

**STRUCTURE OF THE PROGRAMME FOR THE BACHELOR'S DEGREE IN THE  
DEPARTMENT OF MECHANICAL ENGINEERING (B.Eng. Mechanical)**

**YEAR TWO**

<b>COURSE CODE</b>	<b>Course Title</b>	<b>Credit Value</b>	<b>Status</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Prerequisite</b>
<b>FIRST SEMESTER</b>							
MTH 2101	Numerical methods	4	C	30		10	
MTH 2102	Topics in Engineering Mathematics	3	C	25		5	
CSC 2101	Computer Programming for Engineers	2	C	15		5	
CEN 2102	Structural Analysis I	3	C	25		5	
CEN 2107	Fluid Mechanics and Hydraulics	3	C	25		5	
EEE 2101	Electrical Machines	3	C	25		5	
MEC 2101	Design of Machine Elements	3	C	25		5	
MEC 2102	Engineering Thermodynamics	3	C	25		5	
MEC 2103	Solid Mechanics	3	C	25		5	
MEC 2104	Engineering Dynamics	3	C	25		5	
<b>TOTAL</b>		<b>30</b>		<b>245</b>	<b>0</b>	<b>55</b>	
<b>SECOND SEMESTER</b>							
MTH 2201	Time Series and Statistics	4	C	30		10	
ENR 2201	Computer Aided Design	2	C	15		5	
ENR 2202	Law and Management	2	C	15		5	
CEN 2203	Fluid Dynamics and Hydrology	3	C	25		5	
EEE 2202	Measurement and Instrumentation	3	C	25		5	
MEC 2201	Heat and Mass Transfer Hydraulic and Pneumatic	3	C	25		5	

MEC 2202	Control	3	C	25		5	
MEC 2203	CIM Systems and Robotics	3	C	25		5	
MEC 2204	Electromechanics	3	C	25		5	
MAT 2202	Partial Differential Equations	3	C	25		5	
	<b>University Requirement</b>						
	Sport						
SPT 2024		1	C	10	0	0	
<b>TOTAL</b>		<b>30</b>		<b>2450</b>		<b>55</b>	

### YEAR THREE

Course Code	Course Title	Credit value	Status	L	T	P	Prerequisite
	<b>FIRST SEMESTER</b>						
ENR 3101	Occupational Safety and Health	3	C	25		5	
MEC 3101	Environmental Control Engineering	3	C	25		5	
MEC3102	Automotive Engineering	3	C	25		5	
MEC 3103	Vibration and Noise Control	3	C	25		5	
MEC 3104	Machining and Fabrication Processes	3	C	25		5	
MEC 3105	Mechanics of Machinery	3	C	25		5	
MEC 3106	Power Plants and Energy Economics	3	C	25		5	
MEC 3107	Introduction to Modeling and Simulation	3	C	25		5	
MEC 3108	Polymer Engineering	3	C	25		5	
MEC 3109	Mechatronics	3	C	25		5	
<b>TOTAL</b>		<b>30</b>		<b>250</b>	<b>0</b>	<b>50</b>	

	<b>SECOND SEMESTER</b>						
ENR 3201	Industrial Training	<b>30</b>	<b>C</b>	<b>10</b>	<b>0</b>	<b>29</b>	<b>0</b>
<b>TOTAL</b>							

#### YEAR FOUR

Course Code	Course Title	Credit value	Status	L	T	P	Prerequisite
	<b>FIRST SEMESTER</b>						
ENR 4101	Engineering Economy and Project Planning	<b>3</b>	<b>C</b>	<b>25</b>		<b>5</b>	
ENR 4102	Technical Communication	<b>2</b>	<b>C</b>	<b>15</b>		<b>5</b>	
ENR 4103	Quality Control Engineering	<b>3</b>	<b>C</b>	<b>25</b>		<b>5</b>	
MEC 4101	HVAC Systems	<b>3</b>	<b>C</b>	<b>25</b>		<b>5</b>	
MEC 4102	Thermal System Design	<b>3</b>	<b>C</b>	<b>25</b>		<b>5</b>	
MEC 4103	Mechanical Workshop Practice	<b>3</b>	<b>C</b>	<b>10</b>		<b>20</b>	
MEC 4104	Final Year Project I	<b>4</b>	<b>C</b>	<b>5</b>		<b>35</b>	
MEC 4105	Turbomachinery	<b>3</b>	<b>C</b>	<b>25</b>		<b>5</b>	
	<b>ELECTIVES (Choose two)</b>						
MEC 4106	Manufacturing Process Design*	<b>3</b>	<b>E</b>	<b>25</b>		<b>5</b>	
MEC 4107	Jig, Fixture and Mold Design*	<b>3</b>	<b>E</b>	<b>25</b>		<b>5</b>	
MEC 4108	Industrial Maintenance**						
MEC 4108	Management Information Systems**	<b>3</b>	<b>E</b>	<b>25</b>		<b>5</b>	
MEC 4109		<b>3</b>	<b>E</b>	<b>25</b>		<b>5</b>	

<b>TOTAL</b>		<b>30</b>		<b>205</b>		<b>95</b>	
<b>SECOND SEMESTER</b>							
ENR 4201	System Analysis	3	C	25		5	
MEC 4201	Engineering Management Science	3	C	25		5	
MEC 4202	Engineering Tools and Operations	3	C	25		5	
MEC 4203	Renewable Energy Optics	4	C	30		10	
MEC 4204	Final Year Project II	3	C	25		5	
MEC 4205	Topics in Mechanical Engineering	4	C	5		35	
MEC 4206		4	C	20	10	10	
	<b>ELECTIVES (Choose two)</b>						
MEC 4207	Flexible Manufacturing Systems*	3	E	25		5	
MEC 4208	Automation of Production Systems*	3	E	25		5	
MEC 4209	Logistics and Supply Chain Management**	3	E	25		5	
MEC 4210	System Reliability and Maintainability**	3	E	25		5	
	* Specialist in Production Engineering						
	** Specialist in Industrial Engineering						
<b>TOTAL</b>		<b>30</b>		<b>205</b>	<b>10</b>	<b>85</b>	