



**DEGREE CHECKLIST
2016-2017**

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

NAME

STUDENT #

Students are strongly advised to refer to online Academic Calendars before enrolling into courses: <http://calendars.registrar.yorku.ca/>

| | 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/EECS 2031 3.00 | Software Tools | | |
| <input type="checkbox"/> | LE/EECS 2501 1.00 | Fortran and Scientific Computing | | |
| <input type="checkbox"/> | LE/ENG 2001 3.00 | Engineering Projects: Management, Economics & Safety | | |
| <input type="checkbox"/> | LE/ESSE 2030 3.00 | Geophysics and Space Science | | |
| <input type="checkbox"/> | LE/ESSE 2360 3.00 | Fundamentals of 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 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 credits) | <input type="checkbox"/> | | | |

Notes

| | COURSES | | CREDITS EARNED | GRADE |
|--|--------------------------|--|-------------------|-------|
| Third Year Courses | | | | |
| | <input type="checkbox"/> | LE/ENG 3000 3.00 Professional Engineering Practice | | |
| | <input type="checkbox"/> | LE/ENG 3330 3.00 Materials for Space Applications | | |
| | <input type="checkbox"/> | ES/ENVS 2150 3.00 Environment, Technology and Sustainable Society I or 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 3340 3.00 Mechanisms | | |
| | <input type="checkbox"/> | LE/ESSE 3360 3.00 Heat Transfer and Thermal Design | | |
| | <input type="checkbox"/> | LE/ESSE 3610 3.00 Geodetic Concepts | | |
| | <input type="checkbox"/> | SC/PHYS 2030 3.00 Computational Methods for Physicists and Engineers | | |
| | <input type="checkbox"/> | SC/PHYS 3050 3.00 Electronics I | | |
| | <input type="checkbox"/> | SC/PHYS 3150 3.00 Electronics II | | |
| | <input type="checkbox"/> | SC/PHYS 3250 3.00 Introduction to Space Communications | | |
| | <input type="checkbox"/> | SC/PHYS 4110 3.00 Dynamics of Space Vehicles | | |
| Complementary Studies (3 credits) | <input type="checkbox"/> | | | |
| Fourth Year Courses | | | | |
| | <input type="checkbox"/> | LE/ESSE 4020 3.00 Time Series and Spectral Analysis | | |
| | <input type="checkbox"/> | LE/ENG 4000 6.00 Engineering Project | | |
| | <input type="checkbox"/> | LE/ENG 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/ENG 3320 3.00, LE/ENG 4330 3.00, LE/ESSE 3020 3.00, LE/ESSE 4220 3.00, LE/ESSE 4230 3.00, LE/ESSE 4610 3.00, SC/PHYS 3070 3.00, SC/PHYS 4120 3.00 | <input type="checkbox"/> | | | |
| | <input type="checkbox"/> | | | |
| Complementary Studies (6 credits) | <input type="checkbox"/> | | | |
| | <input type="checkbox"/> | | | |
| TOTAL CREDITS & CGPA (minimum overall GPA of 5.00 required to graduate in the BEng program) | | | | |
| General Prerequisite: Most 2000-, 3000-, and 4000-level EECS courses require the following general (that is, common) prerequisites, in addition to other course-specific prerequisites: a cumulative grade point average of 4.50 or better over all completed major EECS courses. Note: "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 the Co-Op Program is highly recommended for all engineering students, but is not a degree requirement. | | | | |
| Notes | | | | |
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| BEng, Space Engineering | | | Page 2 of 2 | |