

Structure B.Tech. Mechanical Engineering

Semester I

Course Name	Credits
Applied Physics	3
Engineering Mathematics – 1	4
Engineering Graphics	1
Computer Programming (C / Python)	2
English (Professional Communication)	2
Applied Physics lab	1
Engineering Graphics Lab	2
Computer Programming Lab	1
Workshop 1 (Job Work / Hands on Exposure)	1

Semester II

Course Name	Credits
Physics for Mechanical Engineers	4
Engineering Mathematics - 2	4
Applied Chemistry	2
Graphics for Mechanical Engineers	1
Introduction to Mechanical Engineering	2
Physics for Mechanical Engineers Lab	1
Chemistry Lab	1
Graphics for Mechanical Engineers - Lab.	2
Workshop -2	2
Introduction to Mechanical Engineering Lab	1
Environmental Science	0

Semester III

Course Name	Credits
Engineering Mathematics - 3	3
Basic Electrical Engineering	3
Computer Aided Machine Drawing (CATIA / AUTOCAD)	1
Engineering Mechanics (Statics and Dynamics)	3
Fluid Mechanics	3
Material Science	3
Basic Electrical Engineering Laboratory	1
Computer Aided Machine Drawing Laboratory	1
Mechanics Laboratory (Mechanics/FM)	1
Material Science Laboratory	1
Essence of Indian Traditional Knowledge	0

Semester IV

Course Name	Credits
Basic Electronics Engineering	3
Fluid Machinery and Fluid Power	3
Strength of Machine Elements	3
Theory of Machines –	3
Manufacturing Processes	4
Thermodynamics	3
Basic Electronics Engineering Laboratory	1
Fluid Machinery and Fluid Power Laboratory	1
Theory of Machines - 1 Laboratory	1
Environmental Science	0

Semester V

Course Name	Credits
Theory of Machines – 2	3
Applied Thermodynamics	3
Mechanical Design	3
Engineering Metallurgy	3
Heat Transfer	3
Humanities Open Elective - 1	3
(Industrial Psychology / Finance and Accounting)	
Theory of Machines - 2 Laboratory	1
Applied Thermodynamics – Laboratory	1
Mechanical Design Laboratory	1
Heat Transfer Laboratory	1

Semester VI

Course Name	Credits
Mechatronics	2
Production Technology and Metrology	3
Design of machine elements	3
Professional Elective Course 1	3
Professional Elective Course 2	3
Humanities Open Elective – 2 (Operation Research/Economics)	3
Mechatronics Laboratory	1
Production Technology and Metrology Laboratory	1
Design of Machine Elements Laboratory	1
Summer Internship	3

Semester VII

Course Name	Credits
Computational Methods for Mechanical Engineers	3
Professional Elective Course 3	3
Professional Elective Course 4	3
Open Elective Course 1	3
Open Elective Course 2	3
Computational Methods for Mechanical Engineers Laboratory	1
Seminar	1
Project Stage – 1 (SAP, WILO,C4i4 Lab,IES, Unity, HCL Technologies but not limited to this)	3

Semester VIII

Course Name	Credits
Professional Elective Course 4	3
Professional Elective Course 5	3
Open Elective Course – 3	3
Open Elective Course - 4 / Interdisciplinary mini-project	3
Project Stage – 2 (SAP, WILO,C4i4 Lab,IES, Unity, HCL Technologies but not limited to this)	6