



1. Will this new course affect a current program?  
If "yes", has a Program Revision Form been submitted concurrently?

Yes  No   
Yes  No

2. Teaching Department:

Biology

3. Administering Faculty/Unit:

Science

6. Responsible Instructor

Dr. Brian McGill

4. Campus  
(Downtown, Macdonald, Off Campus, Distance Ed, Other – specify)

Downtown

5. Effective Term of Implementation  
(Ex. Sept. 2004 = 200409)

Term:

200701

7. Course Title (Limit 30 Characters) - required for all courses:

Large-scale Ecology

9. Course Title to Appear in the Calendar (optional)  
(Limit 59 characters):  
Note: This can ONLY be an expansion of word(s) abbreviated in the 30 character course title above.

10. Credit Weight  
(or CEU's for non-credit CE courses):

3

8. Course Number(s)  
Indicate course number & the number of terms spanned:  
(tick all that apply)

Subject/course number:

BIOL 310

Course(s) Span:

- 1 term
- 2 consecutive terms (D1, D2)
- 2 non-consecutive terms (N1, N2)
- 3 consecutive terms (J1, J2, J3)

11. Rationale for new course

Ecology is too large a field to be covered in a single semester at a level for students focusing on organismal biology. Yet, a broad foundation in all aspects of ecology is essential for such students. The current course Biology 308 covers one major subdiscipline of ecology (Population and community dynamics) at this level. The proposed course would cover another major section of ecology at a level appropriate for introducing students focusing on organismal biology. The topics covered would be of special relevance and interest to students with interest in environmental issues.

This course is a good follow on course to Biology 308 for students pursuing advanced ecology courses, or an alternative to 308 for students not planning to pursue advanced courses in the biology department.

12. Course Description  
(as it will appear in the Calendar [maximum 50 words]):  
(N.B. Faculty of Medicine must append complete course outline)

Ecology of spaces larger than a population or community, including exploration of the variation in life between regions (biomes), the effect of human destruction of habitat (landscapes), patterns across many species and of biodiversity (macroecology), and of changes in biodiversity and climate over time (including global warming).

13. Supplementary information to appear in the Calendar in addition to the course description.  
Such as: equivalent course(s), contact hours, enrolment limitations, language of instruction etc.  
Please enter the information as it should appear in the calendar notes.

14. Schedule Types(s):  
(Enter all that apply – see course guidelines for a complete list.)  
(i.e. Lecture, Labs, Tutorial)

	Hours per Week	Hours per Week	Hours per Week
Lecture	<input type="text" value="3"/>	<input type="text"/>	<input type="text" value="3"/>
<hr/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<hr/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Hours per Week:			<input type="text" value="3"/>
Total Number of Weeks:			<input type="text" value="13"/>

15. Projected Enrolment:

16. Required text and/or preliminary reading list sent to library?

Yes     No

17. Prerequisite(s) (Courses or Tests)  
Specify course number(s) or name(s) of test(s):



If the student does not have a prerequisite should web registration be blocked?  
 Yes     No

If "Yes" complete A and B:

A. Indicate minimum grade or test score(s) the student must attain in prerequisite course(s) or test(s):

B. Can the prerequisite course(s) or test(s) be taken in the same term as this course?  
 Yes     No

18. Corequisite(s) Course Number(s):  
Specify course number(s) and title(s):



If the student does not register for the corequisite in the same term should web registration be blocked?  
 Yes     No

19. Restriction(s):




20. Consultation Reports Attached  
 Yes     N/A

21. Additional Course Charges (must be approved by the Fee Policy Committee)

Description of Fee (e.g. screening fee)	Amount
<input type="text"/>	<input type="text"/>

22. Requires Teaching, Physical, or Financial Resources Not Currently Available (attach explanation)  
 Yes     No

INFORMATION FOR ADMISSIONS, RECRUITMENT & REGISTRAR'S OFFICE		
<i>To be completed by the Faculty</i> Slot Course: <input type="checkbox"/> Yes <input type="checkbox"/> No  Thesis Component: <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>To be completed by ARR</i> CIP Code <div style="border: 1px solid black; height: 20px; width: 100%; margin-top: 5px;"></div>	<i>For Continuing Education Use</i> CE Admin. Unit : <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 5px;"></div> CE Non-Grant Courses: <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 5px;"></div> Flat Rate: CdnFlat Rate: <input type="checkbox"/> Yes <input type="checkbox"/> N/A

23. Approvals:						
Routing Sequence	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP
Name	<div style="border: 1px solid black; padding: 2px;">P. LASKO</div>	<div style="border: 1px solid black; padding: 2px;">P. LASKO</div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>
Signature	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>
Date	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>	<div style="border: 1px solid black; height: 20px;"></div>
Departmental Contact Person (name/phone/email)	<div style="border: 1px solid black; padding: 2px;">Susan Gabe/ 7045/ susan.gabe@mcgill.ca</div>					

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## Draft syllabus

Lecture course with laboratory sessions. Midterm 20%, Final 30%, Paper 20%, Lab 30%. The lab will consist of a series of studies that will be written up. Some labs will analyze pre-existing data on a computer while others will involve trips into the field to collect data.

Week 1 (½ wk) – What is scale? Why is study of large scales important? Why is study of large scales relatively new?

Weeks 1-3 (2 wks) – Landscape ecology – The extent of habitat fragmentation. The effects on organisms. Landscape fragmentation metrics. Amelioration of fragmentation (corridors, etc.)

Weeks 3-4 (1 ½ wks)- Species ranges. Why aren't species found everywhere. How do species ranges vary? What causes them?

Weeks 4-6 (2 wks) - Macroecology – interrelationships between abundance, body size, range size, occupancy and other variables. What are the patterns? What are the mechanisms?

Weeks 6-8 (2 wks) – Patterns and processes in biodiversity at different scales. What controls how many species there are?

Weeks 8 & 9 (1 ½ wks) – Why are there different climates across the earth? How climate controls the life that lives there (physiological mechanisms). What are the biomes that result. How does climate affect productivity.

Weeks 10 & 11 (1 ½ wks) – What happened to life during the ice ages? How do organisms respond to changing climate?

Week 11 & 12 (1 wk) – Life through the ages – starting from earliest multicellular life to today, what have been the patterns in biodiversity? (Note not a review of the evolution of life)

Weeks 12 & 13 (1 ½ wks) – Global change; What causes it? How will the climate change? How will life be impacted?