# CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL

## SUBMITTED BY:
- **Department:** Biology / Geography
- **Prepared by:** Patricia Heiser / Diane Wagner
- **Email/Contact:** paheiser@alaska.edu

## College/School
- **Phone:** 5227/7068
- **Faculty Contact:** Diane Wagner / Patricia Heiser

## 1. CURRENT COURSE IDENTIFICATION:
- **Dept:** BIOL
- **Course #** 618
- **No. of Credits** 3

## COURSE TITLE
- **Biogeography**
- current course title – not new title

## 2. ACTION DESIRED:
- **Change Course** [X]
- **Drop Course** [ ]

### NUMBER
- [ ]

### PREREQUISITES
- [ ]

### CREDITS (including credit distribution)
- [ ]

### CROSS-LISTING
- [X] Dept. GEOG
- [ ]
- (Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

### STACKING (400/600)
- [X] Dept. BIOL/GEOG
- Course # 418

### OTHER (please specify)
- Wish to CROSS-LIST with GEOG 618, AND STACK with GEOG/BIOL 418. (course would end up GEOG/BIOL 418 and GEOG/BIOL 618)

## 3. COURSE FORMAT

**NOTE:** Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school’s curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

### COURSE FORMAT:
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [X] 5
- 5 weeks to full semester

### OTHER FORMAT (specify all that apply)
- [ ]

### Mode of delivery (specify lecture, field trips, labs, etc)
- [ ]

## 4. COURSE CLASSIFICATIONS:

(undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)
- [ ] H = Humanities
- [ ] N = Natural Science
- [ ] S = Social Sciences

### Will this course be used to fulfill a requirement for the baccalaureate core?
- [ ] YES
- [X] NO

### IF YES, check which core requirements it could be used to fulfill:
- [ ] O = Oral Intensive, Format 6 turned in:
- [ ] W = Writing Intensive, Format 7 turned in:
- [ ] Natural Science, Format 8 turned in:

## 5. COURSE REPEATABILITY:
- [ ] Is this course repeatable for credit?
- [ ] YES
- [X] NO

### Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).
- [ ]

### How many times may the course be repeated for credit?
- [ ] TIMES

### If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?
- [ ] CREDITS
BIOL F618 Biogeography

3 Credits
Offered Spring

Spatial and temporal geography of plant and animal groups; emphasis on environmental and historical features controlling present patterns of distribution. Prerequisites: Graduate standing or permission of instructor. (3+0)

GEOG 618 / BIOL 618 Biogeography

3 Credits
Offered Spring Fall

Spatial and temporal geography of plant and animal groups; emphasis on environmental and historical features controlling present patterns of distribution. Prerequisites: Graduate standing or permission of instructor.

This course explores the geography of life by examining linkages between climate, geomorphology, and ecological communities with emphasis on the biogeography of subarctic, polar, and alpine regions. Prerequisites: graduate standing or permission of instructor. (3+0)

8. IS THIS COURSE CURRENTLY CROSS-LISTED?

YES/NO [ ] NO [x]

If Yes, DEPT [ ] NUMBER [ ]

(Requires written notification of each department and dean involved. Attach a copy of written notification.)

9. GRADING SYSTEM:

LETTER: [x] PASS/FAIL: [ ]

10. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

None expected. Course will be taught in Geography Dept with faculty already dedicated to teaching the course (formerly call GEOG 411 Patterns and Processes). No impact on workload or resources.

11. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (ffkll@uaf.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No [ ] Yes [x] Course already exists, resources adequate

12. IMPACTS ON PROGRAMS/DEPTS:

What programs/departments will be affected by this proposed action?

Include information on the Programs/Departments contacted (e.g., email, memo)

Stacking at 400/600 level allows undergraduates in Geography and Biology to take this course while still providing opportunity for graduate students interested, but lacking undergrad course in Biogeography, to take a course important to many interdisciplinary research topics. Cross listing with Biology will make it easier for both graduate and undergraduate Geography/Biology students to find the course in the schedule, and provide more opportunity to take interdisciplinary courses.
13. POSITIVE AND NEGATIVE IMPACTS

Please specify positive and negative impacts on other courses, programs and departments resulting from the proposed action.

Positive impacts: stacking and cross-listing this course will allow more students to consider this course for inclusion in their degree program. While required in the undergraduate Geography BS, this course may enhance the curriculum for interdisciplinary or landscape focused undergraduates in Biology. No negative impacts are expected as the course is required in some Geography tracks, and an elective in Biology. The course has been listed, but not taught for many years in Biology. Offering the course provides more course opportunities for graduate students as well.

14. JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you ask for a change in # of credits, explain why; are you increasing the amount of material covered in the class? If you drop a prerequisite, is it because the material is covered elsewhere? If course is changing to stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit. Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the course is not compromised as a result.

Biogeography offers a valuable interdisciplinary perspective on ecological landscape patterns. Previously listed (but not offered for many years) in Biology, the course is also an important course in Geography and is required of senior Geography BS undergraduates. Cross-listing the course allows students from both departments to include the course in their degree programs. Stacking the course at the graduate/undergraduate level allows undergraduates to gain required disciplinary content knowledge while simultaneously providing an opportunity for graduate students to apply coursework to their research topic. Significantly more work and participation is required by the graduate students (paper presentations, journal article reviews and discussions, take-home exams), and it is expected they will bring perspective from their studies to the class. As a seniors in Geography, students are ready to be exposed to research methods, journal reviews, and graduate student projects. The cross-pollination and integration of undergraduates and graduate students in senior level, ‘specialized’ content classes benefits both student populations. Attached syllabi demonstrate difference between undergraduate and graduate workload, expectations, and grading policies. The instructor has experience teaching at both levels and has taught stacked courses in the past.

APPROVALS:

[Signatures and dates]

Signature, Chair, Program/Department of: Biology

Signature, Chair, College/School Curriculum Council for: CNSM

Signature, Dean, College/School of: SRF

Signature of Provost (if applicable)

Offerings above the level of approved programs must be approved in advance by the Provost.

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE.

[Signature, Chair, UAF Faculty Senate Curriculum Review or Graduate Academic & Advisory Committee]
### ADDITIONAL SIGNATURES: (If required)

<table>
<thead>
<tr>
<th>Signature, Chair, Program/Department of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology</td>
<td>5-7-10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Chair, College/School Curriculum Council for:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5-7-10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature, Dean, College/School of:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSM</td>
<td>10 May 2010</td>
</tr>
</tbody>
</table>
Biogeography
GEOG/ BIOL 618

Instructor: Dr. Daniel Mann
e-mail: dhmann@alaska.edu

Office: Scenario Network Arctic Planning, Denali building
phone: 474-7134
Office Hours: MWF 10:00-10:30 and by appointment

Meeting Time and Location: Lectures 1030-1130 MWF Duckering 344

Course Description
This course explores the geography of life by examining linkages between climate,
geomorphology, and ecological communities with emphasis on the biogeography of subarctic,
polar, and alpine regions.

Course Prerequisites: undergraduate coursework in Ecology, graduate stranding, or instructor's
permission

Required Text: *Biogeography* Lomolino et al., 2005 Sinauer Associates.

Course Objectives: This is a 'synthesis' course for upper division Geography and Life Sciences
undergraduates and graduate students. Students will gain a foundation in the basic principles of
Biogeography. Students will also gain the ability to make connections across disciplinary
boundaries by analyzing interactions between processes and patterns of biota and abiotic factors
at landscape scales. Throughout, I emphasize the role of human ecology as a pervasive factor in
the biogeography of other species.

Instructional / Teaching Methods: This is a lecture course that relies on students keeping up
with supplementary readings in an excellent but complex text book. There will be 4-6 guest
speakers over the course of the semester. For graduate students, an important part of the
instruction is this class will come from their preparation of short lectures that they deliver to
the class and from additional readings and discussion of scientific articles. All students will
write term papers on biogeographic topics of personal interest or relevance to their research.

Learning Methods / Student Assignments: Lectures with directed readings will give students a
sound background in biogeographic processes, patterns, and research practices. There will be at
least one full day field trip scheduled on a weekend in early fall. All students will submit reports
analyzing the data collected during class field trips. Students will submit a term paper on a topic
of their choice. Graduate students will present a 30 minute lecture on their research paper.
Graduate students will also be required to read 5-10 papers from the current scientific
literature, participate in what I call “recent progress” lectures, and to lead class discussions
focused on journal articles.
Course Schedule/Topical Outline:
Week 1: Introduction (text Chapter 1,2: The Science and The History of Biogeography)
Week 2: Physical factors: (text Chapter 3: Climate and Soils)
Week 3: Biotic interactions (text Chapter 4: Niches and Ranges)
    ***FIELD TRIP #1 all day: Physical gradients and plant communities in Fairbanks area
Week 4: Disturbance (text Chapter 4: Disturbance)
    ***Writing assignment: field trip write-up
Week 5: Primary and Secondary Succession: 3 Alaskan chronosequences (assigned readings)
Week 6: Communities, biomes (text Chapter 5: Communities and Ecosystems, The Terrestrial Biomes)
Week 7: Changing climate, changing geography (text Chapter 8)
Week 8: Biota on the move (text Chapter 6: Dispersal)
    ***MIDTERM EXAM ****
Week 9: Extinction in the Geological Record (text Chapter 7)
Week 10: Diversification: (text Chapter 9)
Week 11: Biogeography of evolving humans (sections of Chapter 17)
Week 12: Island Biogeography and areography (text Chapter 14 and 15)
Week 13: Biogeography in the time of global change (sections of Chapter 17)
Week 14: Applications for Alaskan conservation (assigned readings)
Week 15: (extra lecture slots to accommodate guest speakers)
    ***COMPREHENSIVE FINAL EXAMINATION****

The FIELD TRIP is mandatory. We will drive personal vehicles to several locations in Goldstream valley. Bring warm clothes. Rubber boots or Sorrels recommended. Bring your lunch, camera and a notebook. We'll be out the entire day. Students turn in a brief, typed (1 page) report that analyzes the data we gather in the field. All assignments turned in as hard copies – no email attachments.

Term Paper: A 5-10 page term paper (including illustrations) is required. Topics vary according to individual students’ interests. Graduate students present a 30-minute lecture to the class based on their term paper.

Graduate Student Expectations: Graduate students, while learning the same content in lectures as undergraduates in the class, will be held to higher expectations with regard to the integration and application of concepts learned in the course. Graduate student exams will include an additional take-home portion that will require more thoughtful and in-depth responses to selected questions or problems. Throughout the semester graduate students will be required to read and review assigned papers as well as lead and participate in class discussions of current and landmark literature. Grad students will also present their term papers to the rest of the class.

Assignments and Grading:
Midterm Exam: 15%
Final Exam: 25%
Field Trip Participation (attendance + report) 20%
Term Paper: 25% (incl. presentation)
Class Participation and Attendance 15% (incl. journal discussions)
Course grades will be assigned as indicated at the table below. Course %’s are for THIS course only and may vary with different instructors. Grade point values are indicated on the table as well. Please see “Academics and Regulations” section of UAF 2007-2008 Catalogue.

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
<th>GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100-97</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>96-92</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>91-90</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>89-87</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>86-82</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>81-80</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>79-77</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>76-72</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>71-70</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>69-67</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>66-62</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>61-60</td>
<td>0.7</td>
</tr>
</tbody>
</table>

As a reminder of what letter grades mean, the following is provided. Just satisfactorily completing all assignments does not necessarily earn an ‘A’ in any course. These guidelines are from the UAF catalog.

A = outstanding work, mastery of topic
B = above average work, all assignments completed well
C = average, all or most assignments completed, most work satisfactory
D = pass, unsatisfactory or missing work
F = less than 60 percent: failure to meet requirements of course

Support and Disabilities Services: The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. The course instructors will work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities. Please notify the instructor of any special needs.

Plagiarism/Academic Integrity: Univ. Standards and Policies apply (sec UAF Catalog).

due
Biogeography
GEOG 418 / BIOL 418

Instructor: Dr. Daniel Mann
e-mail: dhmann@alaska.edu

Office: Scenario Network Arctic Planning, Denali building
phone: 474-7134
Office Hours: MWF 10:00-10:30 and by appointment

Meeting Time and Location: Lectures 1030-1130 MWF Duckering 344

Course Description
This course explores the geography of life by examining linkages between climate,
geomorphology, and ecological communities with emphasis on the biogeography of subarctic,
polar, and alpine regions.

Course Prerequisites: BIOL 271 Ecology or NRM 277 Conservation Biology, junior/senior
standing, or permission of instructor

Required Text: Biogeography, Lomolino et al., 2005 Sinauer Associates.

Course Objectives: This is a ‘synthesis’ course for upper division Geography and Life Sciences
undergraduates, concurrently taught at the 600 level for graduate students. Students will gain a
foundation in the basic principles of Biogeography. Students will also gain the ability to make
connections across disciplinary boundaries by analyzing interactions between processes and
patterns of biota and abiotic factors at landscape scales. Throughout, I emphasize the role of
human ecology as a pervasive factor in the biogeography of other species.

Instructional / Teaching Methods: This is a lecture course that relies on students keeping up
with supplementary readings in an excellent but complex text book. There will be 4-6 guest
speakers over the course of the semester. For graduate students will prepare short lectures and
will lead discussion of scientific articles for the whole class. All students will write term papers
on biogeographic topics of personal interest or relevance to their research.

Learning Methods / Student Assignments: Lectures with directed readings will give students a
sound background in biogeographic processes, patterns, and research practices. There will be at
least one full day field trip scheduled on a weekend in early fall. All students will submit reports
analyzing the data collected during class field trips. Students will submit a term paper on a topic
of their choice. In addition, graduate students will present a 30 minute lecture on their research
paper. Graduate students in the class will be required to read 5-10 papers from the current
scientific literature, participate in what I call “recent progress” lectures, and to lead class
discussions focused on journal articles. This exercise will foster class discussion and allow
undergraduates to observe how papers are presented for discussion.
Course Schedule/Topical Outline:

Week 1: Introduction (text Chapter 1,2: The Science and The History of Biogeography))
Week 2: Physical factors: (text Chapter 3: Climate and Soils)
Week 3: Biotic interactions (text Chapter 4: Niches and Ranges)
  ***FIELD TRIP #1 all day : Physical gradients and plant communities in Fairbanks area
Week 4: Disturbance (text Chapter 4: Disturbance)
  ***Writing assignment: field trip write-up
Week 5: Primary and Secondary Succession: 3 Alaskan chronosequences (assigned readings)
Week 6: Communities, biomes (text Chapter 5: Communities and Ecosystems, The Terrestrial Biomes)
Week 7: Changing climate, changing geography (text Chapter 8)
Week 8: Biota on the move (text Chapter 6: Dispersal)
  ***MIDTERM EXAM ****
Week 9: Extinction in the Geological Record (text Chapter 7)
Week 10: Diversification: (text Chapter 9)
Week 11: Biogeography of evolving humans (sections of Chapter 17)
Week 12: Island Biogeography and areography (text Chapter 14 and 15)
Week 13: Biogeography in the time of global change (sections of Chapter 17)
Week 14: Applications for Alaskan conservation (assigned readings)
Week 15: (extra lecture slots to accommodate guest speakers)
  ***COMPREHENSIVE FINAL EXAMINATION*****

The FIELD TRIP is mandatory. We will drive personal vehicles to several locations in Goldstream valley. Bring warm clothes. Rubber boots or Sorrels recommended. Bring your lunch, camera and a notebook. We’ll be out the entire day. Students turn in a brief, typed (1 page) report that analyzes the data we gather in the field. All assignments turned in as hard copies – no email attachments.

Term Paper: A 5-10 page term paper (including illustrations) is required. Topics vary according to individual students’ interests. Graduate students will present their term papers to the class.

Information on Exams and Assignments: Examination format will include a mixture of multiple choice, short answer / diagram / map, and essay.

Assignments and Grading:
Midterm Exam: 25%
Final Exam: 30%
Field Trip Participation (attendance + report) 20%
Term Paper: 20%
Class Participation and Attendance 5%

Extra Credit: Extra credit is not an option in this course except under unusual circumstances.
Course grades will be assigned as indicated at the table below. Course %’s are for THIS course only and may vary with different instructors. Grade point values are indicated on the table as well. Please see “Academics and Regulations” section of UAF 2007-2008 Catalogue.

<table>
<thead>
<tr>
<th>grade % GP</th>
<th>GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100-97</td>
</tr>
<tr>
<td>A</td>
<td>96-92</td>
</tr>
<tr>
<td>A-</td>
<td>91-90</td>
</tr>
<tr>
<td>B+</td>
<td>89-87</td>
</tr>
<tr>
<td>B</td>
<td>86-82</td>
</tr>
<tr>
<td>B-</td>
<td>81-80</td>
</tr>
<tr>
<td>C+</td>
<td>79-77</td>
</tr>
<tr>
<td>C</td>
<td>76-72</td>
</tr>
<tr>
<td>C-</td>
<td>71-70</td>
</tr>
<tr>
<td>D+</td>
<td>69-67</td>
</tr>
<tr>
<td>D</td>
<td>66-62</td>
</tr>
<tr>
<td>D-</td>
<td>61-60</td>
</tr>
</tbody>
</table>

As a reminder of what letter grades mean, the following is provided. Just satisfactorily completing all assignments does not necessarily earn an ‘A’ in any course. These guidelines are from the UAF catalog.

A = outstanding work, mastery of topic
B = above average work, all assignments completed well
C = average, all or most assignments completed, most work satisfactory
D = pass, unsatisfactory or missing work
F = less than 60 percent: failure to meet requirements of course

Support and Disabilities Services: The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. The course instructors will work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities. Please notify the instructor of any special needs.

Plagiarism/Academic Integrity: Univ. Standards and Policies apply (see UAF Catalog).
# CHANGE COURSE (MINOR)

MINOR CHANGES INCLUDE ONLY THE FOLLOWING:

1. Frequency in offering.
2. Minor editorial changes in title and/or course description.
3. Jointly approved proposals for cross-listing current courses. (Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)
   (Stacked 400/600 level course requests are not considered as Minor changes.)
4. Change in course number that does not involve a change in lower/upper division status.
5. Internal departmental changes in course prerequisites not affecting courses (or degree programs) offered by other departments.

If changes cannot be considered "Minor" (as defined above), use FORMAT 2 - CHANGE COURSE (MAJOR) and DROP COURSE.

Catalog change deadlines established by the Faculty Senate are to be observed and the proper forms are to be used. Send Minor Change requests directly to the Registrar’s Office after Dean approval. (Please send informational copy to the Governance Office.

---

**SUBMITTED BY:**

<table>
<thead>
<tr>
<th>Department</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by</td>
<td>Patricia Heiser</td>
</tr>
<tr>
<td>Email Contact</td>
<td><a href="mailto:pahaiser@alaska.edu">pahaiser@alaska.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College/School</th>
<th>SNRAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
<td>7068</td>
</tr>
</tbody>
</table>

Faculty Contact: Patricia Heiser

---

See [http://www.uaf.edu/ualgov/faculty/cd](http://www.uaf.edu/ualgov/faculty/cd) for a complete description of the rules governing curriculum & course changes.

**1. COURSE IDENTIFICATION:**

<table>
<thead>
<tr>
<th>Dept</th>
<th>GEOG</th>
<th>Course #</th>
<th>411</th>
<th>No. of Credits</th>
<th>3</th>
</tr>
</thead>
</table>

**COURSE TITLE**

Patterns and Process in the Arctic and SubArctic

---

**2. ACTION DESIRED: Indicate what changes:**

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>PREQUISITES</th>
<th>TITLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**FREQUENCY OF OFFERING**

(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

---

**3. CURRENT CATALOG DESCRIPTION AS IT APPEARS IN THE CATALOG: Including dept., number, title and credits**

GEOG F411

Pattern and Process: Sub-Arctic & Arctic

3 Credits
Explore the linkages between climate, geomorphology and plant communities in sub-arctic and arctic environments. Special focus will be on the interconnection between physical and ecological processes and the landscape patterns that result. Prerequisites: BIOL F271; GEOG F339; GEOS F304; or permission of instructor.
4. **COMPLETE CATALOG DESCRIPTION AS IT WILL APPEAR WITH THESE CHANGES:** (Underline new wording, strike-through-old- wording and use complete catalog format including dept., number, title, credits and cross-listed and stacked.)

GEOG-F411  
GEOG 418 / BIOL 418  
Pattern and Process: Sub-Arctic & Arctic Biogeography  
3 Credits  
Explore the linkages between climate, geomorphology and plant communities in sub-arctic and arctic environments. Special focus will be on the interconnection between physical and ecological processes and the landscape patterns that result. This course explores the geography of life by examining linkages between climate, geomorphology, and ecological communities with emphasis on the biogeography of subarctic, polar, and alpine regions. Prerequisites: BIOL F271 or NRM 277; GEOG-F338; GEOS-F304; junior/senior standing, or permission of instructor.

5. **IS THIS COURSE CURRENTLY CROSS-LISTED?**

   YES/NO  
   YES/NO  
   If Yes, DEPT  
   NUMBER  
   (Requires written notification of each department and dean involved. Attach a copy of written notification.)

6. **ESTIMATED IMPACT**

   WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.  
   Course is already taught in Geography (as GEOG 411), no impact on budget, space or faculty workloads

7. **IMPACTS ON PROGRAMS/DEPTS:**

   What programs/departments will be affected by this proposed action?  
   Include information on the Programs/Departments contacted (e.g., email, memo)  
   Cross listing with Biology will make it easier for undergraduate Biology students to find the course in the schedule, so more students may enroll.

**JUSTIFICATION FOR ACTION REQUESTED**

The purpose of the department and campus-wide curriculum committees is to scrutinize course change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you drop a prerequisite, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the course is not compromised as a result.

We wish to open the course to more students and listing with Biology will allow more students to see the course in the schedule and consider it an option. The course has been offered at graduate level in Biology and we eventually plan to cross-list and stack it (pending approval from GAC). Presently we wish to just cross list the undergraduate course and make title, number, and description changes. This course is commonly offered in both Geography and Biology departments, and is often cross-listed on other campuses.
<table>
<thead>
<tr>
<th>APPROVALS:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature, Chair, Program/Department of: Geography</td>
<td>5-7-10</td>
</tr>
<tr>
<td>Signature, Chair, College/School Curriculum Council for:</td>
<td></td>
</tr>
<tr>
<td>Signature, Dean, College/School of:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROVALS:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature, Chair, Program/Department of: Biology + Wildlife</td>
<td>5-6-10</td>
</tr>
<tr>
<td>Signature, Chair, College/School Curriculum Council for: CNSM</td>
<td>5-4-10</td>
</tr>
<tr>
<td>Signature, Dean, College/School of: SNRAS</td>
<td>5-7-10</td>
</tr>
</tbody>
</table>

**ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE REGISTRAR'S OFFICE**

Received Registrar's Office
Biogeography
GEOG 418 / BIOL 418

Instructor: Dr. Daniel Mann
email: dhmann@alaska.edu

Office: Scenario Network Arctic Planning, Denali building
phone: 474-7134
Office Hours: MWF 10:00-10:30 and by appointment

Meeting Time and Location: Lectures 1030-1130 MWF Duckering 344

Course Description
This course explores the geography of life by examining linkages between climate, geomorphology, and ecological communities with emphasis on the biogeography of subarctic, polar, and alpine regions.

Course Prerequisites: BIOL 271 Ecology or NRM 277 Conservation Biology, junior/senior standing, or permission of instructor


Course Objectives: This is a ‘synthesis’ course for upper division Geography and Life Sciences undergraduates, concurrently taught at the 600 level for graduate students. Students will gain a foundation in the basic principles of Biogeography. Students will also gain the ability to make connections across disciplinary boundaries by analyzing interactions between processes and patterns of biota and abiotic factors at landscape scales. Throughout, I emphasize the role of human ecology as a pervasive factor in the biogeography of other species.

Instructional / Teaching Methods: This is a lecture course that relies on students keeping up with supplementary readings in an excellent but complex text book. There will be 4-6 guest speakers over the course of the semester. For graduate students will prepare short lectures and will lead discussion of scientific articles for the whole class. All students will write term papers on biogeographic topics of personal interest or relevance to their research.

Learning Methods / Student Assignments: Lectures with directed readings will give students a sound background in biogeographic processes, patterns, and research practices. There will be at least one full day field trip scheduled on a weekend in early fall. All students will submit reports analyzing the data collected during class field trips. Students will submit a term paper on a topic of their choice. In addition, graduate students will present a 30 minute lecture on their research paper. Graduate students in the class will be required to read 5-10 papers from the current scientific literature, participate in what I call “recent progress” lectures, and to lead class discussions focused on journal articles. This exercise will foster class discussion and allow undergraduates to observe how papers are presented for discussion.
Course Schedule/Topical Outline:

Week 1: Introduction (text Chapter 1, 2: The Science and The History of Biogeography))
Week 2: Physical factors: (text Chapter 3: Climate and Soils)
Week 3: Biotic interactions (text Chapter 4: Niches and Ranges)
   ***FIELD TRIP #1 all day: Physical gradients and plant communities in Fairbanks area
Week 4: Disturbance (text Chapter 4: Disturbance)
   ***Writing assignment: field trip write-up
Week 5: Primary and Secondary Succession: 3 Alaskan chronosequences (assigned readings)
Week 6: Communities, biomes (text Chapter 5: Communities and Ecosystems, The Terrestrial Biomes)
Week 7: Changing climate, changing geography (text Chapter 8)
Week 8: Biota on the move (text Chapter 6: Dispersal)
   ***MIDTERM EXAM ****
Week 9: Extinction in the Geological Record (text Chapter 7)
Week 10: Diversification: (text Chapter 9)
Week 11: Biogeography of evolving humans (sections of Chapter 17)
Week 12: Island Biogeography and areography (text Chapter 14 and 15)
Week 13: Biogeography in the time of global change (sections of Chapter 17)
Week 14: Applications for Alaskan conservation (assigned readings)
Week 15: (extra lecture slots to accommodate guest speakers)
   ***COMPREHENSIVE FINAL EXAMINATION*****

The FIELD TRIP is mandatory. We will drive personal vehicles to several locations in Goldstream valley. Bring warm clothes. Rubber boots or Sorrels recommended. Bring your lunch, camera and a notebook. We'll be out the entire day. Students turn in a brief, typed (1 page) report that analyzes the data we gather in the field. All assignments turned in as hard copies – no email attachments.

Term Paper: A 5-10 page term paper (including illustrations) is required. Topics vary according to individual students' interests. Graduate students will present their term papers to the class.

Information on Exams and Assignments: Examination format will include a mixture of multiple choice, short answer / diagram / map, and essay.

Assignments and Grading:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam:</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam:</td>
<td>30%</td>
</tr>
<tr>
<td>Field Trip Participation (attendance + report)</td>
<td>20%</td>
</tr>
<tr>
<td>Term Paper:</td>
<td>20%</td>
</tr>
<tr>
<td>Class Participation and Attendance</td>
<td>5%</td>
</tr>
</tbody>
</table>

Extra Credit: Extra credit is not an option in this course except under unusual circumstances.
Course grades will be assigned as indicated at the table below. Course %’s are for THIS course only and may vary with different instructors. Grade point values are indicated on the table as well. Please see “Academics and Regulations” section of UAF 2007-2008 Catalogue.

<table>
<thead>
<tr>
<th>grade % GP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100-97 4.0</td>
</tr>
<tr>
<td>A</td>
<td>96-92 4.0</td>
</tr>
<tr>
<td>A-</td>
<td>91-90 3.7</td>
</tr>
<tr>
<td>B+</td>
<td>89-87 3.3</td>
</tr>
<tr>
<td>B</td>
<td>86-82 3.0</td>
</tr>
<tr>
<td>B-</td>
<td>81-80 2.7</td>
</tr>
<tr>
<td>C+</td>
<td>79-77 2.3</td>
</tr>
<tr>
<td>C</td>
<td>76-72 2.0</td>
</tr>
<tr>
<td>C-</td>
<td>71-70 1.7</td>
</tr>
<tr>
<td>D+</td>
<td>69-67 1.3</td>
</tr>
<tr>
<td>D</td>
<td>66-62 1.0</td>
</tr>
<tr>
<td>D-</td>
<td>61-60 0.7</td>
</tr>
</tbody>
</table>

As a reminder of what letter grades mean, the following is provided. Just satisfactorily completing all assignments does not necessarily earn an ‘A’ in any course. These guidelines are from the UAF catalog.

A = outstanding work, mastery of topic

B = above average work, all assignments completed well

C = average, all or most assignments completed, most work satisfactory

D = pass, unsatisfactory or missing work

F = less than 60 percent: failure to meet requirements of course

Support and Disabilities Services: The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. The course instructors will work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities. Please notify the instructor of any special needs.

Plagiarism/Academic Integrity: Univ. Standards and Policies apply (see UAF Catalog).