

BE(Hons) Mechanical Engineering - 2024

With Minor in Aerospace Engineering

1st Year Engineering

S1	ENGR101 Foundations of Engineering	EMTH118 Engineering Mathematics 1A	PHYS101 Engineering Physics A	CHEM111 Chemical Principles and Processes
S2	ENGR102 Engineering Mechanics	EMTH119 Engineering Mathematics 1B	COSC 131 Introduction to Programming for Engineers	Elective
ENGR100 Academic Writing Assessment				

2nd Year Engineering

S1	ENME201 Design Communication	ENME202 Stress, Strain and Deformation in Machine Elements	ENME215 Engineering Thermodynamics	EMTH210 Engineering Mathematics 2
S2	ENME203 Dynamics and Vibrations	ENME207 Materials Science and Engineering	ENME221 Engineering Design and Manufacture	EMTH271 Mathematical Modelling and Computation 2
ENME199 Workshop Training Course for Mechanical and Mechatronics Engineering				

3rd Year Engineering

S1	ENME301 Engineering Design and Production Management	ENME303 Controls and Vibrations	ENME307 Performance of Engineering Materials	ENME314 Fluid Mechanics
S2	ENME302 Computational and Applied Mechanical Analysis	ENME362 (in lieu of ENME311) Aerospace Engineering Design	ENME315 Heat Transfer	ENME313 Electro Technology for Mechanical Engineers

4th Year Engineering

S1	ENME 408 Honours R&D Project with Aerospace Topic	ENME 401 Mechanical Systems Design with Aerospace Focus	Aerospace Minor Elective from list below (either semester)	ELECTIVE
S2		ENME 418 Engineering Management and Professional Practice for Mechanical Engineers	Aerospace Minor Elective from list below (either semester)	ELECTIVE

CONTROLS AND ROBOTICS

ENME403 Linear Systems Control and System Identification (S1)
ENME423 Instrumentation and Sensors (S1)
ENMT482 Robotics (S2)

MATERIALS ENGINEERING

ENME407 Advanced Materials Science and Engineering (S1)
ENME417 Adv Composite, Polymeric and Ceramic Materials (S2)
ENME405 Energy Systems Engineering (**)

THERMO-FLUIDS-ENERGY

ENME465 HVAC Engineering (S1)
ENME404 Aero and Ground Vehicle Dynamics (S2)
ENME460 Propulsion (S2)

DESIGN AND MANUFACTURING

ENME492 Industry 4.0 Intelligent Manufacturing (S1)
ENME406 Eng Product Design & Analysis (S2)
ENME411 Advanced Mech System Design (S2)

SPECIAL TOPICS - 2024

ENME452 Computational Materials Engineering(S1)

DYNAMICS, VIBRATIONS AND ACOUSTICS

ENME412 Advanced Vibrations (S1)
ENME402 Acoustics and Vibrations (**)

MINOR IN AEROSPACE ENGINEERING

ENME404 Aero and GV Dynamics (S2)
ENME460 Aerospace Propulsion (S2)
ENGR401 Computational Fluid Mechanics (S1)
ENME488 Special Topic: Mechanics of Flight & Spaceflight (S2)
ENME422 Special Topic: Aerospace Structures (S1)

Final Year Electives