

HGEN 396 Undergraduate Research Project Course

General Information

HGEN396 (FALL/WINTER/SUMMER)

Undergraduate Research Project in Human Genetics

Instructors

P. Tonin (Coordinator) & Staff	MGH (514) 934-1934 ext 44069	patricia.tonin@mcgill.ca
-----------------------------------	------------------------------	--------------------------

Administrative Office	Strathcona, W315-F	(514) 398-4198
-----------------------	--------------------	----------------

Workload

3 credits

Prerequisites

Students will have a CGPA of at least 3.0 in at least one term of the undergraduate studies.

Restrictions

This course cannot be taken under the S/U option. Departmental permission is required. Students cannot be supervised by the same instructor for two 396 Science courses. Open to students in programs offered by the Faculty of Science.

Aims

This course broadens the scope of currently available research projects courses offered to undergraduate Science students. The overall aims are to:

1. Expose undergraduate students to fundamental research environments with a strong focus in the theme of human genetics
2. Hone skills in scientific writing and oral communication

Description

This course is designed to introduce undergraduate Science students to fundamental laboratory research related to human genetics. This course contains a significant research component that requires substantial supervised research work by the student. The course workload involves at least 9 hours of research activities per week for a 13 week period (equivalent to one semester). The Supervisor will evaluate the student based on a written final report, overall research performance and an oral presentation.

HGEN 396 Undergraduate Research Project Course

Enrollment

This course is open to undergraduate Science students and available in the fall, winter or summer term. Enrollment may be limited by the availability of supervisors. Students will visit the Department of Human Genetics webpage (<https://mcgill.ca/humangenetics/prospective-graduate-students/supervision-0>) for research themes and approach potential supervisors directly for availability. The HGEN 396 enrollment and project proposal form (https://www.mcgill.ca/humangenetics/files/humangenetics/396_form-1.pdf) must be completed by the student and project Supervisor and approved by the unit head of Department of Human Genetics or his/her delegate (course coordinator).

Evaluation

This course contains at least 9 hours of research activities per week for a 13-week period conducted in the laboratory of a supervisor affiliated with the Department of Human Genetics. The Supervisor will evaluate the student based on a written report (50%), overall research activities performance (40%) and oral presentation (10%).

Written report (50%): The written report is worth 50% of the overall grade. It shall be a minimum of 10 numbered pages with 2.5 cm margins (12pt Time New Roman font) written in the form of scientific paper. The report will include the following sections: Title page, Abstract/summary (500 word max), Introduction, Hypothesis or Statement of Purpose, Materials and Methods, Results, Discussion and Conclusion, Reference Lists and Appendices (if necessary). Tables and Figures are not included in the 10 page minimum limit. The supervisor will evaluate the report for overall organization, clarity of presentation, presentation of research question, data analysis, clarity of tables and figures, discussion of research findings and proposed future research directions.

Performance (40%): The overall research activities performance is worth 40% of the overall grade. The supervisor will evaluate the overall performance of the student using metrics that reflect an understanding the project, motivation and enthusiasm, commitment, curiosity, industry to work, technical ability and problem solving, organization and precision, judgment and common sense, and interpersonal communication and interactions.

Oral presentation (10%): The supervisor will evaluate a 20 minute oral presentation, worth 10% of the overall grade, made by the student. The oral presentation will represent a summary of the research project and its structure will be determined with guidance from the supervisor. The oral presentation could be made in in the context of regular laboratory meetings held by the supervisor.

Grade submission: A copy of the research report along with the supervisors' assessment will be sent to student and Department of Human Genetics office (Stewart Biology Building N5.13) in care of Dr. Patricia N Tonin (course coordinator) before the end of term for submission of grades.

HGEN 396 Undergraduate Research Project Course

Project Proposal

Follow instructions on completing the web-based form ("396 Form") at:
https://www.mcgill.ca/humangenetics/files/humangenetics/396_form-1.pdf

Notes:

- 1) Keep project description simple (3-5 sentences)
- 2) Grading scheme – copy paste details from “Evaluation” section above

Registration steps

- 1) Students contact prospective supervisors to inquire on availability to host “396 undergraduate research projects courses”: <https://mcgill.ca/humangenetics/prospective-graduate-students/supervision-0>
- 2) Students and supervisors jointly complete the “396 Form”:
https://www.mcgill.ca/humangenetics/files/humangenetics/396_form-1.pdf
- 3) Print and sign (student and supervisor) a copy of the completed form
- 4) The student emails an original copy of the completed 396 form and includes an unofficial copy of transcripts to Department of Human Genetics office (ross.mackay@mcgill.ca) in care of Dr. Patricia N Tonin (course coordinator) for approval.

Questions

Direct all queries to the course coordinator:

Dr. Patricia N. Tonin
Patricia.tonin@mcgill.ca
Tel: (514) 934-1934 ext. 44069