

MECHANICAL ENGINEERING PROGRAM (MECH)

School of Engineering, College of Engineering and Physical Sciences

Mechanical Engineering at Guelph is built around concepts of sustainability and sustainable design to equip graduates to tackle issues associated with emerging technologies. Graduates in mechanical engineering are able to apply mathematical, scientific and engineering principles to a wide variety of fields and find employment across the private and public sectors. The program provides students with a common base of knowledge essential to mechanical engineering, and then allows them to select from a menu of electives to attain a degree of specialization in one of five areas, or to choose electives which broaden their general knowledge base. Elective concentrations are available in the areas of wind and solar energy, food and beverage engineering, mechatronics, manufacturing system design and biomechanics.

Major (Honours Program)

Code	Title	Credits
Semester 1		
CHEM*1040	General Chemistry I	0.50
CIS*1500	Introduction to Programming	0.50
ENGG*1100	Engineering and Design I	0.75
MATH*1200	Calculus I	0.50
PHYS*1130	Physics with Applications	0.50
Semester 2		
ENGG*1210	Engineering Mechanics I	0.50
ENGG*1500	Engineering Analysis	0.50
MATH*1210	Calculus II	0.50
PHYS*1010	Introductory Electricity and Magnetism	0.50
0.50 restricted electives		0.50
Semester 3		
ENGG*1070	Occupational Health and Safety	0.25
ENGG*2100	Engineering and Design II	0.75
ENGG*2120	Material Science	0.50
ENGG*2160	Engineering Mechanics II	0.50
ENGG*2400	Engineering Systems Analysis	0.50
MATH*2270	Applied Differential Equations	0.50
Semester 4		
ENGG*2180	Introduction to Manufacturing Processes	0.50
ENGG*2230	Fluid Mechanics	0.50
ENGG*2340	Kinematics and Dynamics	0.50
ENGG*2450	Electric Circuits	0.50
MATH*2130	Numerical Methods	0.50
STAT*2120	Probability and Statistics for Engineers	0.50
Semester 5		
ENGG*3240	Engineering Economics	0.50
ENGG*3260	Thermodynamics	0.50
ENGG*3280	Machine Design	0.75
ENGG*3510	Electromechanical Devices	0.50
HIST*1250	Science and Technology in a Global Context	0.50

0.50 restricted electives		0.50
Semester 6		
ENGG*3100	Engineering and Design III	0.75
ENGG*3370	Applied Fluids and Thermodynamics	0.50
ENGG*3410	Systems and Control Theory	0.50
ENGG*3430	Heat and Mass Transfer	0.50
1.00 restricted electives		1.00
Semester 7		
ENGG*3140	Mechanical Vibration	0.50
ENGG*4000	Proposal for Engineering Design IV	0.00
2.50 restricted electives		2.50
Semester 8		
ENGG*4160	Mechanical Engineering Design IV	1.00
1.75 restricted electives		1.75

Restricted Electives

(see Program Guide for more information)

The Engineering Program requires Mechanical Engineering students to complete the following combination of elective credits to complete their program:

- 3.50 credits from the MECH-1 Mechanical Engineering electives
- 0.75 credits from the MECH-2 Mechanical Engineering design electives
- 2.00 credits from Complementary Studies electives

Consult the Program Guide for further information on the prerequisite requirements specific to each elective. Students can take a maximum of 1.50 credits at the 1000 level from the above list of electives.