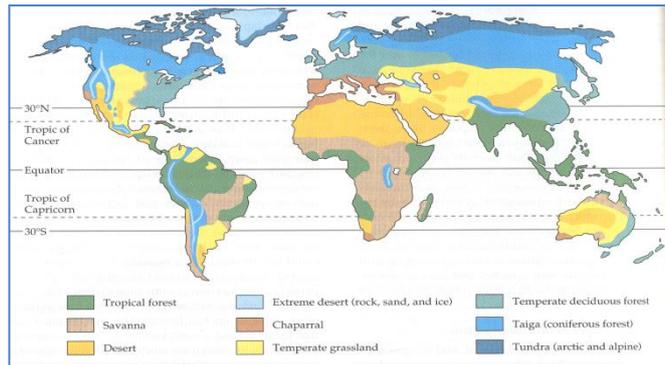


# Biogeography

## Geography 340

3 Credits



This course fulfils the advanced Natural Science requirement (non-lab) for the Bachelor in Science degree in the School of Letters and Science. It is not open to graduate students for credit.

Instructor:	<b>Dr Alison Donnelly</b>
Email:	<a href="mailto:donna@uwm.edu">donna@uwm.edu</a>
Office:	Bolton Hall, Room 426
Office Hours:	By appointment or if my door is open feel free to drop in!!
Time / Location:	Monday & Wednesday 2:00-3:15pm, Lapham Hall 260
Final exam:	Thursday 18 December 2014, LAP 260, 12.30-2.30pm

## Course introduction

Biogeography is the study of biological diversity from a spatial perspective. This class will examine and explain, from both an historical and ecological standpoint, spatial patterns of species distribution in the landscape. We will investigate how environmental factors help shape evolution, dispersal and diversity, of both plant and animal species. In addition, we will study the interactions between the physical environment and human influences that determine the global biogeographic landscape and take a close look at the factors contributing to the biogeographic landscape of North America.

While no prior knowledge or course work is required for this class, a general background in biology, physical geography, and ecology is strongly recommended. **IMPORTANT:** The theory of **biological evolution** is central to all aspects of biogeography. If your personal spiritual beliefs conflict with the science of biogeography you should make an appointment with me so that we can affirm that this class is appropriate for your needs.

## Course format

The course is divided into 3 blocks each of which comprises 5 weeks. Each block will consist of a series of lectures, some kind of in-class practical work and/or an assessment.

*Lectures* The lectures will be approximately 1hr and 15 minutes in length and lecture notes will be available on the course website on D2L before class.



*Practical work* The practical work for this course will take the form of a field-trip to Downer Woods, group presentations and a debate. Each of these activities will be conducted during class time.

*Assessment* The fieldtrip and the debate will be assessed on an individual basis whereas the group presentation will be assessed according to the performance of each group. In addition, there will be a mid-term exam and a final exam both of which will comprise a series of short questions based on material covered in the lectures.

## Required Course Materials

Textbook:

Biogeography: Introduction to Space, Time and Life.  
Glen MacDonald, 2003

*Not required but contains lots of useful information:*

Biogeography - An Ecological and Evolutionary Approach by  
Cox and Moore

Biogeography 3rd Edition by Lomolino, Riddle and Brown.



Other material will be made available as necessary on D2L.

**UWM email account:** In order to succeed in this course, you need to check your UWM email account regularly. When composing emails please be sure to write "Geog. 340" at the beginning of the subject line in any emails you send; address your emails to me by name; consider the *tone* of your emails carefully; and, finally, sign your emails by name. Please do not send emails from any non-UWM email account.

The best way to reach me outside of class is via email ([donnela@uwm.edu](mailto:donnela@uwm.edu)). I generally check and respond to email frequently, and except in unusual circumstances I will try to answer you within 24 hours. Finally, I would be delighted to meet with you in person. Please set up an appointment, or if my office door is open, you're free to drop in if you have a question.

**Desire2Learn Website (D2L):** We will use D2L for this course. You will gain access to lecture slides, assignments, and any other relevant information through the course D2L site (<http://d2l.uwm.edu/>). Lecture notes can be downloaded from the D2L website. In addition, assignments and discussions will also be conducted in D2L.

## Grading information and attendance policies

1. **Lecture Attendance (2%) and participation (3%):** During each lecture session (except session 1, exams and holidays—25 sessions in all), an attendance sheet will be circulated during the class which you should sign. In order to get full marks for attendance you should attend a total of 22 lectures which means you have 3 'passes'. Participation during any discussions, the debate and during the fieldtrip will be noted.

If for any legitimate reason, such as medical, personal emergency, etc. you will miss a considerable (more than 2 in a row) number of lectures it is your responsibility to inform the instructor at the earliest possible opportunity.

2. **Examinations (55% of the final grade):** You will take 2 exams: a midterm worth 15% of your grade, and a final exam worth 40% of your grade. The exams will comprise short answer questions (based on material covered during lectures). Both exams are required. Later in the semester, you will receive more information about the exams. We will have a brief in-class review session before each exam.

Make-up exams may be permitted at the discretion of the instructor for legitimate reasons only, such as a documented illness. However, requests for make-up exams will be considered *only* if the student contacts me in a timely manner, preferably before the exam, but within 24 hours following the date of the exam, and provides verifiable written documentation of their absence. *Do not assume* that you will automatically be allowed a make-up exam.

3. **Fieldtrip to Downer Woods (20% of the final grade):** This part of the course will give you the chance to observe some of the concepts we cover in class, in the real world. It will give students an opportunity to examine a woodland habitat with its range of plant species from ground plants, to shrubs and trees. More specifically, we will record the timing of when leaves begin to lose their colour and fall in Autumn and observe how this differs from one tree to the next. Since leaf colour and leaf fall are triggered by changing temperatures we will investigate some of the consequences of global warming on the life-cycle of trees.
4. **Presentation and report (20% of the final grade):** This is a group exercise where you will be randomly assigned to a group of between 4-6 members. Each group will be given a biome to research, present to the class and to write-up in a report. This exercise is designed as a group exercise so participation and engagement from early on in the process is strongly recommended.

## Course Learning Objectives, Assessments, and Grades

By the end of the semester, you should be able to do the following:

Learning objective	Assessment	% of grade
1. Demonstrate knowledge of how organisms are distributed across the globe.	Midterm exam Final exam	15% 40%
2. Observe, record and analyse spring phenology from a defined suite of trees.	Produce a report	20%
3. Demonstrate understanding of the link between climate warming and plant phenology.		
4. Describe the determining characteristics of one of the world's biomes. Provides an opportunity to conduct research, convey the findings to the class, participate in public speaking and work as part of a team.	Presentation to class (10%)	20%
5. Design, plan and produce a group report on one of the world's biomes. Provides an opportunity to refine writing skills, design skills and work as part of a team.	Produce a report (10%)	
6. Foster critical thinking of environmental issues.	Class debate	3%

The final 2 % will be for class attendance.

## Grading Policy

See the following site for official UWM policy on grades and grading:  
(<http://www4.uwm.edu/secu/docs/other/S29.htm>).

### Guide to grades

93-100%	A	Achievement of outstanding quality
90-92%	A-	Achievement of slightly less than outstanding quality
86-89%	B+	Achievement of slightly more than high quality
83-85%	B	Achievement of high quality
80-82%	B-	Achievement of slightly less than high quality
76-79%	C+	Work of slightly more than acceptable quality
73-75%	C	Work of acceptable quality
70-72%	C-	Work of slightly less than acceptable quality
66-69%	D+	Work slightly below the quality expected
63-65%	D	Work below the quality expected
60-62%	D-	Work barely above failing
0-59%	F	Failure

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**Special Consideration.** *The principle of equal treatment of all students shall be a fundamental guide in responding to requests for special consideration. No student should be given an opportunity to improve a grade that is not made available to all members of the class. This policy is not intended to exclude reasonable accommodation of verified student disability, or the completion of work missed as the result of religious observance, verified illness, or justified absence due to circumstances beyond the student's control.*

*Comments: This policy applies to requests for special consideration both before and after a course is completed (See also Grade or Record Changes). It is usually impossible to make opportunities for grade improvement available to all students in a course after the course has ended. Examples of unacceptable opportunities for an individual student include extra work, retaking an examination, taking an extra examination, or an extension of time on an assignment or examination. The policy on incompletes (UWM Select Policies and Procedures, S-31) explains the circumstances in which a student may be given extra time for the completion of a course. This policy should reassure students who are not seeking special consideration and it should also protect instructors from student pressure for special consideration.*

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## Workload

This is a 3-credit course. As a general rule of thumb, you should expect to spend 4-5 hours outside of class for every class. Since we will have 2 classes each week, you can expect to spend approximately 8-10 hours each week outside class preparing for class, working on assignments and studying for exams. You will be responsible for managing your time in order to complete your work.

<b>Activity</b>	<b># hrs</b>
Time in the classroom (face-to-face lecturing) 20 sessions	25
Time spent online reading lecture and other material	32
Time doing fieldwork	2.5
Time taking exams (1hr 15 min midterm and 2hr final)	3.25
Time for class presentation plus debate	5
Time in tutorials (1 review session before final exam)	1.25
Time completing assignments (3h per week on average)	45
Time for preparation and study (2hrs on average per week)	30
<b>Total for term</b>	<b>144</b>
<b>Average per week</b>	<b>9-10</b>

**NOTE: THESE NUMBERS ARE APPROXIMATE!!!**

## Classroom conduct

I expect that you will conduct yourself in lectures and during assignments in the same manner that you yourself would like to be treated and *to respect the rights of other students to learn*. Class disruptions will not be tolerated, as it erodes the educational environment for everyone. Please be

respectful of your fellow classmates. **Come to class on time, stay until the end, and remain quiet during lectures** (unless I'm trying to get you to contribute to a conversation in class, in which case quiet is the last thing I want you to be!!). I also expect you to *acknowledge and respect the diversity of participants in the class*. Even if you disagree with points of view expressed by your instructor, or your fellow students, as citizens of this class you are responsible for considering different points of view respectfully. The instructor will do the same.

Unless you have a VISA from the Student Accessibility Center or other documentation that you have special needs, **you will not need laptops or other electronic devices during class**. All wireless and electronic devices must be shut down or in silent mode during the class period.

## Late work

To be fair to students who turn their work in on time, **you will not receive credit for assignments turned in late**, unless a documented medical or personal emergency arises. Please contact the instructor immediately if an emergency arises, or if you know you will have a problem turning your work in on time. Please note that "the D2L dropbox didn't work" is not an acceptable excuse for a late assignment; you are responsible for making sure your assignment reaches the dropbox or discussion forum. You should email the instructor immediately—and before the assignment is due—if you have technical difficulties submitting your assignment to the D2L site.

## Make-up exams

In order to be fair to all students in the course, you may not make up exams or resubmit coursework unless a documented medical or personal emergency arises. In the event that you must be absent on the day of an exam, you must contact the instructor immediately to reschedule a make-up exam.

## Technology

**D2L site:** You will gain access to lecture slides, assignments and other material through the course D2L site: <http://d2l.uwm.edu/>. In order to reach the site, simply log in using your Panther ID and password, and then follow the instructions to find the course site. If you need help getting access to the site or to D2L, please use the UWM Help Desk (available 24 hours a day, 7 days a week), which should be your first point of contact for any technical issues you encounter:

Help Desk web site: (<https://www4.uwm.edu/uits/help/>)

Help Desk Telephone: (414) 229-4040

Submit Help Request: [GetTechHelp.uwm.edu](http://GetTechHelp.uwm.edu)

Help Desk Location: Bolton 225

For a handout on accessing D2L visit: (<http://www.uwm.edu/Dept/LTC/docs/firstdayhandout.doc>)

## University policies and special notes

For the University of Wisconsin-Milwaukee's official policies on **disabilities, religious observances, active military duty, incompletes, discriminatory conduct, academic misconduct, complaint procedures,** and **grade appeal procedures,** please see the following web site: <http://www.uwm.edu/Dept/SecU/SyllabusLinks.pdf>. Geography 304 adheres to these policies.

**Students with Disabilities:** If you have a disability and need accommodations of any kind (e.g., a notetaker, special accommodations for tests, etc.), please see me and submit your VISA from the Student Accessibility Center ***within the first two weeks of the semester***. I'll be happy to work with you to make any necessary arrangements. For more information, see the following: <http://www4.uwm.edu/sac/SACltr.pdf>.

**Religious observances:** If you require accommodations for religious observances, I'm happy to work with you to make necessary arrangements. Please note that ***you are required to notify me within the first three weeks of the semester*** of the specific dates on which you will request relief from an examination or academic requirement: <https://www4.uwm.edu/secu/docs/other/S1.5.htm>.

**Academic misconduct:** You are responsible for reading and following UWM guidelines on academic misconduct, including cheating and plagiarism: <http://www4.uwm.edu/osl/dean/conduct.cfm>. If an instructor suspects academic misconduct, we are required to follow the procedures described here: [http://www4.uwm.edu/acad\\_aff/policy/academicmisconduct.cfm](http://www4.uwm.edu/acad_aff/policy/academicmisconduct.cfm).

**Incompletes:** "An Incomplete may be given to a student who has carried a subject successfully until near the end of the semester but, **because of illness or other unusual and substantiated cause beyond that student's control**, has been unable to take or complete the final examination or to complete some limited amount of term work. **An Incomplete is not given unless the student proves to the instructor that s/he was prevented from completing course requirements for just cause as indicated above.**" (quoted from UWM policy: <http://www4.uwm.edu/secu/docs/other/S31.pdf>).

If you have questions or concerns about the class, please do not hesitate to contact the instructor.

**Tentative Lecture Schedule – subject to change at a moment’s notice!!!**

<b>Block 1:Physical environment and climate impacts on biogeography</b>			
Wk 1	Sept 3	1. Introduction to course and defining biogeography	Ch 1 & 2
Wk 2	Sept 8	2. Physical Geography and Earth Systems	Ch 2
	Sept 10	3. Role of Light and Temperature	Ch 3
Wk 3	Sept 15	4. Moisture and other factors	Ch 3
	Sept 17	5. Biological interactions and phenology	Ch 4
Wk 4	Sept 22	6. Ecosystem Disturbances	Ch 5
	Sept 24	7. Preparation for Downer Woods	Info on D2L. <i>Report due in dropbox Fri. 10 Oct. 11.59pm</i>
Wk 5	Sept 29	8. Fieldtrip to Downer Woods	
	Oct 1	9. Fieldtrip to Downer Woods	
<b>Block 2: Physical, biological and human impacts on biogeography</b>			
Wk 6	Oct 6	10. Geological time and Global Change	Ch 7
	Oct 8	11. Quaternary Climates and Ecological Change	Ch 7
Wk 7	Oct 13	12. Intro to Biomes, Biome Assignment & Class Time	Ch 6
	Oct 15	13. Dispersal and Invasive Species	Ch 8
Wk 8	Oct 20	14. Evolution and Speciation. Review for mid-term.	Ch 9
	Oct 22	15. <b>MID-TERM EXAM</b>	Ch 1-9
Wk 9	Oct 27	16. Extinction	Ch 9
	Oct 29	17. Biogeographical Realms. Class time for biomes	Ch 10
Wk 10	Nov 3	18. Biogeography and Human Evolution	Ch 11
	Nov 5	19. Human Alteration of the Biosphere	Ch 12
<b>Block 3:Biodiversity and conservation</b>			
Wk 11	Nov 10	20. Student Presentations - Biomes	<i>Reports due in dropbox by 11.59 pm 2 days after presentation</i>
	Nov 12	21. Student Presentations - Biomes	
Wk 12	Nov 17	22. Student Presentations - Biomes	
	Nov 19	23. Biogeographical Distributions	Ch 13
Wk 13	Nov 24	24. Geography and Biodiversity	Ch 14
	<b>Thanksgiving Holiday</b>		
Wk 14	Dec 1	25. Island Biogeography	Ch 14
	Dec 3	26. Biogeography and Conservation	Ch 15
Wk 15	Dec 8	27. Class debate: is biodiversity worth conserving	Ch 15
	Dec 10	28. Review for final exam	Blocks 2 and 3 only

**Final exam: Thursday 18 December 2014, LAP 260, 12.30-2.30pm**