

BE(Hons) Mechanical Engineering – 2022

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 Quality	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 Design and Production Management	ENME315 Heat Transfer	ENME313 Electro Tech for Mechanical Engineers

4th Year Engineering

S1	ENME 408 Honours R&D Project with BioMedical Topic	ENME 401 Mechanical Systems Design	Aerospace Minor Elective from list below (either semester)	ELECTIVE 2
S2		ENME 418 Engineering Management and Professional Practice for Mechanical Engineers	Aerospace Minor Elective from list below (either semester)	ELECTIVE 3

CONTROLS AND ROBOTICS

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

SPECIAL TOPICS - 2021

ENME483 HVAC Engineering (S2)
ENME484 Industry 4.0 Intelligent Manufacturing (S1)
ENME486 Aerospace Structures (S1)

MATERIALS ENGINEERING

ENME407 Advanced Materials Science and Engineering (S1)
ENME417 Adv Composite, Polymeric and Ceramic Materials (**)
ENME427 Engineering Failure Analysis and Prevention (S2)

Final Year Electives

DYNAMICS, VIBRATIONS AND ACOUSTICS

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

THERMO-FLUIDS-ENERGY

ENGR401 Computational Fluid Mechanics (S1)
ENME404 Aero and Ground Vehicle Dynamics (S2)
ENME405 Energy Systems Engineering (S1)
ENME460 Propulsion (S2)

DESIGN AND MANUFACTURING

ENME406 Eng Product Design & Analysis (S2)
ENME411 Advanced Mech System Design (**)

MINOR IN AEROSPACE ENGINEERING

ENME404 Aero and GV Dynamics (S2)
ENME460 Aerospace Propulsion (S2)
ENME486 Special Topic: Aerospace Structures (S1)
ENGR401 Computational Fluid Mechanics (S1)

** Not Offered in 2021