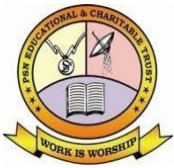


# PSN COLLEGE OF ENGINEERING AND TECHNOLOGY

*(Autonomous Institution)*

*Approved by AICTE, affiliated to Anna University, Chennai and Recognized by UGC  
Melathediyoor, Palayamkottai (TK), Tirunelveli (DT), Pin: 627 152*

*An ISO 9001: 2008 Certified Institution*



## DEPARTMENT OF MECHANICAL & AUTOMATION ENGINEERING

### BACHELOR OF ENGINEERING Mechanical and Automation Engineering



### CURRICULUM AND SYLLABUS

*(For the Academic Year 2018-19 Onwards)*

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## DEPARTMENT OF MECHANICAL AND AUTOMATION ENGINEERING (R2018)

### SEMESTER - I

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Technical English	3	0	0	3
2		Elementary Mathematics for Engineers	3	0	0	3
3		Applied Physics I	3	0	0	3
4		Applied Chemistry I	3	0	0	3
5		Engineering Graphics	2	0	2	3
6		Fundamentals of Computers and Python Programming	3	0	0	3
<b>PRACTICAL</b>						
7		Applied Physics & Chemistry Lab I	0	0	3	2
8		Computer Lab	0	0	3	2
9		Workshop Practice	0	0	3	2
<b>TOTAL</b>			<b>17</b>	<b>0</b>	<b>11</b>	<b>24</b>

### SEMESTER - II

S.No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Business Communication and Presentation Skills	3	0	0	3
2		Engineering Mathematics – I	3	0	0	3
3		Applied Physics II	3	0	0	3
4		Applied Chemistry II	3	0	0	3
5		Engineering Mechanics	3	0	0	3
6		Programming in C	2	0	0	2
7		Basic Engineering (Coming under EEE Board)	2	0	0	2
<b>PRACTICAL</b>						
8		Applied Physics & Chemistry Lab II	0	0	3	2
9		C Programming Lab	0	0	2	1
10		Basic Electrical and Electronics Lab	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>8</b>	<b>24</b>

**SEMESTER - III**

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Engineering Mathematics – II (Differential Equation & Fourier series)	4	0	0	4
2		Engineering materials and metallurgy	3	0	0	3
3		Fluid Mechanics and Machinery	3	0	0	3
4		Production Technology – I	3	0	2	4
5		Electronics devices & circuits	3	0	0	3
6		Solids Mechanics	3	1	0	4
<b>PRACTICAL</b>						
7		Solid Mechanics and Fluid Mechanics Lab.	0	0	3	2
8		Electronic devices and digital lab	0	0	3	2
9		Career Skill Development Training-I	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>10</b>	<b>26</b>
<b>MANDATORY COURSE</b>						
1		Environmental studies	2	0	0	2*
<i>*Mandatory courses are non-credit courses, pass is must to qualify for degree</i>						

**SEMESTER - IV**

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Engineering Mathematics – III (Transformation Techniques & Application of PDEs.)	3	1	0	4
2		Production Technology – II	3	0	0	3
3		Electrical drives and control	3	0	0	3
4		Mechanics of Machines	3	1	0	4
5		Hydraulics and Pneumatics	3	0	0	3
6		LAN & Networking	3	0	0	3
7		Career Skill Development Training-II	0	0	2	1
<b>PRACTICAL</b>						
8		Computer Aided Drafting and Machine drawing Lab	0	0	3	2
9		LAN & Networking Lab	0	0	3	2
10		Electrical Drives and Control Lab	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>11</b>	<b>27</b>

**SEMESTER - V**

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Applied Mathematics – IV (Probability & Statistics)	3	1	0	4
2		Design of Machine Elements	3	1	0	4
3		Engineering Metrology & Measurements	3	0	0	3
4		Thermal science & Engineering	3	0	0	3
5		CAD & CAM	3	0	0	3
6		Open Elective-I	3	0	0	3
		Foreign Language	1	0	0	1
<b>PRACTICAL</b>						
7		Dynamics and Metrology Lab	0	0	3	2
8		CAD & CAM Lab	0	0	3	2
9		Thermal science and engineering Lab	0	0	3	2
<b>TOTAL</b>			<b>19</b>	<b>2</b>	<b>9</b>	<b>27</b>
<b>MANDATORY COURSE</b>						
10		Human rights & Value Education	2	0	0	2*
<i>*Mandatory courses are non credit courses, pass is must to qualify for degree</i>						

**SEMESTER - VI**

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Operation Research	3	0	0	3
2		Heat and Mass Transfer	3	1	0	4
3		Control System Engineering	3	0	0	3
4		Mechatronics	3	0	0	3
5		Open Elective – II	3	0	0	3
6		Elective – I	2	0	0	2
<b>PRACTICAL</b>						
7		Mechatronics Lab	0	0	3	2
8		Control System Engineering Lab	0	0	3	2
9		English Language Lab for Engineers	0	0	3	2
10		Design and Fabrication Project	0	0	3	2
<b>TOTAL</b>			<b>17</b>	<b>1</b>	<b>12</b>	<b>26</b>

**SEMESTER - VII**

S. No	Course Code	Course Name	L	T	P	C
<b>THEORY</b>						
1		Total Quality Management	3	0	0	3

2		Finite Element Analysis	3	1	0	4
3		Industrial Automation and Robotics	3	0	0	3
4		Sensorics	3	0	2	4
5		Elective – II	2	0	0	2
6		Elective – III	2	0	0	2
<b>PRACTICAL</b>						
7		Simulation & Analysis Lab	0	0	3	2
8		Automation Lab.	0	0	3	2
9		Project Phase I	0	0	3	1
<b>TOTAL</b>			<b>16</b>	<b>1</b>	<b>11</b>	<b>23</b>
<b>MANDATORY COURSE</b>						
1		Internship Training	2	0	0	2*
<i>*Mandatory course. No credit, only pass is must to qualify for degree</i>						

### SEMESTER - VIII

S. No	Course Code	Course Name	L	T	P	C
<b>PRACTICAL</b>						
1		Project Work – Phase II	0	0	12	5
<b>TOTAL</b>			<b>2</b>	<b>0</b>	<b>12</b>	<b>5</b>

### OPEN ELECTIVES OFFERED TO OTHER DEPARTMENTS

S. No	Course Code	Course Name	L	T	P	C
1		Non Destructive Examination	3	0	0	3
2		Industrial Automation & Robotics	3	0	0	3
3		Industrial Safety	3	0	0	3

### ELECTIVES

S. No	Course Code	Course Name	L	T	P	C
<b>SIXTH SEMESTER (Elective – I)</b>						
1		Metal Cutting & Tool Design	2	0	0	2
2		Design of Jigs, Fixtures & Press Tools	2	0	0	2
3		Computational Fluid Dynamics	2	0	0	2
4		Principles of Management	2	0	0	2
5		Unconventional Machining Processes	2	0	0	2
<b>SEVENTH SEMESTER (Elective –II&amp;III)</b>						
1		Refrigeration & Air – Conditioning	2	0	0	2
2		Renewable Sources of Energy	2	0	0	2
3		Automated Medical Instrumentation	2	0	0	2
4		Waste Management and Energy Recovery	2	0	0	2
5		Maintenance Engineering	2	0	0	2
6		Entrepreneurship development	2	0	0	2

<b>Semester</b>	<b>Credits</b>
I	24
II	24
III	26
IV	27
V	27
VI	26
VII	23
VIII	5
<b>TOTAL CREDITS TO BE EARNED</b>	<b>182</b>

Chairman,  
Board of Studies  
Mechanical & Automation Engineering  
PSNCET (Autonomous)