
TERM 8 - CLASS OF 2025 - Winter 2025

COMPLEMENTARY STUDIES

| | Course # | Course Name | Instructor |
|------|----------|---|-------------|
| ENGI | 4102 | Engineering Economics | Shekari, E. |
| ENGI | 8151 | Technology, Sustainable Society and International Development | Hashemi, S |
| ENGI | 8155 | Ethics in a Technological World | Rosales, J. |

| CIVIL | | |
|----------|-------------|------------|
| Course # | Course Name | Instructor |

Required:

| | | | |
|------|-----------|---|-------------------------|
| ENGI | 8152(004) | Engineering Professionalism II | Rosales, J. / Luther, R |
| CIV | 8000 | Civil Engineering Project - multiple sections | Bruneau, S. , Peach, B |
| CIV | 8830 | Contract Law and Labour Relations | Wellon, R. |

Technical Electives - choose three electives in total

Choose up to 3 electives from:

| | | | |
|-----|------|-------------------------------|------------|
| CIV | 8550 | Structural Building Systems | Adluri, S |
| CIV | 8150 | Municipal Engineering | Peach, B |
| CIV | 8630 | Environmental Assessment | Neisan, R |
| CIV | 8570 | Coastal and Ocean Engineering | Bruneau, S |
| CIV | 8580 | Subsea Pipeline Engineering | Shiri, H |

Choose up to 1 elective from:

| | | | | |
|-----------------|-----------------|---|-----------------------|-----------|
| ONAE | 8074 | Arctic Ocean Engineering | Quinton, B | cancelled |
| PROC | 8276 | Design of Natural Gas Handling Equipment | Aborig,A | |
| PROC | 8170 | Reliability Engineering | Mamudu, A | |
| PROC | 8291 | Sustainable Oil Production & Gas Storage II | Aborig,A | |

COMPUTER

| | | | | |
|-----------------|-----------------|--|-----------------------------------|-----------|
| | | Required: | | |
| ENGI | 8152(002) | Engineering Professionalism II | Rosales, J. / Luther, R | |
| ECE | 8010 | CoE Design Project | Peters, D | |
| ECE | 8400 | RT Operating Sys / Embedded and RT Systems Design | Anderson, J. | |
| | | Technical Electives (choose 2): | | |
| ECE | 8210 | Supervisory Control and Data Acquisition | Masek, V | cancelled |
| ECE | 8410 | Computer Vision | Hamilton, M. | cancelled |
| ECE | 8620 | Wireless and Mobile Communications | Wanasinghe, T | |
| ECE | 8600 | Design of Digital Signal Processing Systems | Noel, A | |
| ECE | 8610 | Filter Synthesis | Power, S | |
| ECE | 8420 | Cryptography | Heys, H | Cancelled |
| ENGI | 8112 | Sp Types in Engineering | Moloney, C | Cancelled |
| | | Computer Science elective (must be approved by Department Head) | | |
| ENGI | 8153 | Engineering in Medicine | Nakhla, S./Power, S./Czarnuch, S. | |
| | | Free Elective: | | |
| | | approved by Department Head | | |
| | | Biomedical Stream students only | | |
| HKR | 4703-002 | Occupational Ergonomics and Sport Biomechanics | Byrne, J | |
| | | 6 credit hours from: ECE 8410, 8600, other courses as specified by the Department Head | | |

ELECTRICAL

| | | | | |
|-----------------|-----------------|--|-----------------------------------|-----------|
| | | Required: | | |
| ENGI | 8152(002) | Engineering Professionalism II | Rosales, J. / Luther, R | |
| ECE | 8000 | EE Design Project | Peters, D | |
| ECE | 8610 | Filter Synthesis | Power, S | |
| | | Technical Electives (choose 2): | | |
| ECE | 5500 | Digital Systems | Wanasinghe, T | |
| ECE | 8210 | Supervisory Control and Data Acquisition | Masek, V | Cancelled |
| ECE | 8410 | Computer Vision | | cancelled |
| ECE | 8600 | Design of Digital Signal Processing Systems | Noel, A | |
| ECE | 8620 | Wireless and Mobile Communications | Wanasinghe, T | |
| ENGI | 8153 | Engineering in Medicine | Nakhla, S./Power, S./Czarnuch, S. | |
| ECE | 8700 | Antennas | Al-Habashneh, A | Cancelled |
| ENGI | 8112 | Sp Types in Engineering | Moloney, C | Cancelled |
| | | Free Elective: | | |
| | | approved by Department Head | | |
| | | Biomedical Stream students only | | |
| HKR | 4703-002 | Occupational Ergonomics and Sport Biomechanics | Byrne, J | |
| | | 6 credit hours from: ECE 8410, 8600, other courses as specified by the Department Head | | |

MECHANICAL

| | | | | |
|----------------|-----------------|---|-----------------------------------|-----------|
| | | Required: | | |
| ENGI | 8152(001) | Engineering Professionalism II | Rosales, J. / Luther, R | |
| ME | 8705 | Mechanical Project II | Morrissey, L. | |
| | | 9 credit hours from Technical Stream Courses | | |
| | | Students may experience scheduling difficulties if courses are selected from more than one technical stream. | | |
| | | Complementary studies course may be taken out of term if not yet completed as per Complementary Studies Self Audit form. | | |
| | | <u>Mechanics and Materials</u> | | |
| | | <u>All stream students are required to take:</u> | | |
| ME | 8604 | Fatigue and Fracture | Elruby, A. | |
| | | <u>Plus two technical electives from below:</u> | | |
| ME | 8106 | Corrosion and Corrosion Control | Alidokht, S. | |
| ME | 8304 | Machine Dynamics | Yang, J. | |
| ME | 8305 | Modelling and Simulation of Dynamic Systems | Rideout, G. | |
| ME | 8606 | Mechanical Behaviour of Composites | Nakhla, S | |
| ME | 8902 | Arctic Offshore Engineering | Taylor, R. | |
| | | <u>Mechatronics</u> | | |
| | | <u>All stream students are required to take:</u> | | |
| ME | 8305 | Modelling and Simulation of Dynamic Systems | Rideout, G. | |
| | | <u>Plus two technical electives from below:</u> | | |
| ENGI | 8153 | Engineering in Medicine | Nakhla, S./Power, S./Czarnuch, S. | |
| ECE | 8410 | Computer Vision | | cancelled |
| ECE | 8610 | Filter Synthesis | Power, S | |
| ME | 8304 | Machine Dynamics | Yang, J. | |
| | | <u>Petroleum Technical Stream</u> | | |
| | | <u>All stream students are required to take:</u> | | |
| PROC | 8291 | Sustainable Oil Production & Gas Storage II | Aborig, A | |
| | | <u>Plus two technical electives from below:</u> | | |
| PROC | 8276 | Design of Natural Gas Handling Equipment | Aborig, A | |
| PROC | 8292 | Drilling Engineering | Lin, C | |
| ME | 8106 | Corrosion and Corrosion Control | Alidokht, S. | |
| ME | 8902 | Arctic Offshore Engineering | Taylor, R. | |
| | | <u>Thermo Fluids</u> | | |
| | | <u>All stream students are required to take:</u> | | |
| ME | 8406 | Design of Thermal Systems | Etiminan, A. | |
| | | <u>Plus two technical electives from below:</u> | | |
| ME | 8407 | Sustainable Energy Systems | Pope, K | |
| ME | 8504 | Computational Fluid Mechanics | Etiminan, A. | |
| ME | 8506 | Advanced Fluid Dynamics | Etiminan, A. | |
| | | <u>Biomedical Stream</u> | | |
| | | <u>All stream students are required to take:</u> | | |
| HKR | 4703 | Occupational Ergonomics and Sport Biomechanics | Byrne, J | |
| | | <u>Plus two technical electives from below:</u> | | |
| ENGI | 8153 | Engineering in Medicine | Nakhla, S./Power, S./Czarnuch, S. | |
| ENGI | 8158 | Human Factors and System Safety | Smith, D | |
| ECE | 8410 | Computer Vision | Karami, E | cancelled |
| ME | 8504 | Computational Fluid Mechanics | Etiminan, A. | |
| | | * Other courses may be taken with approval of Department Head | | |

If scheduling permits:

Students may replace stream Technical Electives with Technical Electives or required courses from another stream

With Department Permission, students may replace Stream Required Courses with Required Courses from other streams

ONAE

Required:

| | | | |
|------|-----------|--------------------------------|-------------------------|
| ENGI | 8152(005) | Engineering Professionalism II | Rosales, J. / Luther, R |
| ONAE | 8000 | ONAE Project | Veitch, B |

Technical Electives (choose 3):

| | | | | |
|-----------------|-----------------|---|-----------------------|-----------|
| ONAE | 8034 | Applied Acoustics | Moro, L | |
| ONAE | 8054 | Advanced Marine Vehicles | Molyneux, D | |
| ONAE | 8074 | Arctic Ocean Engineering | Daley, C. | cancelled |
| ONAE | 8075 | Finite Element Analysis of Marine Structures | Quinton, B | cancelled |
| ENGI | 8158 | Human Factors and System Safety | Smith, D. | |

Other courses with permission from the Department Head

PROCESS

| | | | |
|------|-----------|--|-------------------------|
| ENGI | 8152(003) | Engineering Professionalism II | Rosales, J. / Luther, R |
| PROC | 8040 | Process Engineering Project | Ahmed, S |
| | | <u>Process Technical Stream</u> | |
| PROC | 8141 | Bioprocess Engineering II | Zhang, Yan |
| PROC | 8151 | Industrial Pollution Control | Zhang, Yahui |
| PROC | 8293 | Extractive Metallurgy | Zhang, Yahui |
| | | Choose one of: | |
| ME | 8106 | Corrosion and Corrosion Control | Alidokht, S. |
| | | <u>Petroleum Technical Stream</u> | |
| PROC | 8291 | Sustainable Oil Production & Gas Storage II | Aborig, A |
| PROC | 8292 | Drilling Engineering | Lin, Cui |
| | | Choose one of: | |
| PROC | 8170 | Reliability Engineering | Mamudu, A |
| PROC | 8276 | Decarbonization Strategies in the Gas Industry | Aborig, A |

One Free Elective

one free elective which must be a 5000-level or higher Engineering course, or a 2000-level or higher course either from the Faculty of Arts or the Faculty of Science or a 3000-level or higher course from the Faculty of Business Administration. Selection of a course must be approved by the Department Head.
