McGill

U3

Program/Major or Minor/Concentration Revision Form

(2013)

1.0 Degree Title
Specify the two degrees for concurrent degree programs

B.Sc. in Pharmacology

1.1 Major (Legacy= Subject) (30-char. max.)

Pharmacology

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

- ☐ Faculty Program (FP)
- ☐ Major
- ☐ Joint Major
- ☐ Major Concentration (CON)
- ☐ Minor
- ☐ Minor Concentration (CON)
- ☒ Honours (HON)
- ☐ Joint Honours Component (HC)
- ☐ Internship/Co-op
- ☐ Thesis (T)
- ☐ Non-Thesis (N)
- ☐ Other

Please specify

1.5 Complete Program Title

Honours in Pharmacology

2.0 Administering Faculty/Unit

Faculty of Science

Offering Faculty/Department

Faculty of Medicine / Dept. of Pharmacology & Therapeutics

3.0 Effective Term of revision or retirement
Please give reasons in 5.0"Rationale" in the case of retirement
(Ex. Sept. 2004 = 200409) ☐ Retirement

Term: 201509

4.0 Existing Credit Weight: 74 credits

Proposed Credit Weight: 76 credits

5.0 Rationale for revised program

The program has been revised to add two PHAR 200 levels courses in U1 so that entry level students have the opportunity to be exposed to Pharmacology and to meet Pharmacology faculty members in their first year in the program. A U2 level laboratory course has been created to provide a Pharmacology lab experience for students entering the Honours program. Additional U3 500 level courses have been created to provide more choices to students in their final year. These new courses should have an impact on class sizes, which have been increasing to the extent that they decrease the opportunity for interactions and limit the format of some of these courses.

6.0 Revised Program Description (Maximum 150 words)

Not applicable.

7.0 List of existing program and proposed program

Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

U1 Required Courses (22 credits)

- BIOL 200 Molecular Biology (3 credits)
- BIOL 202 Basic Genetics (3 credits)
- CHEM 212 Introductory Organic Chemistry 1 (4 credits)
- CHEM 222 Introductory Organic Chemistry 2 (4 credits)
- PHGY 209 Mammalian Physiology 1 (3 credits)
- PHGY 210 Mammalian Physiology 2 (3 credits)
- PHGY 212 Introductory Physiology Laboratory 1 (1 credit)
- PHGY 213 Introductory Physiology Laboratory 2 (1 credit)

U2 Required Courses (16 credits)

- BIOC 311 Metabolic Biochemistry (3 credits)
- BIOL 301 Cell and Molecular Laboratory (4 credits)
- PHAR 300 Drug Action (3 credits)
- PHAR 301 Drugs and Disease (3 credits)
- PHAR 303 Principles of Toxicology (3 credits)

U3 Required Courses (18 credits)

- PHAR 503 Drug Discovery and Development 1 (3 credits)
- PHAR 558 Pharmacology Selected Topics (3 credits)
- PHAR 562 General Pharmacology 1 (3 credits)
- PHAR 563 General Pharmacology 2 (3 credits)
- PHAR 598 D1 Honours Pharmacology Research Project (3 credits)
- PHAR 598 D2 Honours Pharmacology Research Project (3 credits)

Complementary Courses (18 credits)

15 credits selected as follows:

3 credits selected from (usually in Year 1):

- ANAT 212 Molecular Mechanisms of Cell Function (3 credits)
- BIOC 212 Molecular Mechanisms of Cell Function (3 credits)
- BIOL 201 Cell Biology and Metabolism (3 credits)

3 credits selected from (usually in Year 2):

- CHEM 203 Survey of Physical Chemistry (3 credits)
- CHEM 204 Physical Chemistry/Biological Sciences 1 (3 credits)

3 credits selected from (usually in Year 2):

- BIOL 373 Biometry (3 credits)
- MATH 203 Principles of Statistics 1 (3 credits)
- PSYC 204 Introduction to Psychological Statistics (3 credits)

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

U1 Required Courses (24 credits)

- BIOL 200 Molecular Biology (3 credits)
- BIOL 202 Basic Genetics (3 credits)
- CHEM 212 Introductory Organic Chemistry 1 (4 credits) *
- CHEM 222 Introductory Organic Chemistry 2 (4 credits) *
- PHGY 209 Mammalian Physiology 1 (3 credits)
- PHGY 210 Mammalian Physiology 2 (3 credits)
- PHGY 212 Introductory Physiology Laboratory 1 (1 credit)
- PHGY 213 Introductory Physiology Laboratory 2 (1 credit)
- PHAR 200 Introduction to Pharmacology 1 (1 credit)
- PHAR 201 Introduction to Pharmacology 2 (1 credit)

** Students who have taken the equivalent of CHEM 212, CHEM 222,and/or MATH 203 in CEGEP (as defined at: http://www.mcgill.ca/students/transfercredit/prospective/cegep) are exempt and may not take these courses at McGill. Students must replace these credits with appropriate complementary course credits to satisfy the total credit requirements for their degree.*

U2 Required Courses (16 credits)

- BIOC 311 Metabolic Biochemistry (3 credits)
- BIOL 301 Cell and Molecular Laboratory (4 credits)
- PHAR 300 Drug Action (3 credits)
- PHAR 301 Drugs and Disease (3 credits)
- PHAR 303 Principles of Toxicology (3 credits)

U3 Required Courses (6 credits):

6 credits selected as follows:

- PHAR 598 D1 Honours Pharmacology Research Project (3 credits)
- PHAR 598 D2 Honours Pharmacology Research Project (3 credits)

Complementary Courses (30 credits)

15 credits selected as follows:

3 credits selected from (usually in Year 1):

- ANAT 212 Molecular Mechanisms of Cell Function (3 credits)
- BIOC 212 Molecular Mechanisms of Cell Function (3 credits)
- BIOL 201 Cell Biology and Metabolism (3 credits)

3 credits, one of (usually in Year 2):

- CHEM 203 Survey of Physical Chemistry (3 credits)
- CHEM 204 Physical Chemistry/Biological Sciences 1 (3 credits)

3 credits selected from (usually in Year 2):

- BIOL 373 Biometry (3 credits)
- MATH 203 Principles of Statistics 1 (3 credits) *
- PSYC 204 Introduction to Psychological Statistics (3 credits)

3 credits, one of (usually in Year 3):

- PHAR 503 Drug Discovery and Development 1 (3 credits)
- PHAR 505 Structural Pharmacology (3 credits)

3 credits, one of (usually in Year 3):

- PHAR 562 Neuropharmacology (3 credits)
- PHAR 563 Endocrine Pharmacology (3 credits)

Attach extra page(s) as needed

9 credits selected from the following upper-level science courses:

Committee approval is required to substitute an upper-level science course not in the list below.

* Note: Students may take either ANAT 458 or BIOC 458.

- ANAT 321 Circuitry of the Human Brain (3 credits)
- ANAT 322 Neuroendocrinology (3 credits)
- ANAT 365 Cellular Trafficking (3 credits)
- ANAT 458 Membranes and Cellular Signaling (3 credits) *
- BIOC 312 Biochemistry of Macromolecules (3 credits)
- BIOC 450 Protein Structure and Function (3 credits)
- BIOC 454 Nucleic Acids (3 credits)
- BIOC 458 Membranes and Cellular Signaling (3 credits) *
- BIOL 300 Molecular Biology of the Gene (3 credits)
- BIOL 303 Developmental Biology (3 credits)
- BIOL 306 Neural Basis of Behaviour (3 credits)
- BIOL 314 Molecular Biology of Oncogenes (3 credits)
- BIOT 505 Selected Topics in Biotechnology (3 credits)
- CHEM 302 Introductory Organic Chemistry 3 (3 credits)
- CHEM 334 Advanced Materials (3 credits)
- CHEM 382 Organic Chemistry: Natural Products (3 credits)
- CHEM 502 Advanced Bio-Organic Chemistry (3 credits)
- CHEM 503 Drug Design and Development 1 (3 credits)
- CHEM 504 Drug Design and Development 2 (3 credits)
- CHEM 522 Stereochemistry (3 credits)
- CHEM 552 Physical Organic Chemistry (3 credits)
- EPIB 501 Population Health and Epidemiology (3 credits)
- EXMD 401 Physiology and Biochemistry Endocrine Systems (3 credits)
- EXMD 504 Biology of Cancer (3 credits)
- EXMD 511 Joint Venturing with Industry (3 credits)
- MIMM 387 The Business of Science (3 credits)
- MIMM 414 Advanced Immunology (3 credits)
- NEUR 310 Cellular Neurobiology (3 credits)
- PATH 300 Human Disease (3 credits)
- PHAR 504 Drug Discovery and Development 2 (3 credits)
- PHGY 311 Channels, Synapses & Hormones (3 credits)
- PHGY 312 Respiratory, Renal, & Cardiovascular Physiology (3 credits)
- PHGY 313 Blood, Gastrointestinal, & Immune Systems Physiology (3 credits)
- PHGY 314 Integrative Neuroscience (3 credits)
- PHGY 520 Ion Channels (3 credits)
- PSYC 302 The Psychology of Pain (3 credits)
- PSYC 311 Human Cognition and the Brain (3 credits)
- PSYT 301 Issues in Drug Dependence (3 credits)
- PSYT 455 Neurochemistry (3 credits)
- PSYT 500 Advances: Neurobiology of Mental Disorders (3 credits)
- REDM 410 Writing Research Articles (3 credits)

15 credits selected from the following upper-level science courses:

Committee approval is required to substitute an upper-level science course not in the list below.

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- EXMD 511 Joint Venturing with Industry (3 credits)
- MIMM 387 The Business of Science (3 credits)
- MIMM 414 Advanced Immunology (3 credits)
- NEUR 310 Cellular Neurobiology (3 credits)
- PATH 300 Human Disease (3 credits)
- PHAR 390 Laboratory in Pharmacology (3 credits)
- PHAR 504 Drug Discovery and Development 2 (3 credits)
- PHAR 508 Drug Discovery and Development 3 (3 credits)
- PHAR 562 Neuropharmacology (3 credits)
- PHAR 563 Endocrine Pharmacology (3 credits)
- PHAR 565 Epigenetic Drugs and Targets (3 credits)
- PHGY 311 Channels, Synapses & Hormones (3 credits)
- PHGY 312 Respiratory, Renal, & Cardiovascular Physiology (3 credits)
- PHGY 313 Blood, Gastrointestinal, & Immune Systems Physiology (3 credits)
- PHGY 314 Integrative Neuroscience (3 credits)
- PHGY 520 Ion Channels (3 credits)
- PSYC 302 The Psychology of Pain (3 credits)
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- PSYT 301 Issues in Drug Dependence (3 credits)
- PSYT 455 Neurochemistry (3 credits)
- PSYT 500 Advances: Neurobiology of Mental Disorders (3 credits)
- REDM 410 Writing Research Articles (3 credits)

8.0 Consultation with Related Units ☐ Yes ☒ No Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence	Name	Signature	Date
Department	Dr. Gerhard Multhaup		
Curric/Acad Committee	Dr. Barbara Hales		
Faculty 1			
Faculty 2			
Faculty 3			
CGPS			
SCTP			
APC			
Senate			

Submitted by

Name	Chantal Grignon
Phone	514-398-3623
Email	chantal.grignon@mcgill.ca
Submission Date	

To be completed by ARR:

CIP Code

10. FQRSC (Research) Indicator (for GPS): Yes No