**New Course**

<table>
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<th>Program Affected?</th>
<th>Y</th>
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<td>Program Change Form Submitted?</td>
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</table>
| Subject/Course/Term | PHAR 598  
- two consecutive terms (D1, D2) |
| Credit Weight or CEU's | 6 credits |
| Course Activities |  
| Schedule Type | Hours per week |
| PW - Project | 9 |
| Total Hours per Week | 9 |
| Total Number of Weeks | 26 |
| Course Title |  
| Official Course Title | Honours Pharma Research Proj. |
| Course Title in Calendar | Honours Pharmacology Research Project |
| Rationale | PHAR 598 is being created as a research course specifically for Honours students. PHAR 599D1/D2 will remain a Complementary course for students in the Pharmacology Minor and Major Programs. |
| Responsible Instructor | Dr. Anne McKinney and Dr. Dusica Maysinger |
| Course Description | Supervised Honours Research Project in Pharmacology. Students are expected to obtain hands-on research experience in their supervisor's laboratory. They are also required to submit a written report in the form of a scientific manuscript and present a ten minute seminar. |
| Teaching Dept. | 0253 : Pharmacology and Therapeutics |
| Administering Faculty/Unit | SC : Faculty of Science |
| Prerequisites |  |
| Corequisites | PHAR 562 General Pharmacology 1 and PHAR 563 General Pharmacology 2. |
| Web Registration Blocked? | N |
| Restrictions | - Only open to U3 students accepted in the BSc. Honours Pharmacology. Requires Departmental approval. - Students must register for both PHAR 598 D1 and PHAR 598 D2. No credit will be given for this course unless both PHAR 598 D1 and PHAR 598 D2 are successfully completed in consecutive terms. |
1. Minimum of 9 hours/week to be spent in the lab. A statement of the proposed project and method of evaluation, signed by the student and supervisor, must be submitted to the departmental Director of Undergraduate Studies for approval by the add/drop deadline of the semester in which the student registers for this course.

### Supplementary Calendar Info

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<tr>
<th>Campus</th>
<th>Downtown</th>
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<td>Projected Enrollment</td>
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<td>Requires Resources Not Currently Available</td>
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<td>Explanation for Required Resources</td>
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<td>Required Text/Resources Sent To Library?</td>
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<td>Consultation Reports Attached?</td>
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<td>Effective Term of Implementation</td>
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### File Attachments

- PHAR 598 New Outline.doc
- Supervisor-Evaluation PHAR 598.doc
- Pharmacology Honours Program-revision-form_Nov_19_2013.doc

### Approvals Summary

**Show all comments**

<table>
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<tr>
<th>Version No.</th>
<th>Departmental Curriculum Committee</th>
<th>Departmental Meeting</th>
<th>Departmental Chair</th>
<th>Other Faculty</th>
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<th>Faculty</th>
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PHAR 598 – Honours Research Project in Pharmacology
Course Outline (2014 - 2015)

Course Coordinators:
Dr. Dusica Maysinger
(tel: 398-1264; e-mail: dusica.maysinger@mcgill.ca; McIntyre, room 1314)
Dr. Anne McKinney
(tel: 398-5685; e-mail: anne.mckinney@mcgill.ca; Bellini, room 167)

Teaching Assistant:
TBA; McIntyre 1314

Overview of the course:
This course consists of a thesis-based research project involving laboratory work in a selected area of Pharmacology. The research topic should highlight a novel aspect or contribute new knowledge to the current field of research.

The project should be carried out under the supervision of a faculty/staff member in the laboratory, and will require a minimum of 9 hours per week over 2 semesters, or 16 hours per week over 1 semester, to be spent in the laboratory and/or library. Students will be required to actively participate in the research project through experimental work, as well as evaluating scientific articles, biological merit and significance.

At the end of the course, the student must submit a written report in the form of a scientific manuscript and present a 10-minute seminar to a panel of evaluators (including the supervisor, coordinators and teaching assistant).

Method of evaluation:
1) Manuscript submission (50%)
2) Seminar presentation (25%)
3) Supervisor evaluation (25%)

Manuscript Submission (50%)
A written report should be submitted in the form of a manuscript, drafted according to the guidelines of a relevant, high impact journal as determined by the supervisor and course coordinators. The written report should be no longer than 20 typed pages (double-spaced) and should include these sections: Abstract, Introduction, Methods, Results (+ Figures and Tables), Discussion and References.

It will be evaluated by the supervisor and course coordinators, who will subsequently meet with the student for an informal discussion of the report.
**Seminar Presentation (25%)**

At the end of the term, students will present and summarize their research and findings in a 10-min oral presentation (slide show presentation). Evaluation of the seminar will be as follows:

1) Rationale (and understanding) of research topic  
2) Preparation and general knowledge regarding the research field  
3) Ability to critically analyze the student’s own and other’s data  
4) Ability to answer questions  
5) Clarity of presentation

5%  
5%  
5%  
5%  
5%

At mid-term, students will meet informally with the course coordinators/TA to discuss his/her progress in the research project. Students are also encouraged to submit a **Summary Research Proposal** to the TA (more instructions to follow).

**Supervisor Evaluation (25%)**

Ongoing evaluation of the students will be carried out by the faculty/staff member responsible for supervising the project.

***All course material will be available on myCourses: [http://www.mcgill.ca/mycourses/](http://www.mcgill.ca/mycourses/). Students are responsible for understanding the importance of academic integrity ([http://www.mcgill.ca/students/srr/honest/students](http://www.mcgill.ca/students/srr/honest/students) or [http://www.mcgill.ca/integrity/student guide/](http://www.mcgill.ca/integrity/student guide/)). Academic integrity is important. Anything that undermines the evaluation process at McGill undermines the value of your degrees. McGill's Code of Student Conduct and Disciplinary Procedures appears in the Handbook on Student Rights and Responsibilities([GreenBook](http://www.mcgill.ca/students/srr/academicrights/integrity/cheating/)); Article 15(a) of the Code, which is devoted to plagiarism, reads as follows:

*No student shall, with intent to deceive, represent the work of another person as his or her own in any academic writing, essay, thesis, research report, project or assignment submitted in a course or program of study or represent as his or her own an entire essay or work of another, whether the material so represented constitutes a part or the entirety of the work submitted.* These rules concern information obtained from any source (e.g., books, journal articles, the Internet, other students) and apply to any written submission (term papers, essays, assignments, take-home exams and lab reports).
Supervisor Evaluation - PHAR 598
Honours Pharmacology Research Project

NAME OF STUDENT: _____________________________________

Course number & Year: ___________________________________

Please check the sentence that best characterizes your student for the following criteria. The supervisor evaluation is 25% of the final grade.

1. The student worked in the lab for an average of:
   - 0 - 4 hours per week
   - 5 - 10 hours per week
   - 11 - 20 hours per week
   - 20 hours or more per week
   - Cannot evaluate

2. Please estimate the number of papers that the student read related to their project.
   - 1-9
   - 10-19
   - 20-29
   - 30-39
   - 40 or more
   - Cannot evaluate

3. The quantity of experimental work achieved was:
   - Insufficient
   - Minimum
   - Average
   - Excellent
   - Outstanding
   - Cannot evaluate

4. Quality of experimental work. The student:
   - Was unable to perform experiments
   - Had difficulties in learning to perform techniques un-aided
   - Was able to perform experiments un-aided but needed a lot of help to get started
   - Was able to repeat experiments after being shown one time how to do them
   - Was able to repeat and modify experiments
   - Was able to develop experimental techniques which were not done in the laboratory
   - Cannot evaluate
5. Ability to interpret results. At the end of the class, the student
- Was unable to interpret results un-aided
- Had difficulties to interpret results
- Was able to interpret results with relative ease
- Presented excellent abilities to interpret results but was not able to suggest follow-up experiments
- Presented excellent abilities to interpret results and was able to suggest logical follow-up experiments
- Presented exceptional abilities to interpret results and was able to propose innovative follow-up experiments
- Cannot evaluate

6. Quality of discussions with the student. By the end of the term the student:
- Poor understanding of the project and experiments
- Demonstrated a superficial understanding of the project and experiments
- Demonstrated a good understanding of the project and experiments
- Demonstrated an excellent understanding of the project and experiments
- Demonstrated and outstanding understanding of the project and experiments
- Cannot evaluate

7. Quality of record keeping (lab book). The student:
- Never kept any record of the work performed
- Kept very messy records of the work performed
- Kept good records only under supervision of the work performed
- Was able to keep an acceptable record of the work performed
- Kept an exemplary note book
- Cannot evaluate

8. Oral communication skills. The student:
- Had major communication problems
- Got on with other lab members and was able to function in a team
- Was able to communicate efficiently with other lab members
- Had excellent communication abilities both in the laboratory and with his supervisor
- Had outstanding communication abilities both in the laboratory and with his supervisor, and always had time to help others
- Cannot evaluate

9. Motivation for the project. The student
- Was very un-motivated and disinterested or distracted
- Did the minimum amount of work.
- Demonstrated good motivation
- Demonstrated very good motivation
- Demonstrated excellent motivation, keenness and an aptitude to ask questions.
- Cannot evaluate
10. The student handed in a draft of their report 1 week in advance of the final submission deadline
   ☐ Yes
   ☐ No

11. The student prepared and presented a draft of their power point presentation 1 week in advance of the final submission deadline
   ☐ Yes
   ☐ No

Comments:
Please indicate any specific qualities or concerns that you have about the student that will help the committee make their final evaluation of the Student. Also mention any special needs or circumstances that we should be made aware of. Finally, if you are supervising more than one student, we would appreciate a candid comparative evaluation of their abilities.