## New Course

### Proposal Reference
- Number: 3178
- PRN Alias: 11-12#134
- Version No: 8
- Submitted By: Ms Nancy Nelson
- Edited By: Ms Josie D'Amico

### Program Affected?
Y

### Program Change Form Submitted?
- N (Simple Change) - Please add BIOL 320 to the list of "Other Complementary Courses" for B.Sc., Major Program in Neuroscience, under "200- and 300-level courses:" to "Basic Life Sciences Courses" in the Minor in Interdisciplinary Life Sciences; "12 credits of biologically oriented courses (BOC) selected from:" list, Major in Anatomy & Cell Biology; "3 credits of biologically oriented courses (BOC) selected from:" list, Major in Anatomy & Cell Biology Core Science Component; to "U2 or U3 Complementary Courses" list for Major and Honours in Biology under "12 credits selected from:" list of "Neurosciences Stream" in the Joint Major in Biology and Mathematics under the "Stream Complementary Courses."

### Subject/Course/Term
- BIOL 320
- one term

### Credit Weight or CEU's
- 3 credits

### Course Activities

<table>
<thead>
<tr>
<th>Schedule Type</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Lecture</td>
<td>2</td>
</tr>
<tr>
<td>Q - Conference</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Hours per Week: 3  
Total Number of Weeks: 13

### Course Title

<table>
<thead>
<tr>
<th>Official Course Title</th>
<th>Course Title in Calendar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evolution of Brain and Behav</td>
<td>Evolution of Brain and Behaviour</td>
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</table>

### Rationale
The large number of undergraduates requesting neurobiology courses indicates that there is both an interest in and a need for additional courses. While there are a number of courses in the Biology department that teach evolutionary principles, there is no course that focuses on the evolution of behaviour and neurobiological mechanisms. The proposed course will address how evolutionary changes in behaviour are mediated by evolutionary changes in specific brain circuits and inform students about the functions of different brain systems in a variety of species. This course will build upon principles taught in other neuroscience courses, such as BIOL 306 (Neural Basis of Behavior) and will complement the only
<table>
<thead>
<tr>
<th><strong>Approvals Summary</strong></th>
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<tr>
<td>existing neuroanatomy course offered to undergraduates (ANAT 321), which focuses exclusively on human neuroanatomy.</td>
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<thead>
<tr>
<th><strong>Responsible Instructor</strong></th>
<th>Sarah Woolley/Jon Sakata</th>
</tr>
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<tbody>
<tr>
<td><strong>Course Description</strong></td>
<td>Functional and comparative approach to neuroanatomy, examining how species changes in brain organization contribute to evolutionary changes in behaviour.</td>
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<table>
<thead>
<tr>
<th><strong>Teaching Dept.</strong></th>
<th>0286 : Biology</th>
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<tbody>
<tr>
<td><strong>Administering Faculty/Unit</strong></td>
<td>SC : Faculty of Science</td>
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<table>
<thead>
<tr>
<th><strong>Prerequisites</strong></th>
<th>NCSI 201 or BIOL 306 Web Registration Blocked? : N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corequisites</strong></td>
<td></td>
</tr>
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| **Restrictions** | |

| **Supplementary Calendar Info** | 1. Winter, 2 hours of lecture and 1 hour of conference (mandatory) per week. |

| **Additional Course Charges** | |

<table>
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<tr>
<th><strong>Campus</strong></th>
<th>Downtown</th>
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<table>
<thead>
<tr>
<th><strong>Projected Enrollment</strong></th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requires Resources Not Currently Available</strong></td>
<td>N</td>
</tr>
</tbody>
</table>

| **Explanation for Required Resources** | |

| **Required Text/Resources Sent To Library?** | |

| **Library Consulted About Availability of Resources?** | |

| **Consultation Reports Attached?** | |

<table>
<thead>
<tr>
<th><strong>Effective Term of Implementation</strong></th>
<th>201301</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>File Attachments</strong></td>
<td>No attachments have been saved yet.</td>
</tr>
</tbody>
</table>

| **To be completed by the Faculty** | |

| **For Continuing Studies Use** | |

https://banweb.mcgill.ca/pban1/bzsckpfw.p_display_form?form_mode=View_Printable&pr...
Biology 320: Evolution of Brain and Behaviour
Profs. Sarah Woolley and Jon Sakata

Course Outline

I. Introduction (1 lecture)
II. Principles of brain evolution (4 lectures)
III. Evolutionary changes in brain size (2 lectures)
IV. Neural Systems
   a. Cerebellum (2 lectures)
   b. Basal ganglia (4 lectures)
   c. Prefrontal cortex (3 lectures)
   d. Septum (2 lectures)
   e. Ventral Pallidum (2 lectures)
   f. Hippocampus (4 lectures)
   g. Vocal motor circuitry (2 lectures)

Each week, there will be one mandatory conference (i.e., two lectures and one conference per week).

Selected readings potentially from:
- Butler and Hodos: Comparative Vertebrate Neuroanatomy (2005; PDFs available online)
- Kaas: Evolutionary Neuroscience (2009)
- Purves et al.: Neuroscience (2008)

The grades will be based on the following:
20% midterm exam
30% final exam
30% research paper
10% presentation
10% class participation
McGill Biology Department

Guidelines for the Course Proposal/Change Form

CONSULTATION REPORT FORM
RE: COURSE / PROGRAM PROPOSALS

DATE: JAN. 26/2012
TO: 
FROM: Nancy Nelson  Biol Advisor, *4109

The attached proposal has been submitted to the Curriculum/Academic Committee, and it has been decided that your department should be consulted.

Course #: Biology 320  Evolution of Brain and Behaviour

Would you be good enough to review this proposal and let me know no later than Jan 30/12, on this form, whether or not your department has any objections to, or comments regarding, the proposal.

[ ] NO OBJECTIONS  [ ] SOME OBJECTIONS

COMMENT:

Some overlap with Anth 321
But focus of course is very different

Signature:  
Date: Feb 7/2012
From: Vittoria Catania, Ms.
Sent: Friday, February 03, 2012 4:41 PM
To: Josie D'Amico
Subject: Added BOC to Anatomy & Cell Biology - BIOL 320

Hi Josie,
As discussed, please add BIOL 320 to the following programs:
Honours – BOC list – 3 credits
Majors – BOC list – 12 credits
Liberal – List B – 6-7 credits.

Have a great weekend!

Vittoria Catania
Student Affairs Administrator
www.mcgill.ca/anatomy
Department of Anatomy & Cell Biology
3640 University Street, Room 1/60
Montreal, Qc H3A 2B2
Tel: 514-398-6335
Fax: 514-398-5047

Students: Please note that to protect your privacy, we will only reply to you at your official McGill e-mail address. Please check your McGill e-mail regularly to ensure that you do not miss any important messages.
From: Ryan Bouma  
Sent: Wednesday, February 01, 2012 4:15 PM  
To: Josie D'Amico  
Cc: Nancy Nelson, Ms.; Monroe W. Cohen  
Subject: RE: New course proposal consultation request--re-sending at request of Laurie Hendren  

Hi Josie,  

Just to clarify, we would like to include BIOL 320 in the Neuroscience list of Other Complementary Courses, in the 200-300 level section.  

Ryan Bouma  
Interdisciplinary Program Adviser  
Faculty of Science  
Dawson Hall, Room 411  
853 Sherbrooke Street West  
Montreal, QC H3A 2T6  

From: Monroe W. Cohen  
Sent: Wednesday, February 01, 2012 11:11 AM  
To: Josie D'Amico  
Cc: Nancy Nelson, Ms.; Ryan Bouma  
Subject: RE: New course proposal consultation request--re-sending at request of Laurie Hendren  

Hi Josie,  

BIOL 320 will be a valuable addition as a complementary course in the Neuroscience Major, and we will include it in the program.  

Monroe  

From: Josie D'Amico  
Sent: Wednesday, February 01, 2012 9:52 AM  
To: Nancy Nelson, Ms.; Sonia Viselli; Vittoria Catania, Ms.; gillian@hebb.psych.mcgill.ca; Monroe W. Cohen  
Cc: Sarah Woolley, Dr.  
Subject: RE: New course proposal consultation request--re-sending at request of Laurie Hendren  

Thanks, everyone.  

I just want to point out that the prerequisite courses for BIOL 320 are:  

NSCI 201 (Introduction to Neuroscience) OR  
BIOL 306 (Neural Basis of Behavioural)  

Laurie and I would appreciate it very much if you could let us know as soon as possible. We will be holding our Pre-Academic meeting tomorrow at noon, so if you could let us know quickly, that would be great.  

Please let me know if you have any questions.
Josie

From: Nancy Nelson, Ms.
Sent: Wednesday, February 01, 2012 8:54 AM
To: Sonia Viselli; Vittoria Catania, Ms.; gillian@hebb.psych.mcgill.ca; Monroe W. Cohen
Cc: Sarah Woolley, Dr.; Josie D'Amico
Subject: New course proposal consultation request--re-sending at request of Laurie Hendren

Dear All,

Laurie Hendren asked me to revisit the subject with each of you to see if you would be interested in including this course in your ULS, BOC, or complementary courses for your Majors and Honors programs. If so, please include that note in your consultation forms so that we could take care of it with the course proposal, rather than having to submit several revisions.

BIOL will include the course in its complementary course list for the Neuro stream of our Majors and Joint Majors.

I hope to hear from you as soon as possible.

Thanks
Nancy

Dear Sonia, Vittoria and Sarah,

We circulated a form on this topic back in September but in the confusion we never heard back. I’ll attach the proposal and outline, and we’d like to confirm your opinions to Josie d’Amico by Monday Jan 30 if possible.

Please print your name and department in the “TO:” section of the consultation form.

Thanks
Nancy

Best regards,

Nancy Nelson
Undergraduate Advisor
McGill University
Department of Biology
STEWART Biology Building W3/25
1205 Avenue Docteur Penfield
Montréal Québec H3A 1B1
Phone: 514-398-4109
Fax: 514-398-5069
Mail to: Nancy.Nelson@mcgill.ca

McGill students: please use your official McGill email, and include your student id number in all correspondence.

Office hours Winter 2012:
Mondays and Thursdays 10-11:30
Wednesdays 2-3:30
Hi Josie,

Yes, that was intended to be our consultation. The course looks good and does not overlap our courses.

Gillian

Josie D'Amico

From: Josie D'Amico [mailto:josie.damico@mcgill.ca]
Sent: February-01-12 3:30 PM
To: 'Gillian O'Driscoll'
Subject: RE: New course proposal --O'Driscoll Psych

Thank you, Gillian.

I didn’t think you needed to modify your programs, but I just wanted to make sure that was consultation with Psychology about the course itself.

Thanks, again.

Josie

From: Gillian O'Driscoll [mailto:gillian@ego.psych.mcgill.ca]
Sent: Wednesday, February 01, 2012 3:28 PM
To: Josie D'Amico
Cc: Sarah Khayutin, Ms; Nancy Nelson, Ms.
Subject: RE: New course proposal --O'Driscoll Psych

Thank you for sending the documents.

Biol 320 looks great. I checked our program and it doesn’t look like we would need to modify any aspect of it to allow our students to take Biol 320 for credit toward their Major or for their Honours degree. Currently, we say they can take 12 credits (for major; 9 for Honours) at the 300 and above level in Biology as complementary courses, and these would include this course.

Gillian O’D.
UG Program Director
Dept of Psych

From: Josie D'Amico [mailto:josie.damico@mcgill.ca]
Sent: February-01-12 9:52 AM
To: Nancy Nelson, Ms.; Sonia Viselli; Vittoria Catania, Ms.; gillian@hebb.psych.mcgill.ca; Monroe W. Cohen
Cc: Sarah Woolley, Dr.
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McGill University
Department of Biology
STEWART Biology Building W3/25
1205 Avenue Docteur Penfield
Montréal Québec H3A 1B1
Phone: 514-398-4109
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