McGill

Program/Major or Minor/Concentration Revision Form

(07/2004)

1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 Bachelor of Science

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

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

1.4 Category

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

1.5 B.Sc.; Physiology and Physics

2.0 Administering Faculty/Unit
Faculty of Science

Offering Faculty/Department
Faculty of Medicine/Department of Physiology

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: 201409

4.0 Existing Credit Weight: 80

Proposed Credit Weight: 80

5.0 Rationale for revised program

PHGY 209 and 210 are now added in the U1 year as required courses as it was incorrectly listed in the complementary listing and they are prerequisites to U2 required courses.
MATH 315 (or MATH 325) must be taken in U1, and not in U2 as presently listed, since it is a prerequisite to MATH 437 and PHYS 413, one of which is taken by all students in U2 (MATH 437 and PHYS 413 are given in alternate years).
PHYS 241 is added in the U1 year as a required course to replace PHYS 328, which was incorrectly included in the program (in fact, PHYS 241 is a prerequisite to PHYS 328). PHYS 241 must be taken in U1as it is a prerequisite to PHYS 339, a required U2 course.

6.0 Revised Program Description (Maximum 150 words)

Major in Physiology & Physics (80 credits)

U1 Required Courses (17 credits)
* The corequisite BIOL 200, BIOL 201 is waived for this program.

MATH 222 Calculus 3 (3 credits)
PHGY 212 Introductory Physiology Laboratory 1(1 credit) *
PHGY 213 Introductory Physiology Laboratory 2(1 credit) *
PHYS 230 Dynamics of Simple Systems (3 credits)
PHYS 232 Heat and Waves (3 credits)
PHYS 257 Experimental Methods 1 (3 credits)
PHYS 258 Experimental Methods 2 (3 credits)

U2 Required Courses (21 credits)
MATH 326 Nonlinear Dynamics and Chaos (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)
PHYS 328 Electronics (3 credits)
PHYS 339 Measurements Laboratory in General Physics (3 credits)

U2 or U3 Required Courses (6 credits)

MATH 437 Mathematical Methods in Biology (3credits)
PHYS 413 Physical Basis of Physiology (3 credits)

U3 Required Courses (21 credits)

BMDE 519 Biomedical Signals and Systems (3 credits)
PHGY 461D1 Experimental Physiology (4.5 credits)
PHGY 461D2 Experimental Physiology (4.5 credits)
PHYS 333 Thermal and Statistical Physics (3 credits)
PHYS 340 Majors Electricity and Magnetism (3 credits)
PHYS 446 Majors Quantum Physics (3 credits)

Major in Physiology & Physics (80 credits)

U1 Required Courses (~~17~~ 26 credits)
* The corequisite BIOL 200, BIOL 201 is waived for this program.

MATH 222 Calculus 3 (3 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) *
PHYS 230 Dynamics of Simple Systems (3 credits)
PHYS 232 Heat and Waves (3 credits)
PHYS 241 Signal Processing (3 credits)
PHYS 257 Experimental Methods 1 (3 credits)
PHYS 258 Experimental Methods 2 (3 credits)

U2 Required Courses (~~21~~ 18 credits)
MATH 326 Nonlinear Dynamics and Chaos (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)
~~PHYS 328 Electronics (3 credits)~~
PHYS 339 Measurements Laboratory in General Physics (3 credits)

U2 or U3 Required Courses (6 credits)
(Note: These courses are offered in alternate years)

MATH 437 Mathematical Methods in Biology (3credits)
PHYS 413 Physical Basis of Physiology (3 credits)

U3 Required Courses (21 credits)
BMDE 519 Biomedical Signals and Systems (3 credits)
PHGY 461D1 Experimental Physiology (4.5 credits)
PHGY 461D2 Experimental Physiology (4.5 credits)
PHYS 333 Thermal and Statistical Physics (3 credits)
PHYS 340 Majors Electricity and Magnetism (3 credits)
PHYS 446 Majors Quantum Physics (3 credits)

Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)	Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)
U1 Complementary Courses (9 credits) 3 credits, one of: MATH 223 Linear Algebra (3 credits) MATH 247 Honours Applied Linear Algebra (3 credits) 6 credits selected as follows: ** The corequisite BIOL 200, BIOL 201 is waived for this program. PHGY 209 Mammalian Physiology 1 (3 credits) PHGY 210 Mammalian Physiology 2 (3 credits) ** **U2 Complementary Courses (6 credits)** 3 credits, one of: MATH 315 Ordinary Differential Equations (3 credits) MATH 325 Honours Ordinary Differential Equations (3 credits) 3 credits, one of: MATH 248 Honours Advanced Calculus (3 credits) MATH 314 Advanced Calculus (3 credits) Attach extra page(s) as needed	**U1 Complementary Courses (9 6 credits)** 3 credits, one of: **MATH 315 Ordinary Differential Equations (3 credits)** **MATH 325 Honours Ordinary Differential Equations (3 credits)** 3 credits, one of: MATH 223 Linear Algebra (3 credits) MATH 247 Honours Applied Linear Algebra (3 credits) ~~6 credits selected as follows:~~ ~~** The corequisite BIOL 200, BIOL 201 is waived for this program.~~ ~~PHGY 209 Mammalian Physiology 1 (3 credits)~~ ~~PHGY 210 Mammalian Physiology 2 (3 credits) **~~ **U2 Complementary Courses (6 3credits)** ~~3 credits, one of:~~ ~~MATH 315 Ordinary Differential Equations (3 credits)~~ ~~MATH 325 Honours Ordinary Differential Equations (3 credits)~~ 3 credits, one of: MATH 248 Honours Advanced Calculus (3 credits) MATH 314 Advanced Calculus (3 credits)

B.Sc. Physiology & Physics

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. John Orlowski		Feb. 13/14
Curric/Acad Committee	Dr. Ragsdale, Chair		27 feb 2014
Faculty 1	Dr. Davis, Assoc Dean		Feb 27 '14
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name	Sonia Viselli
Phone	514-398-3689
Email	sonia.viselli@mcgill.ca
Submission Date	February 13, 2014

To be completed by ARR:

CIP Code

CONSULTATION REPORT FORM
RE COURSE/PROGRAM PROPOSALS

DATE: February 13, 2014

TO: Professor G. Moore
Department of Physics

FROM: Sonia Viselli
Department of Physiology

The attached proposal will be submitted to the Curriculum/Academic Committee in Faculty of Science, and since it is the joint Major Physiology and Physics it is necessity that we consult with your department.

Can you please review this proposal and let me know as soon as possible, on this form, whether or not your department has any objections to, or comments regarding, the proposal.

___X___ NO OBJECTIONS _____ SOME OBJECTIONS

COMMENTS: Physics views these changes as long overdue and necessary to free the program from unlisted prerequisites and prerequisite conflicts.

Signature: **Guy D Moore (sent electronically)**

Date: **26 February 2014**