

DEPARTMENT  
OF  
**SCIENCE AND TECHNOLOGY  
STUDIES**

FACULTY OF SCIENCE  
York University

Undergraduate  
Mini-Calendar  
2017-18

# Message from the Department Chair

Welcome to Science & Technology Studies at York University!

I am a historian, so I often rummage around in archives. Some very old York academic calendars contain a couple of STS gems. York's first "Science, Technology & Society" course appeared in 1969. In 1977, "Science & Technology Studies" became a Bachelor of Arts stream. York's first Department of Science Studies made its debut in 1989. Its courses promised students not just (celluloid!) films and sparkling classroom discussion, but learning tours of hospitals, diagnostic centres, and government science agencies.

The world of science & technology has certainly changed a lot since then. Our computing power and big data manipulations were hardly imaginable in the late 1960s. We now talk less of mapping genomes, and more about editing them. Voyager 2 was launched in 1977, finally leaving our solar system in 2013. The spread of HIV/AIDS in the early 1980s killed millions, horrified the world, and its political struggles continue to challenge biomedical and social conventions right up to our current era.

The list could go on, and of course it would include changes to the Department of STS, and to York University itself. Launching our graduate program in STS in 2009 is perhaps our single greatest accomplishment. But a few things haven't changed. York's STS scholars and educators are still passionate about understanding the social, cultural, economic, and political forces that shape scientific knowledge and build technological power. We still want to know how science and technology, in turn, shape society. And, in some ways, we still do this the way we (well, not me personally!) did back in 1969. Our research and publications approach science and technology from a multitude of disciplinary perspectives. We bring the natural and the social sciences together under a single Department (which includes the Division of Natural Science). We try to get students out of the classroom and into the workshops, labs, and hospitals where they can observe science and technology in the making. And we offer a flexible curriculum with a small class size, where students can get down to the hard work of crafting their own responses to the many challenges and conundrums posed by STS.

If you're interested in science and technology, enjoy some technical details, but are excited about developing a bigger framework to give those details meaning, STS is for you. Look over our courses. Follow our twitter feed. Contact me with your questions.

I look forward to seeing you in our programs!

Kenton Kroker

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## About this Mini-Calendar

This Science and Technology Studies Undergraduate Mini-Calendar supplements the York University Undergraduate Calendar, available on York's website. We have tried to ensure that all the information in our Mini-Calendar is accurate but there may be discrepancies. If you find any errors, please let us know. The York Undergraduate Academic Calendar is the official, final word. For the latest information, students are encouraged to visit our website at [www.sts.info.yorku.ca](http://www.sts.info.yorku.ca). It is each student's responsibility to understand the regulations of his or her degree program. We are, however, always willing to provide you with advice and the latest information on course offerings. Please visit the STS Department's Undergraduate Program Office in 218 Bethune for advising.

## About the Department

York's Science and Technology Studies (STS) is an interdisciplinary department unlike any other in Canada, providing several routes to a BA or a BSc degree. Its purpose is to expand our understanding of science and technology by exploring their social, cultural, philosophical, and material dimensions. Our teaching faculty draw upon the concepts and methods of the humanities and social sciences to deliver courses that examine the intellectual, technical, material, socio-political, institutional, and cultural forces that help shape science and technology.

Students are encouraged to draw connections across traditional boundaries to gain an appreciation of the role of the sciences and technology in understanding and shaping the world and ourselves. Students will learn to analyse complex scientific and technological ideas, and discover how to trace the origins and implications of events and patterns of thought in the past and present.

The small class sizes of our STS Undergraduate program create a more personal atmosphere in which individual relationships, both with professors and with other

students, can flourish. Undergraduate students sometimes have the opportunity to work on research projects with faculty.

STS graduates are well-equipped for employment in fields such as science journalism, museum work, science teaching, and science policy. Many of our students have gone on to studies in law, medicine, and education, as well as graduate studies in STS

Many of our faculty enjoy international reputations for the high quality of their STS research, which encompasses a wide range of topics and approaches. Others are award-winning teachers, who focus on crafting innovative and engaging pedagogical strategies. (Some do both!) All of us are actively engaged with the various professional societies that represent STS, including the History of Science Society, the Society for the History of Technology, the Society for the Social Studies of Science, the Canadian Society for History & Philosophy of Science, and the Canadian Society for the History of Medicine.

## **Advising**

For general regulations specific to the Faculty in which a student is enrolled, refer to Faculty websites and speak with advisers at [Science Academic Services](#). We encourage you to consider booking an advising meeting with the Chair early in the Fall term to review your progress, current status, and future plans.

## **STS Seminar Series and Graduate Studies**

Now in its 23<sup>rd</sup> year, the STS Research Seminar is one of the longest-operating public colloquia at York. Held on Tuesdays from 12:30-2:00, the series welcomes local and international scholars to the Keele Campus to speak on a wide variety of topics in STS.

Undergraduate students are very welcome to attend these talks. It's your chance to see and hear internationally-renowned scholars from around the world – don't miss out! Looks for posters around campus and check our website for information on upcoming events like these.

We strongly encourage students to consider working towards an honours degree in STS. If you have already made this decision, you may want to investigate applying to our MA program in STS. For more information on the grad program, contact the Graduate Program Director or the Chair of STS.

## **STS Student Association**

There is not currently a Science and Technology Studies Student Association. We have had such organizations in the past, and they have helped build a strong student-led community, promote the STS department on campus, advocate for increased resources, and create opportunities for students to engage in academic and non-academic experiences outside of the classroom. If you are interested in helping form one, we want to hear from you – please contact the Chair for more details.

# STS Course Director Contact Information

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# Courses in Science and Technology Studies

This is the current list of STS courses. All these courses count as STS courses in one of our degree streams. For day/time and room locations, please see the **Course Timetables** page on the Registrar's website, at <https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm>

## Tentative Fall/Winter 2017-18 Course Timetable

Term	Faculty	Subject	Course #	Credit Weight	Course Title	Day	Hour	Duration	Course Director
Y	SC	STS	4501	6.0	Seminar in Science and Technology Studies	R	11:30	180	Jill Lazenby
Y	SC	STS	4560	6.0	The Anthropology of Science and Technology	M	14:30	180	Natasha Myers
F	SC	STS	2411	3.0	Introduction to Science and Technology Studies	R	11:30	180	Daniela Monaldi
F	SC	STS	3226	3.0	Representations of Nature: Cultural and Historical Perspectives	W	16:00	180	Joan Steigerwald
F	SC	STS	3500	3.0	The Global Information Society	W	11:30	180	Vera Pavri
F	SC	STS	3561	3.0	History of Computing and Information Technology	W	16:00	180	TBA
F	SC	STS	3600	3.0	Technological Failure	R	8:30	180	Angela Cope
F	SC	STS	3725	3.0	Science and Exploration	T	14:30	180	Michael Wintroub
F	SC	STS	3740	3.0	Life Sciences in Modern Society	M;W	14:30	120;60	James Elwick
F	SC	STS	3780	3.0	Biomedical Science in Social & Historical Context	M	11:30	180	Kenton Kroker
F	SC	STS	3970	3.0	Science and Gender in Modern Western Culture	T	8:30	180	TBA
F	SC	STS	4785	3.0	Science, Health and Food	F	11:30	180	Benjamin Mitchell
W	SC	STS	2010	3.0	History of Modern Science	T	8:30	180	TBA
W	SC	STS	2210	3.0	Technology in the Modern World	F	11:30	180	TBA
W	SC	STS	3726	3.0	Technology, Experts and Society	W	14:30	180	Hélène Mialet
W	SC	STS	3760	3.0	Nature, Knowledge and New Worlds, 1500-1800	R	14:30	180	Ernst Hamm
W	SC	STS	3775	3.0	Physics in the 20th Century	M	14:30	180	Daniela Monaldi
W	SC	STS	3790	3.0	Science and Technology Issues in Global Development	W	11:30	180	TBA
W	SC	STS	3975	3.0	Science and Religion in Modern Western Culture	F	14:30	180	Bernard V Lightman
W	SC	STS	4228	3.0	Nature in Narrative	M	16:00	180	Joan Steigerwald
W	SC	STS	4230	3.0	Informational Identities: The Self in the Age of Technology	T	14:30	180	Hélène Mialet
W	SC	STS	4780	3.0	Epidemics and the Modern World: Local, National & Global Configurations of Disease	M	11:30	180	Kenton Kroker

## Courses Offerings:

### (TERM Y) FALL/WINTER 2017-18

#### **SC/STS 4501 6.00 Seminar in Science & Technology Studies (Lazenby)**

The seminar builds upon students' existing skills in Science and Technology Studies. It will familiarize students with central themes in this interdisciplinary field that have emerged from efforts in history, philosophy and social studies of science and technology. Topics may include an examination of the nature and function of experiment, ethics, expertise, evidence, gender, instruments, language, policy, popularization, technological systems, risk, and visualization in science and technology. Prerequisites: Completion of SC/STS 2411 3.00. Cross-listed to: AP/SOSC 4501 6.00, AP/HUMA 4501 6.00

#### **SC/STS 4560 6.00 Anthropology of Science and Technology (Myers)**

Examines anthropological studies of science and technology to explore the power of scientific facts in contemporary cultures. Considers how facts are produced and stabilized in scientific laboratories, how facts are made to travel, and how we incorporate facts in our daily lives and practices. Key themes include the politics of science in relation to race, gender, identity, and capitalism.

#### **SC/STS 4700 3.00/6.00 Independent Research in Science and Technology Studies**

This course offers the opportunity for students to design and pursue a course of individualized study in consultation with the Department Chair and proposed course director. Note: Students must be accepted by a faculty supervisor before registering for SC/STS 4700 6.00 and must have permission from the Department Chair. Prerequisites: 78 credits and permission of the Department Chair.

#### **SC/STS 4710 6.00 Honours Thesis in Science and Technology Studies**

Original research undertaken by a student under the supervision of a thesis committee. Note: Open only to honours students in Science and Technology Studies. Prerequisite: 78 credits and permission of the Department Chair.

### (TERM F) FALL 2017

#### **SC/STS 2411 3.00 Introduction to Science and Technology Studies (Monaldi)**

This course introduces students to the interdisciplinary field of science and technology studies. Using case studies, it considers how knowledge about science and technology develops. It analyses the social responsibility of the scientist and the public engagement with technoscientific expertise. Cross-listed to: AP/HUMA 2411 3.00.

#### **SC/STS 3226 3.00 Representations of Nature: Cultural and Historical Perspectives (Steigerwald)**

This course explores visual representations of nature, examining the historical and cultural contexts of specific technologies and practices of representation. The course fosters critical reflection upon how visual representations of nature affect

our understanding of nature. Its philosophical focus is the notion of representation, as a crucial common link between scientific, artistic and cultural visual practices. It addresses questions on the nature and role of visual representations in science and culture, including what counts as objective or accurate representation. The course also analyzes the technological and material conditions of visualization. It examines how various technologies, from scientific instruments to practices of cultural image making, shape our perceptions and conceptions of nature. In science, visual representations are used to depict and communicate understandings of nature. Visualization techniques also assist scientists in making sense of natural phenomena, by making non-visible processes manifest and by offering material forms in which to imagine and conceive natural processes. But imaging practices also operate widely in culture as means for depicting and shaping understandings of natural phenomena. The course explores how phenomena are constructed in the process of representing them, and how the products thus made manifest are artifacts as well as natural entities. It considers how through particular modes of representation, informed by historically and culturally specific contexts, nature is reconceived.

Readings include theoretical works as well as case studies. They are drawn from a diversity of fields – science and technology studies, cultural studies, anthropology, art history and environmental studies. Cross-listed to AP/HUMA 3226 3.00.

### **SC/STS 3500 3.00 The Global Information Society (Pavri)**

This course explores the role of information and communication technologies (ICTs) in today's global society. We will examine three critical questions about our current information age which include:

- a) Are ICTs the key to solving our world's current social problems?
- b) Are humans becoming too dependent on computer automation to perform labor and leisure tasks?
- c) Should we expect any kind of individual privacy with the increased use of ICTs in today's world?

Cross-listed to: AP/SOSC 3500 3.00.

### **SC/STS 3561 3.00 History of Computing and Information Technology (Isopp)**

This course examines the evolution of computing and information technology in a broad social, cultural, and historical context, with special emphasis on developments since the early 20<sup>th</sup> century. Cross-listed to: AP/SOSC 3561 3.00.

### **SC/STS 3600 3.00 Technological Failure (Cope)**

This course challenges our common understandings of why technologies fail. Using approaches drawn from history, sociology and philosophy of technology, it critically examines the complex relationships between human action, the social contexts of knowledge and the proper functioning of machines.

### **SC/STS 3725 3.00 Science and Exploration (Wintroub)**

Systems of knowledge and technologies utilized in scientific exploration are investigated within the socio political context of borderlands, colonialism and modern progress.

### **SC/STS 3740 3.00 Life Sciences in Modern Society (Elwick)**

The emergence of professional biology is explored through examination of conflicting views of the role of natural history in the development of the specialized life sciences. The course focuses on how people historically thought about *stages* of development, and how "evolution" was frequently assumed to mean not only biological but also *moral* progress (e.g. "primitive" to "civilized", "retarded" to "normal", "childlike" to "adult"). Such assumptions affected not only technical work in such fields as embryology (e.g. Haeckel's "ontogeny recapitulates phylogeny"); they also rationalized tragic social policies such as eugenics and residential schools. In addition to a final exam, students will learn how to research and write a major paper.

### **SC/STS 3780 3.00 Biomedical Science in Social & Historical Context (Kroker)**

Biomedicine as we know it today is the product of some radical transformations that have taken place over the past 200 years. Health is no longer the absence of disease. It is something we achieve through the routine maintenance and even enhancement of our bodies (and our minds). Disease is not the opposite of health, but a threshold value along a continuum of physiological measures. Health has also become a property of populations, described as being "at risk" for disease and requiring the mass interventions of "public health." In the absence of symptoms or pain, we can still imagine our bodies as diseased through an array of visual technologies. But disease can also be so small as to be invisible (bacteria, viruses, genomes, immune complexes), or so large as to be unimaginable (climates, environments, exposures). Once a craft-like and intuitive art, medical practice has become a technologized and highly specialized applied science. The shameful quest for "racial improvement" through eugenics has been abandoned, even as it has become more and more routine for individuals to imagine disease as an integral component of their social and political identities. Pitched political battles are fought over whether and how the state and the market should provide health for citizens and consumers.

This course will examine some of the historical origins of those changes, and look at how they have come to shape current biomedical practices. Students will be evaluated through a class presentation, two written assignments, and a final in-class exam. The course will also feature a field trip to a local health facility or museum.

### **SC/STS 3970 3.00 Science and Gender in Modern Western Culture (Monaldi)**

This course analyzes the gendered nature of modern Western scientific culture. It draws on literary, historical and philosophical sources, films and contemporary feminist writings. Cross-listed to: AP/HUMA 3970 3.00.

### **SC/STS 4785 3.00 SCIENCE, HEALTH AND FOOD (Mitchell)**

An examination of how knowledge is generated and validated in health and food sectors through analysis of studies, statistics, publications, evidence based medicine, government regulation and policy in Canada, the USA and the EU. Case studies will detail controversial issues. Prerequisite: Completion of 60 credits.

## **(TERM W) WINTER 2018**

### **SC/STS 2010 3.00 HISTORY OF MODERN SCIENCE (TBA)**

This course explores some of the central issues and theories in the history of physical and life sciences since the Renaissance. The focus is on the institutional trends and changing conceptual frameworks as they related to larger societal change.

Cross-listed to: AP/HIST 2810 3.00.

### **SC/STS 2210 3.00 TECHNOLOGY IN THE MODERN WORLD (TBA)**

This course examines the critical interconnections among technology, politics, culture, the arts, the sciences and social life. Specific topics will vary from year to year, covering social and historical contexts that may include Europe, North America, Africa, and Asia between 1500 and the present. Cross-listed to: AP/HUMA 2210 3.00, AP/HIST 2822 3.00.

### **SC/STS 3726 3.00 TECHNOLOGY, EXPERTS AND SOCIETY (Mialet)**

A critical examination of the introduction and adoption of new technologies and the rise of expert knowledge. Specific historical examples of modern technologies will be considered in order to explore the relationship between society and technology. Cross-listed to: AP/SOSC 3726 3.00.

### **SC/STS 3760 3.00 NATURE, KNOWLEDGE AND NEW WORLDS, 1500–1800 (Hamm)**

An in-depth examination of the cultural, social, technological and intellectual context of a formative period in the history of modern science.

### **SC/STS 3775 3.00 PHYSICS IN THE 20<sup>TH</sup> CENTURY (Monaldi)**

This course examines both the philosophical questions raised by historical developments in modern physics and historical-scientific questions raised by philosophical inquiry. Note: No background in physics required. Readings include scientific, historical and philosophical texts.

### **SC/STS 3790 3.00 SCIENCE AND TECHNOLOGY ISSUES IN GLOBAL DEVELOPMENT (TBA)**

This course examines a multiplicity of historical and cultural factors influencing and shaping scientific norms and technological practices in global development. Moreover, this course seeks to address questions on how global development goals are affecting the utilization of planetary resources and the advancement of technological systems of production. One of the predominant objectives of this course is to elucidate the entanglements between science, technology and global development, and unpack further what global development means in the context of international cooperation and international security.

### **SC/STS 3975 3.00 SCIENCE AND RELIGION IN MODERN WESTERN CULTURE (Lightman)**

Examination of the relationship between science and religion through a study of the

implications of the following intellectual developments for religious thought: the rise and triumph of Newtonian science, the Darwinian revolution, relativity theory, quantum physics, "big bang" theory, and creationism. Cross-listed to: AP/HUMA 3975 3.00.

### **SC/STS 4228 3.00 NATURE IN NARRATIVE (Steigerwald)**

This course explores narratives of nature in both literary and scientific texts. In the course, we examine how figures and understandings of nature are developed in and through literary forms—from novels and plays to essays and short stories. In some of the literary texts studied, ideas from science are employed as central metaphors or themes. A couple of the texts in the course are scientific works—works written to be accessible to a non-scientific audience—that are read for their use of literary forms, such as metaphors and rhetorical techniques, to enrich their narratives, to ease the comprehension of scientific ideas, and to persuade readers of the theories put forward. Students are encouraged to read all the texts in the course as narratives, as stories or points of view of the natural world or human nature, even the scientific works. Most of the texts in the course self-consciously play with their character as narrative, several presenting alternative versions of the story being told from contrasting viewpoints. This emphasis on the narrativity or literary forms of texts encourages us to reflect on the constructed character of all our narratives of nature, whether literary or scientific. But the course also asks how narratives can provide true accounts of our world, and examines the place of nature in the narratives shapes their truth value.

Cross-listed to: AP/HUMA 4228 3.00.

### **SC/STS 4230 3.00 INFORMATIONAL IDENTITIES: THE SELF IN THE AGE OF TECHNOLOGY (Mialet)**

This course examines the effects of technologies of information and communication upon the construction and functioning of a personal identity. The course also examines the cultural, political, psychological and spiritual dimensions of recent changes in the nature of personal identity. Cross-listed to: AP/HUMA 4230 3.00.

### **SC/STS 4780 3.00 EPIDEMICS AND THE MODERN WORLD: LOCAL, NATIONAL & GLOBAL CONFIGURATIONS OF DISEASE (Kroker)**

This course explores the changing interactions between epidemic disease, governance, and scientific knowledge since the nineteenth century. Widespread infections, pathological outbreaks, and emerging diseases are examined at the local, national, and global levels as both historical agents and as constructs. Prerequisites: Completion of sixty credits of which three credits are drawn from 3000 level STS or HIST courses; or permission of the instructor. Cross-listed to AP/HIST 4088 3.00.

# Program Requirements

The Department of Science and Technology Studies (STS) offers several degree streams leading to either a BA or a BSc degree. While the undergraduate program's requirements are the same for both BA and BSc students, the courses outside the program differ. If you have any questions that are not answered in these pages, please discuss them with the Chair. Please note that *York University Undergraduate Calendar* provides the definitive statements concerning program requirements.

- If you wish to pursue a BA in STS, see [Section 1](#) below, page 14.
- If you wish to pursue a BSc major or minor in STS, see [Section 2](#) below for the new regulations, page 16.
- If you declared a major or minor in STS before the Summer of 2013, please make an appointment with the Departmental Chair to discuss your program requirements.

## Section 1: Requirements for BA Degrees in STS

There are **three** required courses for all BA streams:

SC/STS 2411 3.00; either SC/STS 2010 3.00 or SC/STS 2210 3.00; SC/STS 4501 6.00.

### General Education

All students in the Faculty of Science must fulfill the General Education requirements listed for BA degrees. Please speak with an Academic Advisor or see <http://science.yorku.ca/current-students/my-degree/program-requirements/general-education/> for more information.

### Bachelor Program (90 credits)

Students will take at least 30 credits in STS, including:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS 2411 3.00;
- AP/HUMA/SOSC SC/STS 4501 6.00;
- 18 additional credits chosen from the STS list of courses.

### Honours BA Program (120 credits)

Students must complete at least 48 credits in STS, including:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS 2411 3.00;
- AP/HUMA/SOSC SC/STS 4501 6.00;
- 36 additional credits chosen from the STS list of courses, including at least six credits at the 4000 level.

### **Honours (Double Major) Program (120 credits)**

STS may be pursued jointly with any other Honours Bachelor's degree program in the Faculty of Liberal Arts & Professional Studies, Faculty of Environmental Studies, Faculty of Health, Lassonde School of Engineering or School of the Arts, Media, Performance & Design.

Students must complete at least 42 credits in STS, including:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS2411 3.00;
- AP/HUMA/SOSC SC/STS4501 6.00;
- 30 additional credits chosen from the STS list of courses, including at least six credits at the 4000 level.

### **Honours (Double Major) Interdisciplinary Programs (120 credits)**

STS may be linked with any Honours (Double Major) Interdisciplinary BA program in the Faculty of Liberal Arts & Professional Studies. Students must take at least 36 credits in STS and at least 36 credits in the interdisciplinary program. Courses taken to meet the STS requirements cannot also be used to meet the requirements of the interdisciplinary program. Students in these interdisciplinary programs must take a total of at least 18 credits at the 4000 level, including at least 12 credits in STS and six credits in the interdisciplinary program. For further details about the requirements, see the listings for specific Honours (Double Major) Interdisciplinary BA Programs.

The 36 credits in STS must include the following:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS 2411 3.00;
- AP/HUMA/SOSC SC/STS 4501 6.00;
- 24 additional credits chosen from the STS list of courses, including at least six credits at the 4000 level.

### **Honours (Major/Minor) Program (120 credits)**

STS may be pursued jointly with any Honours Minor Bachelor's degree program in the Faculty of Liberal Arts & Professional Studies, Faculty of Environmental Studies, Faculty of Health, Lassonde School of Engineering or School of the Arts, Media, Performance & Design.

Students must complete at least 42 credits in STS, including:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS 2411 3.00;
- AP/HUMA/SOSC SC/STS 4501 6.00;
- 30 additional credits chosen from the STS list of courses, including at least six credits at the 4000 level.

### **Honours (Minor) Program (120 credits)**

The Honours Minor must be pursued jointly with an Honours BA program in the Faculty of

Liberal Arts & Professional Studies, Faculty of Environmental Studies, Faculty of Health, Lassonde School of Engineering or School of the Arts, Media, Performance & Design.

Students must complete at least 30 credits in STS, including:

- SC/STS 2010 3.00 or SC/STS 2210 3.00;
- AP/HUMA/SOSC SC/STS 2411 3.00;
- AP/HUMA/SOSC SC/STS 4501 6.00;
- 18 additional credits chosen from the STS list of courses.

## Section 2: Requirements for BSc Degrees in STS

BSC DEGREE REQUIREMENTS FOR SCIENCE AND TECHNOLOGY STUDIES

The program core is defined as: SC/STS 2411 3.00; either SC/STS 2010 3.00 or SC/STS 2210 3.00; SC/STS 4501 6.00.

### Bachelor Program

#### A. General Education:

- Non-science requirement: 12 credits;
- Mathematics: six credits from: SC/MATH 1505 6.00, SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1300 3.00, SC/MATH 1310 3.00, SC/MATH 1021 3.00, SC/MATH 1025 3.00; (note that SC/MATH 1013 3.00 and SC/MATH 1300 3.00 are course credit exclusions, as are SC/MATH 1014 3.00 and SC/MATH 1310 3.00);
- Computer science: three credits from LE/EECS 1520 3.00, LE/EECS 1530 3.00, LE/EECS 1540 3.00 or LE/EECS 1020 3.00;
- Foundational science: six credits from: SC/BIOL 1000 3.00, SC/BIOL 1001 3.00 (or SC/BIOL 1010 6.00), SC/CHEM 1000 3.00, SC/CHEM 1001 3.00, SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00.

#### B. Major requirements:

- The program core as specified above (12 credits);
- an additional 18 credits from the approved science and technology studies major courses including at least 12 major credits at the 3000 level or above, for a total of a minimum of 30 credits from science and technology studies major courses,
- at least 18 science credits at the 2000 level or higher non-science and technology studies major courses..

**C. Science breadth:** satisfied within the major requirements.

**D. Upper level requirements:** a minimum of 18 credits at the 3000 level or above.

**E. Additional credits:** as required, for an overall total of 90 credits.

**F. Standing requirements:** a minimum overall grade point average of 4.00 (C) is required in order to be eligible to graduate with a BSc degree (bachelor program).

## Honours Programs

### Specialized Honours Program

#### A. General education:

- Non-science requirement: 12 credits;
- Mathematics: six credits from: SC/MATH 1505 6.00, SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1300 3.00, SC/MATH 1310 3.00, SC/MATH 1021 3.00, SC/MATH 1025 3.00; (note that SC/MATH 1013 3.00 and SC/MATH 1300 3.00 are course credit exclusions, as are SC/MATH 1014 3.00 and SC/MATH 1310 3.00);
- Computer science: three credits from LE/EECS 1520 3.00, LE/EECS 1530 3.00, LE/EECS 1540 3.00 or LE/EECS 1020 3.00;
- Foundational science: six credits from: SC/BIOL 1000 3.00, SC/BIOL 1001 3.00 (or SC/BIOL 1010 6.00), SC/CHEM 1000 3.00, SC/CHEM 1001 3.00, SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00.

#### B. Major requirements:

- the program core as specified above (12 credits);
- an additional 42 credits from the approved science and technology studies major courses (for a total of 54 science and technology studies credits, including at least 18 credits at the 3000 or higher level, of which at least 12 are at the 4000 level);
- at least 18 science credits at the 2000 level or higher that are *not* science and technology studies courses.

C. **Science breadth:** satisfied within the major requirements.

D. **Upper level requirements:** a minimum of 42 credits at the 3000 level or above.

E. **Additional elective credits:** as required, for an overall total of 120 credits.

F. **Standing requirements:** To graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses and a minimum cumulative credit-weighted grade point average of 5.00 over all courses completed.

## Honours Double Major and Honours Major/Minor Programs

An Honours Major in science and technology studies may be combined with an Honours Major in another subject area in a BSc Double Major degree program, or with an Honours Minor in another subject area in an Honours Major/Minor BSc degree program. Possible subject combinations are listed under Undergraduate Degree Programs in the Faculty of Science and Engineering Undergraduate Degree and Certificate Programs section.

Students should consult with a departmental adviser to plan their studies in order to meet the program requirements for both majors and their prerequisites.

#### A. General education:

- Non-science requirement: 12 credits;
- Mathematics: six credits from: SC/MATH 1505 6.00, SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1300 3.00, SC/MATH 1310 3.00, SC/MATH 1021 3.00, SC/MATH STS Undergraduate Mini-Calendar 2017-18

1025 3.00; (note that SC/MATH 1013 3.00 and SC/MATH 1300 3.00 are course credit exclusions, as are SC/MATH 1014 3.00 and SC/MATH 1310 3.00);

- Computer science: three credits from LE/EECS 1520 3.00, LE/EECS 1530 3.00, LE/EECS 1540 3.00 or LE/EECS 1020 3.00;
- Foundational science: six credits from: SC/BIOL 1000 3.00, SC/BIOL 1001 3.00 (or SC/BIOL 1010 6.00), SC/CHEM 1000 3.00, SC/CHEM 1001 3.00, SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00.

**B. Major requirements:**

- The program core as specified above (12 credits);
- an additional 30 credits from the approved science and technology studies major courses, including at least 18 credits at the 3000 or higher level, of which at least 12 are at the 4000 level, for a total of 42 credits in science and technology studies;
- at least 18 science credits at the 2000 level or higher level non-science and technology studies courses; Note: would be met if the second major or the minor is in another science discipline;
- the course requirements for the second major or the minor.

**C. Science breadth:** satisfied by the above requirements.

**D. Upper level requirements:** a minimum of 42 credits at the 3000 level or above.

**E. Additional credits:** as required, for an overall total of 120 credits.

**F. Standing requirements:** To graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses and a minimum cumulative credit-weighted grade point average of 5.00 over all courses completed, subject to the following exception. In addition, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed is required to graduate in the Honours Double Major program where biology is the other major.

## Honours Minor

- The program core as specified above (12 credits);
- an additional 18 credits from the approved science and technology studies major courses (for a total of 30 credits in science and technology studies).

# University Resources

## Science Academic Services

### (Advising for students enrolled in the STS BA & BSc Degrees)

Loc: 352 Lumbers Building

Tel: (416) 736-5790 (New Student Appointment Booking Line)

(416) 736-5085 (General Enquiries)

Hours: 10:00 a.m. to 4:00 p.m. Monday to Friday.

Email: [sciadvis@yorku.ca](mailto:sciadvis@yorku.ca) (New student enquiries & Alternate Enrolment Advising)

[sciquest@yorku.ca](mailto:sciquest@yorku.ca) (Current Student Enquiries)

Website: <http://science.yorku.ca/current-students/academic-advising/>

Science Academic Service (SAS) is the undergraduate advising office for all Science students. This office is responsible for advising all new science students regarding course selection in their first year of study. SAS also answers any enquiries regarding admission to the faculty, program requirements, university regulations and petition procedures. Information is also available on applying to professional programs (e.g. medicine, dentistry, etc).

## Writing Centres

Bethune College Writing Centre (for students affiliated with Bethune College)

Loc: 206 Bethune College

Tel: 416-736-5164 ext 22035

<http://bethune.yorku.ca/writing>

The Bethune Writing Centre, located in BC 206, offers FREE one-on-one or small group instruction in academic writing to undergraduate students affiliated with Bethune College. STS students are by default enrolled in Bethune College. Students who did not declare STS as their intended major upon first enrolling at York may have been assigned to a different college. Students may verify their college affiliation and/or change it via the Current Students website.

## The Writing Department

Loc: South 311 Ross Building

Tel: 416-736-5134

<http://www.yorku.ca/laps/writ/>

The Writing Department offers individual tutoring for LA&PS students in all aspects of the essay writing process, as well as short, non-credit workshop-style courses in a variety of writing skills, techniques and problem-solving strategies.

## **Counselling and Disability Services**

Loc: Bennett Centre for Student Services, N110

Tel: 416-736-5297

<http://www.yorku.ca/cds/>

The Centre offers the following Programs and Services:

Personal Counselling Services

- Learning Skills Services
- Disability Services
- Learning Disability Services
- Mental Health Disability Services
- Physical, Sensory & Medical Disability Services (PSMDS)

## **Alternate Exam and Test Procedures Offered through PSMDS**

Loc: Student Client Services, Bennett Centre for Student Services (Main Floor)

Tel: 416-872-9675

TTY: 416-736-5660

Fax: 416-650-8129

Email: [altexams@yorku.ca](mailto:altexams@yorku.ca)

<http://www.yorku.ca/altexams/>

York's Counselling & Disability Services and the Registrar's Office work in partnership to support alternate exam and test accommodation services for students with disabilities at the Keele campus.

## **York International Exchange Programs – Study Abroad**

Loc: 200 York Lanes

Tel: 416-736-5177

<http://international.yorku.ca/>

The York Exchange Program allows students at York to earn part of their degree credits at a postsecondary institution in another country.

## **Career Centre**

Loc: McLaughlin College, Suite 202

Tel: 416-736-5351

<http://www.yorku.ca/careers/students.htm>

The Career Centre provides assistance with job searching, career options, further education, and building skills and experience.

## **Office of the Ombudsperson and Centre for Human Rights and Equity**

Loc: 1050 Kaneff Tower  
<http://ombuds.info.yorku.ca/>

This office offers confidential counselling and assistance to any member of the university who finds her or himself in a situation involving harassment or abuse of any kind.

## **ACMAPS - Atkinson Centre for Mature and Part-time Students**

Loc: 111 Central Square  
Tel: 416-736-5770  
<http://acmaps.info.yorku.ca/>

Open to students of all Faculties, the Atkinson Centre for Mature & Part-time Students (ACMAPS) provides information, advice and support to help mature and part-time students make the most of their York experience. ACPAPS is a place where students, staff, and professors can meet to share common interests and experiences.