**University Undergraduate Degree Level Expectations: Space Engineering**

*Depth and Breadth of Knowledge, Knowledge of Methodologies, Application of knowledge, Communication Skills*

With the only accredited space engineering program in Canada, York University offers students an opportunity to fast track a career in the space sector. Our program engages students in a curriculum that familiarizes them with the breadth of skills needed to design, produce, operate, and, manage space systems and missions that utilize the space resource for the benefit of society.

The primary learning outcomes are:

(1) A knowledge of mathematics and science as a foundation for engineering.
(2) A knowledge of electrical and mechanical engineering skills and design principles needed for the design of high-reliability autonomous systems.
(3) The ability to apply engineering methodologies to the design of systems customized for remote operation in space and near-space environments.
(4) The development of a holistic understanding of space engineering from project proposal through to the development, manufacture, launch, and, operation of space systems and space-based information services.
(5) Exposure to methodologies needed to develop successful software and hardware systems customized for space utilization.
(6) The ability to test, verify, and document real-time engineering solutions.
(7) A knowledge of the role, function and regulation of academic, industrial and governmental space organizations nationally and internationally.
(8) The development of communication and interpersonal skills needed for effective communications within inter-organizational teams and between organizations and stakeholders.
(9) The application of effective management approaches that led to sound engineering judgements.