various welding processes applicable in the manufacturing industries.	3	3	2	2	2											2
		C214.4 Explain the advanced welding processes, defects and testing of welds	3	2	3	2	2											
		C214.5 Apply the different deformation process applicable for the various products.	3	2	2	3	2											
		C214.6 Explain the various extrusion, forging processes.	3	2	2	2	2											
		Average	3.0	2.3	2.3	2.3	2.1									2		
ME305PC	THERMODYNAMICS	C215.1 ability to Understand the basic techniques of thermal conversions.	3										2			2		
		C215.2 ability to Understand Estimate the analysis of power and refrigeration cycles with air water - vapour mixtures	2						2					3		3		

		C217.5 Students will be able to assemble different parts like steam engine parts, machine tool parts.				2	1									2
		C217.6 Students will be able to assemble different parts like stuffing boxes parts,						3								2
		Average	3.0	2.0	2.5	2.0	1.6	3.0								2.0
ME308PC	MS & MOS LAB	C218.1 Compute the tensile and shear properties of materials using UTM	3	2					2						3	2
		C218.2 Compute the torsion and impact strength using respective test setup	3	2	2				2						3	2
		C218.3 Compute the response of the beam by deflection method	3	3	2				1						3	2
		C218.4 Calculate the deflection of springs using tensile and compression tests	3		2										2	3
		C218.5 Infer the influence of heat treatment process in mechanical properties and micro structure	3	2					1						3	2
		C218.6 Apply specific testing methods for material characterization	3	2											3	2
		Average	3	2	2				2.5						3	2

		C313.3 Identify the abrasives, bonds and basic parts and operations of machine tools like Milling, Grinding, Lapping, Honing, broaching and estimating their machining times.	3	3	2	2	2										2		
		C313.4 Illustrate concepts of measurements like limits, fits, tolerances, types of assemblies, linear, angular, optical, surface measuring instruments and gauges.	3	2	3	2	2												
		C313.5 Classify different methods of assessment of surface finish and symbols for indicating surface finish.	3	2	2	3	2												
		C313.6 Explain the concepts of measurement of screw thread, gear, alignment tests on lathe and co-ordinate measuring machines.	3	2	2	2	2												
		Average	3.0	2.3	2.3	2.3	2.1										2.0		
SM504PC	FUNDAMENTALS OF MANAGMENT	C314.1 An overview about Business Environment and its Components.	3	2	2				2		1						2		
		C314.2 Understand the concept of Financial Management and its importance.	1	3	2				2		1							2	
		C314.3 Enabling the students to know about the hiring and guiding the work force by the understanding of Human Resource Management.	1	2	3				2		1								2
		C314.4 To understand the concept of economical production aspects of Management.	3	1	1	2													2
		C314.5 To understand the modern concept of marketing and its role in economic development.	3	2	1		2				1								2
		C314.6 To understand the concept of International marketing	2		3		2		2										2
		Average	2.1	2	1.8	2	2		2		1								2
EE511OE	NON CONVENTIONAL POWER GENERATION	C315.1 ability to Understand the basic techniques of thermal conversions.	3									2						2	
		C315.2 ability to Understand Estimate the analysis of power and refrigeration cycles with air water – vapour mixtures	2						2				3						3

		C315.3 ability to Understand increase the utility of the knowledge fluid flow and heat transfer problems solved	3			3								3	3	
		C315.4 ability to Understand the statistical or microscopic analysis of physical explanations	3			2										
		C315.5 ability to Understand the utility of the knowledge fluid flow and heat transfer problems solved. Steam tables and charts given in the appendix.	3	3		2										
		C315.6 ability to Understand the utility of the knowledge fluid flow and heat transfer problems solved. Steam tables and charts given in the appendix.	3	3		2									3	
		Average	3.0	3.0		2.5			2.0		2.5		2.5	2.5	2.6	
ME505PC	THERMAL ENGINEERING LAB	C316.1 Compute the performance of IC Engines.	3	2					2					3		
		C316.2 Predict the characteristics of Fuels and Lubricates used in IC Engines.	3	2	2				2					3		
		C316.3 Compute the Performance of steam generator and turbine.	3	3											3	
		C316.4 Outline the valve timing diagram and port timing diagram of IC Engines.	3	2					2						2	
		C316.5 Compute the heat distribution in an IC engine and steam generator	3	2					2						3	
		C316.6 Predict the significant factors affecting the performance of IC engine and steam generators	3	2											3	
		Average	3.0	2.2	2.0				2.0						2.8	
ME506PC	MACHINE TOOLS LAB	C317.1Illustrate the step turning operations on lathe.	3	3	3	3	3				3				3	
		C317.2Illustrate the Tapper turning operations on lathe.	3	3	3	3	3				3					3
		C317.3Illustrate the thread cutting and Knurling operations on lathe.	3	3	3	3	3				3				3	3
		C317.4Illustrate the operation and making holes on radial drilling machine.	3	3	3	3	3				3					3
		C317.5Develop the operations on cylindrical surface grinding machine.	3	3	3	3	3				3				3	
		C317.6Construct the spur gears on milling machine and producing key way cutting on shaper machine.	3	3	3	3	3				3				3	
		Average	3.0	3.0	3.0	3.0	3.0				3.0				3.0	3.0
ME507PC	ENGINEERING METROLOGY LAB	C318.1 Practice on manufacturing of components for measuring equipments	3	3	3	3	3				3				3	
		C318.2 Practice on different types of tools of vernier callipers	3	3	3	3	3				3					3

	C318.3 Practice on slip gauges as one of the measuring equipment.	3	3	3	3	3				3					3
	C318.4 Practice on manufacturing of components using lathe and alignment tests.	3	3	3	3	3				3					3
	C318.5 Practice on manufacturing of components using tally surface equipment.	3	3	3	3	3				3					3
	C318.6 Practice on manufacturing of components using alignments and tests of equipment.	3	3	3	3	3				3					3
	Average	3.0	3.0	3.0	3.0	3.0				3.0					3.0

ST.PETERS ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

Correlation between the Course outcomes and Program Outcomes A.Y. 2019-20

IV YEAR – I SEM

COURS ECODE	COURSENAME	COURSE OUTCOMES	1	2	3	4	5	6	7	8	9	10	11	12	Pso1	Pso2		
			ME701PC	CAD/CAM	C411.1: Students will be able to Describe the peripherals of computer aided system.	3	1			2								
C411.2: Students will be able to Model engineering components by applying solid modeling techniques.					2	2	3					1				2		
C411.3 : Students will be able to Write NC and CNC programming code by applying principles of Numerical Control systems.					2	1	3					1				1		
C411.4: Students will be able to Describe the concept of part family and methods of identifying the part families.	1				2	1	3											
C411.5: Students will be able to Describe computer aided process planning and various computer aided inspection methods in quality control.	1	2				3	2											2
C411.6 : Students will be able to Describe computer integrated manufacturing and its basic components.	1						1				1				3			
Average	1.5	1.5			2	1.7	2.8				1			1	3		1.5	1.5
ME702PC	INSTRUMENTATION AND CONTROL SYSTEM	C412.1. Identify various elements and their purpose in typical instruments (Remember)	3									2				1		
		C412.2. Analysis of errors so as to determine correction factors for each instrument. (Analysis)	2									3				3		
		C412.3. Understand static and dynamic characteristics of instrument and should be able to determine loading response time. (Understand)	1	2			3											
		C412.4. Explain transducer regarding accuracy and loading time. (Understand)	1			2					3							
		C412.5. Analyze the control system for control of position, temperature, acceleration & process control. (Analysis)			1			2				3						
		C412.6. Analyze the measuring system for the measurement of Flow and liquid level. (Analysis)		3			2		1									
		Average	1	2.3	2	2	2.3	2.5	2		3							

ME723PE	POWER PLANT ENGINEERING	C413.1 Students able to explain the energy sources and conversion methods, concepts	2	3		2						2		2		
		C413.2 Students able to explain the various types of re-heat, re-generation power consumption methods energy sources and conversion methods.	3	2		3							2		2	
		C413.3 Students able to apply power plant engineering concepts in the model of the Assignment Problems	3	3		2							2		2	
		C413.4 Student able to Classify Hydro electric power plant, hydro cycles and its applications.	3	2		3							2		2	
		C413.4 Students able to explain wind energy, HAWT, VAWT, tidal energy	3	3		1		3					2		2	
		C413.5 Students able to explain wind energy, HAWT, VAWT, tidal energy	3	3		1		3					2		2	2
		Average	2.8	2.6		2.0		3.0					2.0		2.0	2.0
ME734PE	CNC TECHNOLOGY	C414.1 Tell about the constructional features of CNC machine tools	3	3	3			3	3	3				3	3	
		C414.2 Choose to CNC programs for popular CNC control system.	3	3	3			3	3	3				3	3	
		C414.3 Develop skill tooling and work holding devices for CNC machine tools	3	3	3			3	2	3				3	3	
		C414.4 Easy to identify with the DNC adaptive control systems	3	3	3			3	3	2				3	3	
		C414.5 Examine the hardware components of PLC.	3	3	2			3	3	3				3	3	
		C414.6 Develop the drives and positional transducers used in CNC machine tools	3	3	2			3	2	2				3	3	
		Average	3	3	2.6			3	2.6	2.6				3	3	
ME742PE	TURBO MACHINES	C415.1 Students will be able to analyse the flow equations in turbo machines.	3	3	2	2								3		
		C415.2 Students will be able to Design and analysis of the steam nozzles.	3	3	2	2								2		
		C415.3 Students will be able to Describe the principle of impulse turbine, velocity diagrams, efficiencies, blading and losses.	3	3	2	2									3	
		C415.4 Students will be able to Understand the students, fundamental thermodynamic concepts of gas dynamics and centrifugal compressors.	3	3	2	2									2	
		C415.5 Students will be able to Calculate, Compare, Analyse the axial flow compressors and cascade analysis.	3	3	2	2									3	
		C415.6 Students will be able to Explain axial flow gas turbines and design cascade analysis.	3	3	2	2									2	
		Average	3	3	2	2									2.4	

ME 703PC	CAD/CAM LAB	C416.1 Draw the 2D & isometric views of different figures using Autocad software	3	2							3				1	1	
		C416.2 Design a 3D geometry using AutoCad		3	2	1					3						
		C416.3 Calculate stresses on 2D components using Ansys software.	2		3						3						2
		C416.4 Calculate stress, strain, harmonic analysis on components using Ansys software	3	2							3						
		C416.5 Conduct Thermal analysis on components using Ansys software	1	3							3						
		C416.6 Write a process sheet & Produce a component using CNC Turning & Milling machine.	1	3							3						
		Average	2.0	2.6	2.5	1.0					3.0					1.0	1.5
ME704PC	ICS LAB	C417.1. Identify various elements and their purpose in typical instruments (Remember)	3								2					1	
		C417.2. Analysis of errors so as to determine correction factors for each instrument. (Analysis)	2								3				3		
		C417.3. Understand static and dynamic characteristics of instrument and should be able to determine loading response time. (Understand)	1	2			3										
		C417.4. Explain transducer regarding accuracy and loading time. (Understand)	1			2			3								
		C417.5. Analyze the control system for control of position, temperature, acceleration & process control. (Analysis)			1			2			3						
		C417.6. Analyze the measuring system for the measurement of Flow and liquid level. (Analysis)		3			2		1								
		Average	1	2.3	2	2	2.3	2.5	2		3						