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**COMPLEMENTARY STUDIES**

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Course #	Course Name	Instructor
ENGI 4102	Engineering Economics	Bazan, C
ENGI 8151	Technology, Sustainable Society and International Development	Hurley, S

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**CIVIL**

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Course #	Course Name	Instructor
	Required:	
ENGI 8152(004)	Engineering Professionalism II	Spracklin-Reid/ Rosales
CIV 8000	Civil Engineering Project - multiple sections	Bruneau, S/ Peach, B
CIV 8830	Contract Law and Labour Relations	Wellon, R

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**Technical Electives - choose three electives in total**

**Choose up to 3 electives from:**

CIV	8550	Structural Building Systems	Adluri, S
CIV	8150	Municipal Engineering	Snelgrove, K
CIV	8630	Environmental Assessment	Saady, N
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
PROC	8276	Design of Natural Gas Handling Equipment	Aborig,A
PROC	8270	Reliability Engineering (Distance)	Khan, F/TBA
PROC	8290	Reservoir Engineering	Aborig,A

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**COMPUTER**

Required:

ENGI	8152(002)	Engineering Professionalism II	Spracklin-Reid/ Rosales
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	Jamil, M
ECE	8410	Computer Vision	Hamilton, M
ECE	8620	Wireless and Mobile Communications	Wanasinghe, T
ECE	8600	Design of Digital Signal Processing Systems	Karami, E.
ECE	8610	Filter Synthesis	Power, S
ECE	8420	Cryptography	Heys, H
		Computer Science elective (must be approved by Department Head)	
ENGI	8103	Engineering in Medicine	Power, Czarnuch, Nakhla
		Free Elective: <a href="#">approved by Department Head</a>	
		<b>Biomedical Stream students only</b>	
HKR	4703-002	Occupational Ergonomics and Sport Biomechanics 6 credit hours from: ECE 8410, 8600, 8420, other courses as specified by the Department Head	Byrne, J

### ELECTRICAL

		Required:	
ENGI	8152(002)	Engineering Professionalism II	Spracklin-Reid/ Rosales
ECE	8000	EE Design Project	Peters, D
ECE	8600	Design Digital Sig Proc Syst	Karami, E.
ECE	8610	Filter Synthesis	Power, S
		Technical Electives (choose 2):	
ECE	5500	Digital Systems	Wanasinghe, T
ECE	8210	Supervisory Control and Data Acquisition	Jamil, M
ECE	8410	Computer Vision	Hamilton, M
ECE	8600	Design of Digital Signal Processing Systems	Karami, E.
ECE	8620	Wireless and Mobile Communications	Wanasinghe, T
ECE	8800	Power System Operation	Jeyasurya, B
ECE	8103	Engineering in Medicine	Power, Czarnuch, Nakhla
		Free Elective: <a href="#">approved by Department Head</a>	
		<b>Biomedical Stream students only</b>	
HKR	4703-002	Occupational Ergonomics and Sport Biomechanics 6 credit hours from: ECE 8410, 8600, other courses as specified by the Department Head	Byrne, J

### MECHANICAL

		Required:	
ENGI	8152(001)	Engineering Professionalism II	Spracklin-Reid/ Rosales
ME	8705	Mechanical Project II	Yang, J.
		<b>9 credit hours from Technical Stream Courses</b>	
		<b>Students may experience scheduling difficulties if courses are selected from more</b>	

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than one technical stream.

Complementary studies course may be taken out of term if not yet completed as per Complementary Studies Self Audit form.

**Mechanics and Materials**

**All stream students are required to take:**

ME 8604 Fatigue and Fracture El-Ruby, A.

**Plus two technical electives from below:**

ME 8106 Corrosion and Corrosion Control Caines, 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

**Mechatronics**

**All stream students are required to take:**

ME 8305 Modelling and Simulation of Dynamic Systems Rideout G.

**Plus two technical electives from below:**

ENGI 8103 Engineering in Medicine Nakhla, S  
ECE 8410 Computer Vision Karami, E  
ECE 8610 Filter Synthesis Power, S  
ME 8304 Machine Dynamics Yang, J.

**Petroleum Technical Stream**

**All stream students are required to take:**

PROC 8290 Reservoir Engineering Aborig, A

**Plus two technical electives from below:**

PROC 8276 Design of Natural Gas Handling Equipment Aborig, A  
PROC 7292 Drilling Engineering for Petr. Explor. & Prod. Butt, S  
ME 8106 Corrosion and Corrosion Control Caines, S.

**Thermo Fluids**

**All stream students are required to take:**

ME 8406 Design of Thermal Systems Nyantekyi-Kwakye, B.

**Plus two technical electives from below:**

ME 8407 Sustainable Energy Systems Pope, K  
ME 8504 Computational Fluid Mechanics Nyantekyi-Kwakye, B.  
ME 8506 Advanced Fluid Dynamics Bhour, M

**Biomedical Stream**

**All stream students are required to take:**

HKR 4703 Occupational Ergonomics and Sport Biomechanics Byrne, J

**Plus two technical electives from below:**

ENGI 8103 Engineering in Medicine Nakhla, S  
ENGI 8108 Human Factors and System Safety Smith, D  
ECE 8410 Computer Vision Karami, E  
ME 8504 Computational Fluid Mechanics Nyantekyi-Kwakye, B.

\* Other courses may be taken with approval of Department Head

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**ONAE**

Required:

ENGI 8152(005) Engineering Professionalism II Spracklin-Reid/ Rosales  
ONAE 8000 ONAE Project Veitch, B

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		Technical Electives (choose 3):	
ONAE	8034	Applied Acoustics	Moro, L
ONAE	8054	Advanced Marine Vehicles	Molyneux, D
ONAE	8074	Arctic Ocean Engineering	Daley, C.
ONAE	8075	Finite Element Analysis of Marine Structures	Quinton, B
ENGI	8108	Human Factors and System Safety	Smith, D.

Other courses with permission from the Department Head

**Term 8, Class of 2019 should follow the 2015-16 University Calendar**

PROCESS			
ENGI	8152(003)	Engineering Professionalism II	Spracklin-Reid/ Rosales
PROC	8040	Process Engineering Project	Ahmed, S
		<b><u>Process Technical Stream</u></b>	
PROC	8151	Industrial Pollution Control	Zhang, Yahui
PROC	8191	Mineral and Metallurgical Process Engineering	Zhang, Yahui
		<b>Choose one of:</b>	
ME	8106	Corrosion and Corrosion Control	Caines, S
		<b><u>Petroleum Technical Stream</u></b>	
PROC	8290	Reservoir Engineering	Aborig, A
PROC	7292	Drilling Engineering for Petr. Explor. & Prod.	Butt, S
		<b>Choose one of:</b>	
PROC	8270	Reliability Engineering (Distance)	Berrouane, M. T.
PROC	8276	Design of Natural Gas Handling Equipment	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.

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