

**E.G.S Pillay Engineering College, Nagapattinam**


**B.E. Mechanical Engineering**

**Total Credits to be earned for the award of the degree: 187 / 144 (for Lateral entry)**

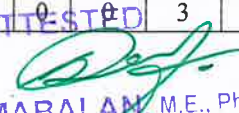
**Full Time Curriculum and Syllabus – R2017**

Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
<b>First Semester</b>								
1701MA101	Engineering Mathematics-I	3	2	0	4	40	60	100
1701PH101	Applied Physics for Engineers	3	0	0	3	40	60	100
1701EN101	Technical English	3	0	0	3	100	0	100
1701CH102	Materials Chemistry	3	0	0	3	40	60	100
1701GE104	Fundamentals of Mechanical Engineering	2	0	2	3	50	50	100
1701GEX03	Programming in C	3	0	0	3	40	60	100
1701HS151	Physics and Chemistry Lab –I	0	0	2	1	50	50	100
1701GEX51	Programming in C Lab	0	0	2	1	50	50	100
1701GEX53	Workshop Practice	0	0	2	1	50	50	100
<b>Total</b>		17	2	8	22			
<b>Second Semester</b>								
1701MA201	Engineering Mathematics II	3	2	0	4	40	60	100
1701PH203	Materials Science	3	0	0	3	40	60	100
1701CH201	Environmental Studies	3	0	0	3	40	60	100
1701GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100
1701GEX04	Engineering Mechanics	2	2	0	3	40	60	100
	Language Elective	3	0	0	3	100	-	100
1701GEX52	Communication Skills Lab	0	0	2	1	50	50	100
1701HS251	Physics and Chemistry Lab II	0	0	2	1	50	50	100
<b>Total</b>		19	6	4	24			
<b>Third Semester</b>								
1701MA301	Engineering Mathematics III	3	2	0	4	40	60	100
1702ME301	Engineering Thermodynamics	3	2	0	4	40	60	100
1702ME302	Engineering Materials and Metallurgy	3	0	0	3	40	60	100
1702ME303	Fluid Mechanics and Machinery	3	0	0	3	40	60	100
1702ME304	Strength of Materials	3	0	2	4	50	50	100
1702ME305	Manufacturing Technology – I	3	0	0	3	40	60	100
1702ME351	Machine Drawing	1	0	2	2	50	50	100
1702ME352	Manufacturing Technology Laboratory	0	0	2	1	50	50	100
1702ME354	Fluid Mechanics and Machinery Lab	0	0	2	1	50	50	100
1704ME353	Seminar Presentation	0	0	2	1	100	0	100
1704GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100
<b>Total</b>		19	4	12	27			

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Fourth Semester								
1701MA401	Numerical Methods and Statistics	3	2	0	4	40	60	100
1702ME401	Thermal Engineering	3	2	0	4	40	60	100
1702ME402	Measurements and Metrology	2	0	2	3	50	50	100
1702ME403	Kinematics of Machines	2	2	0	3	40	60	100
1702ME404	Design of Machine Elements	3	2	0	4	40	60	100
1702ME405	Manufacturing Technology –II	3	0	0	3	40	60	100
1701CH201	Environmental Studies*	3*	0	0	3*	40	60	100
1702ME451	Thermal Engg. Laboratory	0	0	2	1	50	50	100
1702ME452	Manufacturing Technology II Laboratory	0	0	2	1	50	50	100
1704ME453	Technical Seminar - II	0	0	2	1	100		100
1704GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100
<b>Total</b>		16/ 19*	8	10	25 / 28*			
• For lateral entry students only								
Fifth Semester								
1701MA502	Operations Research	2	2	0	3	40	60	100
1702ME501	Heat and Mass Transfer	3	2	0	4	40	60	100
1702ME502	Computer Aided Design	3	0	0	3	40	60	100
1702ME503	Design of Transmission Systems	3	2	0	4	40	60	100
	Elective I	3	0	0	3	40	60	100
	Elective II	3	0	0	3	40	60	100
1702ME551	Heat Transfer Laboratory	0	0	2	1	50	50	100
1702ME552	Computer Aided Design Laboratory	0	0	2	1	50	50	100
1704ME553	Mini Project I (Design and Fabrication)	0	0	2	1	100	-	100
1704GE551	Life Skills: Aptitude I	0	0	2	1	100	-	100
<b>Total</b>		17	6	8	24			
Sixth Semester								
1702ME601	Finite Element Analysis	2	2	0	3	40	60	100
1702ME602	Gas Dynamics and Jet Propulsion	2	2	0	3	40	60	100
1702ME603	Dynamics of Machines	3	0	0	3	40	60	100
1701MGX01	Professional Ethics	3	0	0	3	40	60	100
	Elective III	3	0	0	3	40	60	100
	Elective IV (Open)	3	0	0	3	40	60	100
1702ME651	Dynamics of Machines Laboratory	0	0	2	1	50	50	100
1702ME652	Computer Aided Analysis Laboratory	0	0	2	1	50	50	100
1704ME653	Mini Project II (CAD Modeling)	0	0	2	1	100	-	100
1704ME654	Industrial Visits Presentation	0	0	0	1	100		100
1704GE651	Life Skills: Aptitude II	0	0	2	1	100	-	100
<b>Total</b>		16	4	8	23			
Seventh Semester								
1702ME701	Automobile Engineering	3	0	0	3	40	60	100
1702ME702	Mechatronics	3	0	0	3	40	60	100

  
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1702ME703	Computer Aided Manufacturing	3	0	0	3	40	60	100
1701MGX02	Industrial Economics	3	0	0	3	40	60	100
	Elective V	3	0	0	3	40	60	100
	Elective VI (Open)	3	0	0	3	40	60	100
1702ME751	Mechatronics Laboratory	0	0	2	1	50	50	100
1702ME752	Computer Aided Manufacturing Laboratory	0	0	2	1	50	50	100
1704ME753	Mini Project III (Simulation and analysis)	0	0	2	1	100	-	100
1704ME754	In-Plant Training/Internship Presentation	0	0	0	1	100		100
1704GE751	Life Skills : Competitive Exams Preparation	2	0	0	2	100	-	100
<b>Total</b>		20	0	6	24			
<b>Eighth Semester</b>								
	Elective VII	3	0	0	3	40	60	100
	Elective VIII	3	0	0	3	40	60	100
	Elective IX	3	0	0	3	40	60	100
1704ME851	Project Viva Voce	-	-	18	9	50	50	100
<b>Total</b>		9	0	18	18			

\*Students have to take 5 electives from manufacturing stream in semesters V, VI and VIII, one elective from thermal stream in seventh semester and one elective from design stream in eighth semester.

<b>ELECTIVES</b>						
Code No.	Course	L	T	P	C	
<b>DISCIPLINE ELECTIVES</b>						
<b>ELECTIVES I, II, III, VII &amp; VIII(MANUFACTURING STREAM)</b>						
1703ME001	Non - Traditional Machining Processes	3	0	0	3	
1703ME006	Welding Technology	3	0	0	3	
1703ME005	Mechanical Behaviour Of Materials	3	0	0	3	
1703ME007	Process Planning And Cost Estimation	3	0	0	3	
1703ME013	Composite Materials And Mechanics	3	0	0	3	
1703ME003	Flexible Manufacturing Systems	3	0	0	3	
1703ME010	Statistical Quality Control And Reliability Engineering	3	0	0	3	
1703ME015	Computer Integrated Manufacturing	3	0	0	3	
1703ME017	Advanced Casting And Forming Processes	3	0	0	3	
1703ME002	Industrial Safety Engineering	3	0	0	3	
1703ME011	Industrial Robotics	3	0	0	3	
1703ME009	Additive Manufacturing	3	0	0	3	
1703ME008	Industrial Maintenance Engineering	3	0	0	3	
1703ME004	Non - Destructive Testing	3	0	0	3	
1703MG001	Total Quality Management	3	0	0	3	
<b>Electives V (Thermal Stream)</b>						
1703ME020	Refrigeration And Air-Conditioning	3	0	0	3	
1703ME012	Renewable Energy Sources	3	0	0	3	
1703ME018	Power Plant Engineering	3	0	0	3	
1703ME021	Computational Fluid Dynamics	3	0	0	3	
1703ME019	Internal Combustion Engines	3	0	0	3	

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*[Signature]*  
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<b>Electives IX (Design Stream)</b>					
1703ME022	Applied Hydraulics And Pneumatics	3	0	0	3
1703ME025	Engineering Tribology	3	0	0	3
1703ME023	Mechanical Vibrations	3	0	0	3
1703ME024	Optimization Techniques	3	0	0	3
1703ME016	Design For Manufacture And Assembly	3	0	0	3
1703ME014	Design Of Jigs, Fixtures And Press Tools	3	0	0	3
<b>Open Electives</b>					
1703ME026	Safety Engineering	3	0	0	3
1703ME027	Maintenance Engineering	3	0	0	3
1703ME011	Industrial Robotics	3	0	0	3
1703ME024	Optimization Techniques	3	0	0	3
1704MG001	Entrepreneurship Development I	3	0	0	3

<b>One Credit Courses</b>	
1704ME028	Lean Manufacturing
1704ME029	Non Destructive testing and materials
1704ME030	Geometric Dimension and Tolerance
1704ME031	Piping Engineering
1704ME032	Problem Solving techniques
1704ME033	Automotive exhaust system
1704ME034	Railway Track Technology
1704ME035	Foundation Course in Community Radio technology
1704ME036	Machine For Oil Refineries
1704ME037	Agriculture For Engineers
1704ME038	Fisheries Engineering
1704ME039	Oil and Natural Gas Engineering
<b>Value Added Courses</b>	
1704ME040	Modeling using Solid Works
1704ME041	Modeling using CATIA V5
1704ME042	Modeling using CREO Parametric
1704ME043	Core Java Programming
1704ME044	Fundamentals of Engineering
1704ME045	Tools Design and Manufacturing
1704ME046	CNC Programming and Operations
1704ME047	Welding Inspection and Testing
1704ME048	Pump Inspection and Testing
1704ME049	Product life cycle Management
1704ME050	HVAC
1704ME051	Design

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Course Components	Curriculum Content (% of total number of	Total number of contact hours	Total number of credits
Basic Sciences	23	52	43
Engineering Sciences	7	18	14
Humanities and Social Science	5	11	10
Program Core	38	91	71
Program Electives	11	21	21
Open Electives	3	6	6
Project(s)	6	24	12
Internships/Seminars	2	4	3
Any other (Please specify)	4	10	7
<b>Total</b>	100		<b>187</b>

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