

## Bachelor of Technology in Mechanical Engineering (Robotics)

## School of Mechanical Engineering

Programme Credit Structure		Credits					
<b>University Core Courses</b>		<b>80</b>			MEC2004	Fluid Mechanics	3 2 4
<b>Programme Core Courses</b>		<b>40</b>			MEC2005	Fundamentals of Manufacturing Processes	3 2 4
<b>Programme Elective / Spl. Elective</b>		<b>20</b>			MEC3002	Theory of Machines	3 2 4
<b>University Elective</b>		<b>20</b>			MEC3001	Heat and Mass Transfer	3 2 4
<b>Total Graded Credit Requirement</b>		<b>160</b>			MEC3004	Machine Design	3 2 4
<b>University Core</b>		<b>80</b>			MEC2018	Thermal Engineering Systems	3 2 4
		<b>T</b>	<b>P</b>	<b>C</b>	MEC 3029	Machining Processes and Workshop Technology	3 2 4
	Science Basket			20	<b>Programme Electives</b>		
MAT1001	Calculus for Engineers	3	2	4	MEC4002	Finite Element Method	3 2 4
MAT1002	Applications of Differential and Difference Equations	3	2	4	MEC4017	Introduction to Mechanical Vibrations	3 2 4
MAT1011	Applied Statistics	3	2	4	MEC2008	Product Design and Development	3 0 3
PHY1008	Modern Physics	3	2	4	MEC3005	Automation in Manufacturing	3 2 4
CHY1009	Chemistry and Environmental Studies	3	2	4	MEC2021	Mechatronics	3 0 3
	Engineering Foundation			16	MEC****	Fundamentals of Robotics	4 0 4
CSE1012	Problem Solving using Python	3	2	4	MEC****	Kinematics & Dynamics of Robots	3 2 4
CSE2005	Object Oriented Programming using JAVA	3	2	4	MEC3028	Robot Programming	3 2 4
CSE2001	Data Structures and Algorithms	3	2	4	MEC2015	Instrumentation and Control Basics	3 2 4
ECE1002	Fundamentals of Electrical and Electronics Engineering	3	2	4	MEC4014	Advanced Strength of Materials	3 0 3
	Humanities and Management			18	MEC4016	Fracture Mechanics	3 0 3
ENG1001/	English for Essential Communication/			3	MEC3011	Operations Research	3 0 3
ENG1002	English for Effective Communication	2	2	3	MEC2014	Production Planning and Inventory Control	3 0 3
ENG1002/	English for Effective Communication /			3	<b>University Electives</b>		
ENG2001	English for Professional Communication	2	2	3	<b>20</b>		
FRLxxxx	Foreign Language	2	0	2	Engineering   Sciences   Humanities   Social Sciences   Liberal arts   Economics   Finance   Management		
MGT1040	Entrepreneurship	3	2	4	<b>Honours Degree (20 credits)</b> - Students can opt for an Honours Degree" in the same discipline by earning 20 credits in addition to the minimum credit requirement of the Undergraduate Degree from the courses listed in the Honours options		
MGT1001	Ethics and Values	2	0	2	<b>Minors Degree (20 credits)</b> - Students can opt for a "Minor Degree" in other disciplines 20 credits in addition to the mini-mum credit requirement of the Undergraduate Degree from the courses listed in the Minor options		
	Indian Studies	2	0	2	<b>Double Major Degree (40 credits)</b> -Students can opt for a "Double Major" in other disciplines by earning 40 credits in addition to the minimum credit requirement of the Undergraduate Degree from the courses listed in the Second Major options.		
STSxxxx	Qualitative and Quantitative Skills Practice I	3	0	1			
STSxxxx	Qualitative and Quantitative Skills Practice II	3	0	1			
	Projects and Internships			26			
BIC4002	Industrial Internship/ Senior Design Project	0	0	12			
CAP4001	Capstone	0	0	6			
SIT1001	Summer Internship	0	0	2			
ECS2002	Engineering Clinics - System Design	0	4	2			
MEC1002	Engineering Graphics	0	4	2			
EXCXXXX	Extracurricular Activities			2			
<b>Programme Core</b>		<b>40</b>					
MEC1008	Engineering Mechanics	4	0	4			
MEC2002	Thermodynamics	4	0	4			
MEC2003	Strength of Materials	3	2	4			