



**DEGREE CHECKLIST
2024-2025**

**BACHELOR OF ENGINEERING (BEng)
SPACE ENGINEERING**

NAME

STUDENT #

Students are strongly advised to refer to online Academic Calendars before enrolling into courses:
<https://calendars.students.yorku.ca/academic-calendar#/programs>

		COURSES		CREDITS EARNED	GRADE
First Year Courses					
	<input type="checkbox"/>	SC/CHEM 1100 4.00	Chemistry and Materials Science for Engineers		
	<input type="checkbox"/>	LE/EECS 1011 3.00	Computational Thinking Through Mechatronics		
	<input type="checkbox"/>	LE/EECS 1021 3.00	Object Oriented Programming from Sensors to Actuators		
	<input type="checkbox"/>	LE/ENG 1101 4.00	Renaissance Engineer 1: Ethics, Communication and Problem Solving		
	<input type="checkbox"/>	LE/ENG 1102 4.00	Renaissance Engineer 2: Engineering Design Principles		
	<input type="checkbox"/>	LE/ESSE 1012 3.00	The Earth Environment		
	<input type="checkbox"/>	SC/MATH 1013 3.00	Applied Calculus I		
	<input type="checkbox"/>	SC/MATH 1014 3.00	Applied Calculus II		
	<input type="checkbox"/>	SC/MATH 1025 3.00	Applied Linear Algebra		
	<input type="checkbox"/>	SC/PHYS 1800 3.00	Engineering Mechanics		
	<input type="checkbox"/>	SC/PHYS 1801 3.00	Electricity, Magnetism and Optics for Engineers		
Second Year Courses					
	<input type="checkbox"/>	LE/ENG 2001 3.00	Engineering Projects: Management, Economics & Safety		
	<input type="checkbox"/>	LE/ENG 2003 3.00	Effective Engineering Communication		
	<input type="checkbox"/>	LE/ESSE 2030 3.00	Planetary Geophysics		
	<input type="checkbox"/>	LE/ESSE 2220 3.00	Algorithmic and Computational methods for Geomatics and Space Engineering		
	<input type="checkbox"/>	LE/ESSE 2361 3.00	Space Systems Engineering		
	<input type="checkbox"/>	LE/ESSE 2470 3.00	Introduction to Continuum Mechanics		
	<input type="checkbox"/>	LE/MECH 2302 3.00	Dynamics		
	<input type="checkbox"/>	LE/MECH 2401 3.00	Engineering Graphics & CAD Modelling		
	<input type="checkbox"/>	SC/MATH 2015 3.00	Applied Multivariate and Vector Calculus		
	<input type="checkbox"/>	SC/MATH 2271 3.00	Differential Equations for Scientists and Engineers		
	<input type="checkbox"/>	SC/MATH 2930 3.00	Introduction to Probability and Statistics		
	<input type="checkbox"/>	SC/PHYS 2020 3.00	Electricity and Magnetism		
Complementary Studies (3.00 credits)	<input type="checkbox"/>				
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	COURSES			CREDITS EARNED	GRADE
Third Year Courses					
	<input type="checkbox"/>	LE/ENG 3000 3.00	Professional Engineering Practice		
	<input type="checkbox"/>	LE/ESSE 3330 3.00	Materials for Space Applications		
	<input type="checkbox"/>	LE/ESSE 2210 3.00	Engineering and the Environment		
	<input type="checkbox"/>	LE/ESSE 3280 3.00	Physics of the Space Environment		
	<input type="checkbox"/>	LE/ESSE 3360 3.00	Heat Transfer and Thermal Design		
	<input type="checkbox"/>	SC/PHYS 3250 3.00	Introduction to Space Communications		
	<input type="checkbox"/>	LE/MECH 3302 3.00	Mechanisms for Mechanical Systems		
	<input type="checkbox"/>	LE/MECH 3409 3.00	Machine Elements Design		
	<input type="checkbox"/>	SC/PHYS 3050 3.00	Electronics I		
	<input type="checkbox"/>	SC/PHYS 3150 3.00	Electronics II		
Complementary Studies (3.00 credits)	<input type="checkbox"/>				
Fourth Year Courses					
	<input type="checkbox"/>	LE/ENG 4000 6.00	Engineering Project		
	<input type="checkbox"/>	LE/ESSE 4020 3.00	Time Series and Spectral Analysis		
	<input type="checkbox"/>	LE/ESSE 4110 3.00	Dynamics of Space Vehicles		
	<input type="checkbox"/>	LE/ESSE 4350 6.00	Space Hardware		
	<input type="checkbox"/>	LE/ESSE 4360 3.00	Payload Design		
	<input type="checkbox"/>	LE/ESSE 4361 3.00	Space Mission Design		
	<input type="checkbox"/>	LE/ESSE 4370 3.00	Finite Element Methods in Engineering Design		
	<input type="checkbox"/>	LE/ENG 4550 3.00	Introduction to Control Systems		
Two of: LE/EECS 4421 3.00, LE/ESSE 3320 3.00, LE/ENG 4650 3.00, LE/ESSE 3020 3.00, LE/ESSE 3380 3.00, LE/ESSE 3670 3.00, LE/ESSE 4220 3.00, LE/ESSE 4230 3.00, SC/PHYS 3070 3.00, SC/PHYS 4120 3.00, LE/ESSE 4380 4.00	<input type="checkbox"/>				
	<input type="checkbox"/>				
Complementary Studies (6.00 credits)	<input type="checkbox"/>				
	<input type="checkbox"/>				
TOTAL CGPA (minimum cumulative GPA of 5.00 (C+) required to graduate with an Honours degree)					
EECS GPA Prerequisite:					
Most 2000-, 3000-, and 4000-level EECS courses require a cumulative GPA of 4.5 or better over all EECS major courses in addition to other course-specific prerequisites. "Major" courses are all EECS courses with second digit other than 5 and include LE/EECS 1028 3.00 (cross-listed to: SC/MATH 1028 3.00) and LE/EECS 1019 3.00 (cross-listed to: SC/MATH 1019 3.00).					
Participation in Co-op is highly recommended, but is not a degree requirement.					
Notes					
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Complementary Studies - BEng General Education

Essentials

- You need to pass a total of 12 credits to satisfy this requirement
- These credits are typically completed throughout **second, third, and fourth year**
- You need to pass **at least 3** credits from approved humanities/social science subject areas
- The remaining 9 credits must be completed from the humanities/social science subject areas listed on page 1 or the specified courses listed on page 2
- If you wish, you may complete all 12 credits in the approved humanities/social science subject areas

Restrictions & Reminders

- Unless specified with an asterisk (*), Faculty of Science (SC) courses and courses cross-listed to Faculty of Science, **do not** count towards the humanities/social science component (e.g. AP/HIST 2810 3.00 History of Modern Science is cross-listed to SC/STS 2010 3.00 and therefore **does not** count towards Complementary Studies)
- Courses with a focus on math or statistics **do not** count (e.g. MODR 1650)
- PHIL 2100 3.00 Introduction to Logic **does not** count.

Approved Humanities/Social Science Subject Areas:

Students must **complete at least 3 credits** from the subject areas listed below:

Anthropology (ANTH)	English (EN)	Indigenous Studies (INDG)	Philosophy (PHIL)
Canadian Studies (CDNS)	Gender & Women's Studies (GWST)	Linguistics (LING, LIN)	Political Science (POLS)
Children, Childhood & Youth Studies (CCY)	History (HIST)	Modes of Reasoning (MODR)	Religious Studies (RLST)
Communications (COMS, CMDS)	Human Rights and Equity Studies (HREQ)	Multicultural and Indigenous Studies (MIST)	Social Science (SOSC)
Culture (CLTR)	Humanities (HUMA)		Sociology (SOCI)
			Writing (WRIT)

Languages:

American Sign Language (ASL)	Modern Greek (GKM)	German (GR)	Korean (KOR)
Arabic (ARB)	English as a Second Language (ESL)	Hebrew (HEB)Hindi (HND)	Latin (LA)
Catalan (CAT)	French as a Second Language (FSL)	Italian (IT)	Persian (PERS)
Chinese (CH)	French (FR, FRAN)	Jamaican Creole (JC)	Portuguese (POR)
Greek (GK)		Japanese (JP)	Spanish (SP)
			Swahili (SWAH)

The remaining 9 credits must be completed from the humanities/social science subject areas listed on page 1 or the specified courses listed below:

AP/ADMS 1000 3.00	EU/ENVS 3230 3.00	EU/GEOG 2110 3.00	FA/THEA 1500 6.00
AP/ADMS 1010 3.00	EU/ENVS 3320 3.00	EU/GEOG 2220 3.00	FA/THEA1520 3.00
AP/DEMS 1701 3.00	EU/ENVS 3340 3.00	EU/GEOG 2310 6.00	FA/THEA 1900 3.00
AP/DEMS 2700 3.00	EU/ENVS 3410 3.00	EU/GEOG 3070 3.00	FA/THEA 2060 3.00
AP/DEMS 3706 3.00	EU/ENVS 3420 3.00	EU/GEOG 3150 3.00	FA/YSDN 1900 3.00
AP/DEMS 3707 3.00	EU/ENVS 3430 3.00	EU/GEOG 3230 3.00	HH/IHST 1020 6.00
AP/DEMS 3708 3.00	EU/ENVS 3505 3.00	FA/ARTH 1900 3.00	HH/PSYC1010 6.00
AP/DLLL 1000 6.00	EU/ENVS 3520 3.00	FA/ARTH 2350 3.00	LE/TECL1000 3.00
AP/ECON 1000 3.00	EU/ENVS 3740 3.00	FA/ARTH 2390 3.00	LE/TECL3033 3.00
AP/ECON 1010 3.00	EU/ENVS 4011 3.00	FA/ARTH 2620 3.00	LE/TECL 3099 3.00
AP/HUMA 3226 3.00*	EU/ENVS 4140 3.00	FA/CMA 1401 6.00	LW/LAW 3591 3.00
AP/LLS 1000 6.00	EU/ENVS 4161 3.00	FA/CMA 1701 3.00	SB/ENTR 3400 3.00
AP/PPAS 2110 3.00	EU/ENVS 4210 3.00	FA/CMA 1900 3.00	SB/ENTR 3600 3.00
AP/PPAS 2200 3.00	EU/ENVS 4220 3.00	FA/CMA 2401 6.00	SB/ENTR 4500 3.00
AP/PPAS 3000 3.00	EU/ENVS 4225 3.00	FA/DANC 1340 3.00	SC/BC 3010 3.00
AP/PPAS 3120 3.00	EU/ENVS 4230 3.00	FA/DANC 1900 3.00	SC/STS 1411 3.00
AP/PPAS 3122 3.00	EU/ENVS 4400 3.00	FA/DANC 2340 3.00	SC/STS 2110 3.00*
AP/PPAS 3135 3.00	EU/ENVS 4401 3.00	FA/DATT 1900 3.00	SC/STS 2210 3.00
AP/PPAS 3136 3.00	EU/ENVS4402 3.00	FA/MUSI 1500 6.00	SC/STS 2222 3.00
AP/PPAS 3190 6.00	EU/ENVS4420 3.00	FA/MUSI 1510 3.00	SC/STS 2333 3.00
EU/ENVS 3122 3.00	EU/ENVS4430 3.00	FA/MUSI 1520 6.00	SC/STS 2411 3.00
EU/ENVS 3130 3.00	EU/ENVS4440 3.00	FA/MUSI 1530 3.00	SC/STS 3170 3.00*
EU/ENVS 3150 3.00	EU/ENVS4442 3.00	FA/MUSI 1540 6.00	SC/STS 3500 3.00
EU/ENVS 3151 3.00	EU/ENVS4446 3.00	FA/MUSI 1550 6.00	SC/STS 3561 3.00*
EU/ENVS 3160 3.00	EU/ENVS4520 3.00	FA/MUSI 1556 3.00	SC/STS 3600 3.00
EU/ENVS 3170 3.00	EU/ENVS4523 3.00	FA/MUSI 1580 6.00	SC/STS 3725 3.00*
EU/ENVS 3222 3.00	EU/ENVS4800Q 3.00	FA/MUSI 1900 3.00	SC/STS 3726 3.00
EU/ENVS 3226 3.00	EU/GEOG1000 6.00	FA/MUSI 2520 6.00	SC/STS 3765 3.00
			SC/STS 3790 3.00

***AP/HUMA 3226 3.00, SC/STS 2110 3.00, SC/STS 3170 3.00, SC/STS 3561 3.00, and SC/STS 3725 3.00 count as approved humanities/social science credits.**

The following sample combinations demonstrate how complementary studies can be satisfied:

