1 Introduction

The Faculty of Science is currently working on several initiatives to increase research opportunities in our undergraduate program. This document proposes one such initiative, the Dean’s Multidisciplinary Undergraduate Research List, which is intended to provide a way of acknowledging students who have participated in substantial and broad undergraduate research.

2 Requirements

To be placed on the Dean’s Multidisciplinary Undergraduate Research List at graduation time a student must have completed at least 9 credits of research-based courses, taken for a letter grade, where qualifying courses are specified in the list of approved research courses (see Section 3).

Furthermore, considering all qualifying research-based courses on the student’s transcript at graduation time:

- at least one course, worth at least 3 credits, must be from a different unit than the other courses; and
- every qualifying course must have been completed with a grade of C or above; and
- the average GPA over all qualifying courses must be 3.0 or above.
3 List of approved research-based courses in the Faculty of Science

Members of the academic committee were asked to propose courses from their units which should be on this list. All courses involve a significant research component a final written report or thesis. Reading courses were not included on this list.

There exist some “Independent Studies” courses in which some students are given reading courses and other students are given research projects. Under each department, such courses are listed separately, and departmental validation will be required for students who did research projects in those courses. Departments have been asked to consider reorganizing their courses such that research courses are appropriately named and are made distinct from reading courses.

The following list was thoroughly reviewed and approved at the December 13th Academic Committee meeting.

Anatomy and Cell Biology

- ANAT 396 Undergraduate Research Project (3 credits)
- ANAT 432 Honours Research Project (9 credits)

Atmospheric and Oceanic Sciences

- ATOC 396 Undergraduate Research Project (3 credits)
- ATOC 480 Honours Research Project (3 credits)

Biochemistry

- BIOC 460 Advanced Lab in Biochemistry (6 credits)
- BIOC 491 Independent Research (6 credits)

Biology

- BIOL 396 Undergraduate Research Project (3 credits)
- BIOL 469 Independent Studies 2 (9 credits)
- BIOL 479 Biology Honours Project 1 (9 credits)
- BIOL 480 Biology Honours Project 2 (12 credits)

The following courses qualify for DMURL only with departmental validation that the work completed for the course was a research project and not a reading course.

- BIOL 377 Independent Studies 1 (3 credits)
- BIOL 471 Independent Studies 3 (6 credits)
- BIOL 477 Independent Studies 4 (3 credits)
- BIOL 478 Independent Studies 5 (3 credits)
Chemistry

- CHEM 396 Undergraduate Research Project (3 credits)
- CHEM 470 Research Project (6 credits)
- CHEM 480 Research Project (3 credits)
- CHEM 490 Research Project (3 credits)

Cognitive Science

- COGS 401 Research in Cognitive Science 1 (6 credits)
- COGS 402 Research in Cognitive Science 2 (6 credits)

Computer Science

- COMP 396 Undergraduate Research Project (3 credits)
- COMP 400 Technical Project and Report (3 credits)

Earth and Planetary Sciences

- EPSC 396 Undergraduate Research Project (3 credits)
- EPSC 480 Honours Research Project (6 credits)

The following course qualifies for DMURL only with departmental validation that the work completed for the course was a research project and not a reading course.

- EPSC 482 Independent Studies 1 (3 credits)

Geography

- GEOG 396 Undergraduate Research Project (3 credits)
- GEOG 491 Honours Research (6 credits)
- GEOG 492 Joint Honours Research (3 credits)

The following course qualifies for DMURL only with departmental validation that the work completed for the course was a research project and not a reading course.

- GEOG 490 Independent Studies in Geography (3 credits)

Mathematics and Statistics

- MATH 396 Undergraduate Research Project (3 credits)
- MATH 410 Majors Project (3 credits)
- MATH 470 Honours Project (3 credits)
McGill School of Environment

- ENVR 396 Undergraduate Research Project (3 credits)
- ENVR 401 Environmental Research (3 credits)
- ENVR 451 Research in Panama (6 credits)
- ENVR 490 Independent Study in Environment (3 credits)
- ENVR 495 Honours Research (6 credits)

Note that ENVR 396 is being proposed in multiple faculties and is still going through the faculty-level approval process.

Microbiology and Immunology

- MIMM 396 Undergraduate research project. (3 credits)
- MIMM 502 Honours research project (12 credits)

Physics

- PHYS 396 Undergraduate Research Project (3 credits)
- PHYS 449 Majors Research Project (3 credits)
- PHYS 459 Honours Research Thesis (6 credits)
- PHYS 479 Honours Research Project (3 credits)
- PHYS 489 Special Project (3 credits)

Physiology

- PHGY 396 Undergraduate Research Project (3 credits)
- PHGY 419 Project & Seminar in Immunology (9 credits)
- PHGY 461 Experimental Physiology (9 credits)

Note that PHGY 396 has been approved by Physiology curriculum committee and is currently being considered by the department.

Psychology

- PSYC 380 Honours Research Project and Seminar (9 credits)
- PSYC 395 Psychology Research Project 1 (6 credits)
- PSYC 450 Research Project and Seminar (9 credits)
- PSYC 494 Psychology Research Project (9 credits)
- PSYC 495 Psychology Research Project 2 (6 credits)
- PSYC 496 Senior Honours Research 1 (6 credits)
- PSYC 497 Senior Honours Research 2 (6 credits)
- PSYC 498 Senior Honours Research (9 credits)

Redpath Museum

- REDM 396 Undergraduate Research Project (3 credits)