

APPLIED SCIENCE (APSC)

APSC 6600 Graduate Seminar

6 credit hours

Students develop and strengthen skills in all scientific disciplines that will benefit them throughout their careers: oral communication and public speaking, written communication and scientific writing, project planning, time and project management, networking, conflict resolution, and stress and mental health. Students are exposed to and engage with these topics through a variety of means, including lectures, seminars, readings, discussions, written assignments, oral and poster presentations, and written and oral critiques.

APSC 6603 Thesis I

6 credit hours

Thesis I constitutes the first segment of the student's thesis research project. Students normally register for this course in their first year in the program. Research is conducted under the guidance of the research thesis Supervisor in conjunction with the other Supervisory Committee members. Successful completion of APSC 6603 includes a satisfactory evaluation and Annual Assessment of the student's written and oral presentation of his/her Research Progress Report by the Supervisory Committee. The Supervisor normally submits the completed evaluation to the Program Committee on or before September 30th of that year.

APSC 6604 Thesis II

6 credit hours

Prerequisite: APSC 6603

Thesis II constitutes the second segment of the student's thesis research project. Students normally register for this course in the Fall semester of their second year in the Program. Research is conducted under the guidance of the faculty Research Supervisor in conjunction with the Supervisory Committee.

APSC 6608 Applied Statistics

3 credit hours

Students analyze scientific data at the advanced level. Topics include multivariate analysis, nonparametric methods, and model selection. During course a project component, students apply the statistical tools learned to a real dataset, ideally from their own thesis research.

APSC 6800 – 6825 Special Topics in Applied Science

6 credit hours

Course content varies from year to year.

APSC 6826 – 6849 Special Topics in Applied Science

3 credit hours

Course content varies from year to year.

APSC 6876 - 6899 Directed Studies

3 credit hours

These courses are taken during the first or second year of enrolment in the Master of Science in Applied Science program. The directed studies will be conducted under the supervision of a faculty member following approval by the Program Coordinator.

APSC 7600 Graduate Seminar

6 credit hours

The instructional part of this course focuses on research project definitions, project planning and scientific writing. Students are expected to read articles chosen for discussion, contribute to the critiquing process and make several presentations during the course. Students are expected to attend and report on a designated number of seminars or colloquia either at Saint Mary's University or at other surrounding research institutions.

APSC 7602 Doctoral Research Proposal

6 credit hours

The doctoral research proposal is the first stage in the research program and will be due normally within 3-4 semesters from the beginning of the program. The proposal will consist of a written document and a public presentation, followed by an in camera session with the Examination Committee.

APSC 7603 Qualifying Examination

6 credit hours

The Qualifying Examination will assess students' ability to synthesize information across fields, the potential to contribute to original research in their fields, and whether the student is ready to begin writing the dissertation. The student must demonstrate appropriate breadth of knowledge and show an understanding of the applications of science to real-world problems in their area. The student is expected to complete the Examination within seven semesters from the beginning of the program.

APSC 7604 Doctoral Dissertation

12 credit hours

The dissertation documents original research completed by the students under the supervision of their supervisor(s), must contain a "knowledge transfer plan" which describes "next steps" that can be taken to move the outcomes from the research along the spectrum from fundamental research to commercialization. The dissertation will be presented/ defended by the student and examined by an Examination Committee in public.

APSC 7610 Research Applications and Knowledge Transfer

3 credit hours

An introduction to applied research in the natural sciences. Topics will include research ethics, knowledge transfer, entrepreneurship, public outreach and accessing research funding opportunities. The course will be facilitated by scientists who have successfully participated in technology transfer, business faculty and professionals, and program officers from funding agencies.

APSC 7620 Research Internship

6 credit hours

A research internship of at least four (4) months at a government, non-governmental or industrial research institution, or at an academic research laboratory at a different university. The intent is to have the student gain additional experience in research techniques or applications and benefit from expertise not available locally. The student is required to submit a proposal at least two months in advance of the start of the internship, to be approved by the Supervisory Committee and Program Coordinator. The proposal will outline learning objectives to be completed by the student. The student will submit a report to the Supervisory Committee, no later than one month after the internship ends. The Supervisor and Supervisory Committee are expected to help the student find and fund an appropriate internship. Should an appropriate internship be unavailable for a particular student, the student will have to complete a technology transfer study based on his/her research and present it to the Supervisory Committee augmented by one member from the Sobey School of Business or the Industrial Liaison Office. The student will normally be required to spend at least 50% of their time during the internship working at the place of internship.

APSC 7676-7699 Directed Studies

3 credit hours

Directed studies courses allow for in-depth exploration of a topic not currently available in current graduate course offerings. Directed studies will be conducted under the supervision of a faculty member following approval by the Program Coordinator.