# New Course

**Proposal Reference:** 2819  
**Number:** PRN Alias: 10-11#858  
**Version No:** 4  
**Submitted By:** Mr Thomas Leslie  
**Edited By:** Ms Cindy J Smith

## New Data

<table>
<thead>
<tr>
<th>Program Affected?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Change Form Submitted?</td>
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</tbody>
</table>
| Subject/Course/Term | HGEN 396  
  - one term |
| Credit Weight or CEU's | 3 credits |

## Course Activities

<table>
<thead>
<tr>
<th>Schedule Type</th>
<th>Hours per week</th>
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<tr>
<td>IS - Independent Study</td>
<td>9</td>
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| Total Hours per Week | 9 |
| Total Number of Weeks | 13 |

## Course Title

| Official Course Title | Human Genetic Research Project |
| Course Title in Calendar | Human Genetic Research Project |

## Rationale

This new independent study course coordinated by the Department of Human Genetics is an undergraduate research project course. This course will avail students to research laboratories that focus on human genetics. It will expand the current options available to students and thus further enhance the interdisciplinary nature of the undergraduate program in the life sciences. This course will be added to the roster of 396 series of Undergraduate Research Projects Courses currently available to Science students (www.mcgill.ca/science/ours/396).

## Responsible Instructor

Patricia Tonin

## Course Description

This course introduces undergraduate Science students to fundamental laboratory research in human genetics. It contains a significant research component that requires substantial supervised research work by the student. Supervisors will evaluate students based on a written final report, overall research performance and an oral presentation.

## Teaching Dept.

0222 : Human Genetics

## Administering Faculty/Unit

SC : Faculty of Science

## Prerequisites

BIOL 200, BIOL 201/ANAT 212/BIOC212, and BIOL 202
### Corequisites

### Restrictions
Restricted to U2/U3 students, or permission from instructor.

### Supplementary Calendar Info

### Additional Course Charges

### Campus
Downtown

### Projected Enrollment
5

### Requires Resources Not Currently Available
N

### Explanation for Required Resources

### Required Text/Resources Sent To Library?
N

### Library Consulted About Availability of Resources?
N

### Consultation Reports Attached?

### Effective Term of Implementation
201209

### File Attachments
- HGEN396Outline.doc

### To be completed by the Faculty

### For Continuing Studies Use

## Approvals Summary

<table>
<thead>
<tr>
<th>Version No.</th>
<th>Departmental Curriculum Committee</th>
<th>Departmental Meeting</th>
<th>Departmental Chair</th>
<th>Other Faculty</th>
<th>Curric/Academic Committee</th>
<th>Faculty</th>
<th>SCTP</th>
<th>Version Status</th>
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<td>Approved by Faculty Meeting</td>
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Show all comments
General Information

HGEN396 (FALL/WINTER)
Undergraduate Research Project in Human Genetics (3 credits)

Instructors:
P. Tonin (Coordinator)           MGH (514) 934-1934 ext 44069   patricia.tonin@mcgill.ca
& Staff
Administrative Office       Stewart Biology, N5/13          (514) 398-4198

Workload:

3 credits

Prerequisites:

BIOL200, BIOL201/ANAT212/BIOC212, and BIOL202 or permission

Restrictions:

Restricted to U2/U3 students or permission from the instructor.

Purpose:

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. The Supervisor will evaluate the student based on a written final report, overall research performance and an oral presentation.

Enrollment:

This course is open to undergraduate Science students and available in the fall or winter term. Enrollment may be limited by the availability of Supervisors. Students will be advised to start the application process well before the start of the term and to plan for an alternative course in the case that no suitable project is available. Available projects will be posted on the Office for Undergraduate Research in Science (OURS) website each term and/or the students may visit the Department of Human Genetics webpage for research themes and approach supervisors directly for availability. The HGEN 396 enrollment and project
proposal form 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).

Prerequisites

This course is open to any undergraduate student in any program offered by the Faculty of Science. Students are expected to have a general knowledge of human genetics and/or molecular biology by having successfully completed BIOL200-Molecular Biology, BIOL201/ANAT212/BIOC212-Cell Biology and Metabolism, and BIOL202 Basic Genetics or equivalent courses or attain permission from the Supervisor and course coordinator to waive any of these requirements. Students will have a CGPA of at least 3.0 in at least one term of the undergraduate studies or permission of instructor or course coordinator to waive these requirements.

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%).

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.

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.

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.

A copy of the research report along with the Supervisors’ assessment will be sent to student and the course coordinator of the Department of Human Genetics, by the end of the examination period.