

**K L E F**  
**Department of Mechanical Engineering**  
**M.Tech-Robotics & Mechatronics 2018-19 Course Structure**

**First Year (First Semester):**

S. No.	Course Code	Course Title	Periods			Contact Hours	Credits
			L	T	P		
1	18 ME 5101	Fundamentals of Mechatronics	3	1	0	4	4
2	18 ME 5102	Advanced Engineering Mathematics	3	1	0	4	4
3	18 ME 5103	Sensors and Actuators	3	1	0	4	4
4	18 ME 5104	Modeling and Simulation of Mechatronic Systems	3	0	2	4	4
5		Elective – 1	3	0	0	3	3
6		Elective – 2	3	0	0	3	3
7	18 IE 5149	Seminar	0	0	4	4	2
<b>Total</b>			<b>18</b>	<b>3</b>	<b>6</b>	<b>26</b>	<b>24</b>

**First Year (Second Semester):**

S. No.	Course Code	Course Title	Periods			Contact Hours	Credits
			L	T	P		
1	18 ME 5205	Robotics: Advanced Concepts and Analysis	3	1	0	4	4
2	18 ME 5206	Control of Mechatronic Systems	3	1	0	4	4
3	18 ME 5207	Mechatronics Product Design	3	1	0	4	4
4	18 ME 5208	Precision Engineering	3	1	0	4	4
5		Elective – 3	3	0	0	3	3
6		Elective – 4	3	0	0	3	3
7	18 IE 5250	Term Paper	0	0	4	4	2
<b>Total</b>			<b>18</b>	<b>4</b>	<b>4</b>	<b>26</b>	<b>24</b>

**Second Year (First & Second Semester):**

S.No	Course code	Course Title	Periods			Credits
			L	T	P	
1	18 IE 6050	Dissertation	0	0	72	36

## ELECTIVE COURSES

S.No	Course code	Course Title	Periods			Credits
			L	T	P	
<b>Elective-1</b>						
1	18 ME 51A1	Signal Processing in Mechatronic Systems	3	0	0	3
2	18 ME 51A2	MEMS and NEMS	3	0	0	3
3	18 ME 51A3	Vehicle Dynamics and Multi-body Systems	3	0	0	3
<b>Elective-2</b>						
1	18 ME 51B1	Emerging Smart Materials for Mechatronics Applications	3	0	0	3
2	18 ME 51B2	Intelligent Visual Surveillance	3	0	0	3
3	18 ME 51B3	Microprocessors and Embedded Systems	3	0	0	3
<b>Elective-3</b>						
1	18 ME 52C1	Computational Fluid Dynamics	3	0	0	3
2	18 ME 52C2	Nonlinear Optimization	3	0	0	3
<b>Elective-4</b>						
1	18 ME 52D1	Industrial Automation	3	0	0	3
2	18 ME 52D2	Fuzzy Sets and Artificial Intelligence	3	0	0	3