

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).  
 See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

**TRIAL COURSE OR NEW COURSE PROPOSAL**

**SUBMITTED BY:**

<b>Department</b>	Geography	<b>College/School</b>	SNRAS
<b>Prepared by</b>	Patricia Heiser	<b>Phone</b>	7068
<b>Email Contact</b>	paheiser@alaska.edu	<b>Faculty Contact</b>	P. Heiser

**1. ACTION DESIRED**  
 (CHECK ONE):      Trial Course       New Course

**2. COURSE IDENTIFICATION:**

Dept	GEOG	Course #	202	No. of Credits	3
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Justify upper/lower division status & number of credits:	<b>This course will be taught at the introductory level, but will require several papers involving some research. ENG 111X will be required before taking this class.</b>
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**3. PROPOSED COURSE TITLE:** Natural Disasters

**4. To be CROSS LISTED?**      YES/NO       no      If yes, Dept:       Course #

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

**5. To be STACKED?**      YES/NO       no      If yes, Dept:       Course #

**6. FREQUENCY OF OFFERING:** Odd springs

Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) - or As Demand Warrants

**7. SEMESTER & YEAR OF FIRST OFFERING**  
(AY2011-12 if approved by 3/1/2012; otherwise AY2012-13)

Spring 13

**8. 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:** (check all that apply)

1	2	3	4	5	<input checked="" type="checkbox"/>	6
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6 weeks to full semester

**OTHER FORMAT** (specify) \_\_\_\_\_

**Mode of delivery** (specify lecture, field trips, labs, etc) \_\_\_\_\_

**9. CONTACT HOURS PER WEEK:**

3	LECTURE	hours/weeks	LAB	hours/week	PRACTICUM	hours/week
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Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/guidelines-for-computing/> for more information on number of credits.

**OTHER HOURS** (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

**GEOG 202: NATURAL DISASTERS**  
**3 Credits**  
**Odd Springs**

Natural disasters are usually the result of the build up and sudden release of energy in the solid earth, atmosphere, or biosphere. Natural 'events' typically become disasters when intensive human activity alters the energy dynamics involved, or when the event endangers human life, property, or livelihood. This course examines the natural physical processes that affect the human environment in catastrophic ways. Case studies from around the world will allow the examination of the complex factors that lead to Natural Disasters. (3+0)

11. **COURSE CLASSIFICATIONS:** Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.  
 H = Humanities  S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? **If YES, attach form.**

	<b>YES:</b>		<b>NO:</b>	
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IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, <input type="checkbox"/>	W = Writing Intensive, <input type="checkbox"/>	Natural Science, <input type="checkbox"/>
Format 6	Format 7	Format 8

12. **COURSE REPEATABILITY:**

Is this course repeatable for credit? YES  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?	<input type="text"/>	<b>TIMES</b>
If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?	<input type="text"/>	<b>CREDITS</b>
If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?	<input type="text"/>	<b>CREDITS</b>

13. **GRADING SYSTEM:** Specify only one. Note: Later changing the grading system for a course constitutes a Major Course Change.

LETTER:  PASS/FAIL:

**RESTRICTIONS ON ENROLLMENT (if any)**

14. **PREREQUISITES**   
 These will be required before the student is allowed to enroll in the course.

15. **SPECIAL RESTRICTIONS, CONDITIONS**

16. **PROPOSED COURSE FEES** \$

Has a memo been submitted through your dean to the Provost for fee approval?  
 Yes/No

**17. PREVIOUS HISTORY**

Has the course been offered as special topics or trial course previously?

YES

Yes/No

If yes, give semester, year, course #, etc.:

Fall 2007 GEOG 193 Natural Disasters -intended and offered as 'trial' course, deadlines required it be proposed as Special Topics

**18. ESTIMATED IMPACT**

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

Teaching this course will require the adjustment of workload for regular faculty. Facilities required will be a classroom with capabilities to project power point presentations and videos (sound). Many of these classrooms exist on campus so no special facilities needs are anticipated.

**19. LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (kljensen@alaska.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

Karen Jenson October 2011, discussed holdings and future movie acquisitions

**20. 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)

Geography program and possibly Natural Resource Management program will be impacted. Geology and Geophysics may be impacted.

**21. POSITIVE AND NEGATIVE IMPACTS**

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

This course will have a positive impact on the Geography program and in particular the new Environmental Decision Making concentration, for which is it primarily designed. One of the Depth Areas in EDM, Natural Hazards will include this course. We expect this course to attract students and potential majors interested in a global perspective on environmental decisions, hazard and risk assessment, and the myriad problems associated with humans interacting with the natural environment.

Offering this course will require an adjustment of existing faculty workload. It was offered in Fall 2007 as a trial course (proposed as Spec. Topics to meet scheduling deadline) and intended to be part of ongoing revisions in the Environmental Studies concentration. Those revisions will soon be complete and be proposed in the Fall 2012 review cycle.

There are no similar courses listed in the UAF catalog. Geography offers *GEOG 488 Geographic Assessment and Prediction of Natural Hazards* for majors. That course emphasizes the quantitative aspects of hazard and risk assessment. Students taking this intro level GEOG 202 course will have a broad global perspective of natural hazards that may complement the 400-level class if they eventually take it. At this time we are not making GEOG 202 a pre-requisite for GEOG 488, though eventually we may. A trial course with a similar name (GEOS 194 Natural Hazards and Disasters) has recently been proposed by Geology and Geophysics at the 100 level. Competition for students interested in these courses is possible, and certainly the use of such similar titles will cause confusion. The geology course appears to focus considerably on geologic hazards and emphasizes hazards in Alaska. The GEOG 202 course proposed here covers all types of natural disasters and hazards including: geologic, weather and storms, floods, fire, famine, disease. While this course will focus on the natural/physical driving forces of disasters, it will also specifically examine the nature of hazards, risk, and disaster from a global and geographic perspective by examining the ways in which culture, politics, government, and economics influence the impacts of natural hazards. A conversation between departments, and perhaps collaboration on this topic, is clearly warranted in order to avoid duplication and to ensure that course content, objectives, and titles may be clearly distinguished.

**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. Use as much space as needed to fully justify the proposed course.

This course was originally taught as a trial run in Fall 2007. The course was successful and we decided that it could serve nicely as introductory course to attract potential students into the major. Workload, curriculum, and schedule changes delayed making it a permanent offering until now. This course now fits particularly well with the scope and goals of the new concentration in Environmental Decision Making, and will be part of the Natural Hazards Depth Area within that concentration.

In the trial run of this course I found that students struggled with the writing assignments, especially those who were first semester freshman. I think requiring ENG 111 as a pre-requisite will help ensure that students are better prepared to write short papers. It is still an introductory level class, but also requires some synthesis, critical thinking, and a some of research. The 200 level seems appropriate for the content and expectations of the class.

**APPROVALS: Add additional signature lines as needed.**

Signature, Chair, Program/Department of: Geography Date 10-7-2011

Signature, Chair, College/School Curriculum Council for: SNRAS Date 7 Oct 2011

Signature, Dean, College/School of: Paul Stewart Date 10-10-11

Signature of Provost (if applicable) Date

**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 Date

Faculty Senate Review Committee:  Curriculum Review  GAAC  
 Core Review  SADAC

**ATTACH COMPLETE SYLLABUS (as part of this application).** Note: The guidelines are online: <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/>  
The Faculty Senate curriculum committees will review the syllabus to ensure that each of the it listed below are included. If items are missing or unclear, the proposed course (or changes to may be denied.

**SYLLABUS CHECKLIST FOR ALL UAF COURSES**

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

**1. Course information:**

Title,  number,  credits,  prerequisites,  location,  meeting time  
(make sure that contact hours are in line with credits).

**2. Instructor (and if applicable, Teaching Assistant) information:**

Name,  office location,  office hours,  telephone,  email address.

**3. Course readings/materials:**

Course textbook title,  author,  edition/publisher.  
 Supplementary readings (indicate whether  required or  recommended) and  
 any supplies required.

**4. Course description:**

Content of the course and how it fits into the broader curriculum;  
 Expected proficiencies required to undertake the course, if applicable.  
 Inclusion of catalog description is *strongly* recommended, and  
 Description in syllabus must be consistent with catalog course description.

**5.  Course Goals (general), and (see #6)**

**6.  Student Learning Outcomes (more specific)**

**7. Instructional methods:**

Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

**8. Course calendar:**

A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

**9. Course policies:**

Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

**10. Evaluation:**

Specify how students will be evaluated,  what factors will be included,  their relative value, and  how they will be tabulated into grades (on a curve, absolute scores, etc.)  Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (Not required in the syllabus, but may be a convenient way to publicize this.) Faculty Senate Meeting #171:  
<http://www.uaf.edu/uafgov/faculty-senate/meetings/2010-2011-meetings/#171>

**11. Support Services:**

Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

**12. Disabilities Services:**

The 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.

State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

6/30/2011

# ***GEOG 202 – NATURAL DISASTERS***

## ***COURSE OUTLINE, OBJECTIVES, AND SYLLABUS***

### **Instructor**

Dr. Patricia Heiser, 368 O'Neill      email [paheiser@alaska.edu](mailto:paheiser@alaska.edu)      Phone: 474 -7068

**Lecture** : Tuesday and Thursday 9:45 - 11:15 am      Natural Science Facility 203

**NATURAL DISASTERS** typically are the result of the build up and sudden release of energy in the solid earth, atmosphere, or biosphere. Natural 'events' typically become DISASTERS when intensive human activity alters the energy dynamics involved, or simply when the event endangers human life, property, or livelihood. This course examines the natural physical processes that affect the human environment in catastrophic ways. Each type of hazard will be examined in terms of science behind the disaster, hazard prediction and mitigation, and the human contribution or response. Case studies of each type of disaster will be used to initiate discussion and to integrate the scientific, politic, and human aspects of natural disasters.

**Course Objectives:** My goal for this course is to provide students with a scientific background and understanding of the multiple variables that contribute to Natural Disasters. This course will help you recognize and understand the connections between the physical and biologic processes that drive natural 'events' and, in particular, the human involvements that make such events a "disaster". I will emphasize and compare factors that affect the impact that disasters have in developed countries such as the United States versus those in developing countries around the world. We will also discuss public awareness and media coverage of disasters and how that shapes human response.

**Student Outcomes:** Through the completion of this course, students will:

- *understand* the basics principles of dynamic Earth processes operating in the solid earth, atmosphere, and biosphere
- *understand* the role of energy transfer in the underlying processes that become disasters
- *be aware of and able to recognize* the complexities of multiple variables (natural, geographic, political, social) operating simultaneously to create 'disaster'
- *explore* the human factors in natural disasters including assessment, prediction and mitigation
- *use* case studies from around the world to examine multiple factors driving disaster

**Instructional / Teaching Methods:** This course meets on Tuesdays and Thursdays. Throughout the semester we will typically study one disaster per week. Tuesday's lecture will be focused on the driving forces, natural processes, and factors behind a given disaster. Thursday class times will cover case studies and will include guided discussion of the events and the human contribution and/or response to disaster.

**Learning Methods / Student Assignments:** As stated above, the goals in this course are two-fold. First, I hope you will learn some of the basic scientific principles that drive Natural Disasters. Secondly, I hope this course will initiate students to think critically and ask good questions about what makes natural events *become* DISASTERS. To that end, the following exercises will help you learn the science as well as integrate and apply the different types of information and perspectives we cover in class.

**Assingments:**

1. Weekly "Check Points": There will be a weekly short 'quiz' held each Thursday. It will contain a question or two based on the Tuesday lecture, and then YOU will be asked to provide (in writing) 1 or 2 question(s) or comment(s) for the case study discussion on Thursday.
2. Four short papers: You will be asked to write a short paper (~2-3 pages, guided by assigned questions), following each major section of the course (solid earth, atmosphere, biosphere). A fourth paper will have you address a disaster of dominantly human origin. This will be a chance for you to explore a case study *outside* the ones we are able to cover in class. These may focus on disasters of any scale, but that are of personal interest to you (e.g. Great Flood of 19xx in your hometown) or simply an event we did not have time to cover in class. There are plenty of them!
3. Disasters in the movies! For this assignment you will write a paper (~2 pages, again guided by assigned questions) evaluating the portrayal of Natural Disasters in movies. You may choose a film from a list provided (or with instructor approval...e.g. Godzilla won't qualify, despite being fine entertainment). You will explore the disaster as we have in class: a) the driving forces and science behind it, b) the human factors and response... but will *ADDITIONALLY* explore c) the service or *disservice* the movie played in educating the public about Natural Disaster. What information or *mis*information does the film provide? How might it be helpful or harmful to public perception of science, scientists, hazards in general, or even public safety?

**Required Text**

Natural Disasters, 7<sup>th</sup> edition, by Patrick Abbott

**Course Schedule** (previous fall schedule included here as example)

GEOG 202 Natural Disasters Course Schedule				
Section	Wk	Dates		
Solid Earth	1	Sep 6	Energy of Disasters: A Dynamic Earth	Ch 1-3
	2	Sep 11, 13	Earthquakes and Tsunami	Ch 4-5
	3	Sep 18, 20	Volcanoes	Ch 6-7
	4	Sep 25, 27	Mass Movements	Ch 8-9
Atmosphere and Hydrosphere	5	Oct 2, 4	Atmosphere, Oceans, Climate Change	Ch 10
	6	Oct 9, 11	Hurricanes	Ch 17
	7	Oct 16, 18	Coastal Processes (erosion, inundation)	Ch 11
	8	Oct 23, 25	Thunderstorms, Lightning, Hail	Ch 13
	9	Oct 30, Nov1	Tornados	Ch 12
	10	Nov 6, 8	Floods	Ch 12
	11	Nov 13, 15	Fire	Ch 14
	12	Nov 20	Drought	Ch 15
Biosphere	13	Nov 27, 29	Plague: LOCUSTS	B-board/ E-res
	14	Dec 4,5	Epidemic, Blight, and Famine	B-board/ E-res
	15	Dec 11,13	Climate and Env. Change / Population Growth	B-board/ E-res
	<b>Final Exam Event</b>		Natural Disasters in Earth's History: Mass Extinctions New Radiations	Ch 16
<b>MOVIE REVIEW / HIGHLIGHTS AND LOWLIGHTS</b>				

**Assignment Due Dates:** 2 points per day will be docked for late assignments.

Paper 1: Solid Earth                      Oct 9  
 Paper 2: Atmosphere                      Nov 15  
 Movie Review                                Nov 27  
 Paper 3: Biosphere                        Dec 13

No Final Exam, but attendance is *required* for final exam period.

**Assignments and Grading:**

Students will be evaluated based on 15 weekly quizzes, four writing assignments, and a movie paper (described in detail above). Grades will be determined using the following percentage points.

Weekly Quizzes (4 pts each x 15 weeks) <i>(2 points quiz question, 1 pt for your question)</i>	20%
Three Written Assignments / Short papers (20% pts each x 3)	60%
Disaster Movie Critique	10%
Class participation	<u>10%</u>
	100%

**NOTE:** Missed quizzes **cannot be made up** without documented, verified excuse or approved prior notification. You may submit discussion question for one point.

**Course Grading Scale:** All grades are determined on an absolute score (with no curve) according to the following scale:

- A** An honor grade, indicates originality and independent work, a thorough mastery of the subject and the satisfactory completion of more work than is regularly required.
- B** Indicates outstanding ability above the average level of performance.
- C** Indicates a satisfactory or average level of performance.
- D** The lowest passing grade, indicates work of below-average quality and performance.
- F** Indicates failure.

grade	%	GP
A+	100-97	4.0
A	96-92	4.0
A-	91-90	3.7
B+	89-87	3.3
B	86-82	3.0
B-	81-80	2.7
C+	79-77	2.3
C	76-72	2.0
C-	71-70	1.7
D+	69-67	1.3
D	66-62	1.0
D-	61-60	0.7
F	<60	0.0

**Grading system.** Course grades will be assigned as indicated at the table to the left. Course % are for THIS course 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.

**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:** Academic dishonesty of any type will not be tolerated. Plagiarism is considered academic dishonesty and will be treated as such. If you are unsure of what plagiarism is, please consult my **MANIFESTO** provided on Blackboard, or ask *before* handing in any work for grading. University Standards and Policies apply (see UAF Catalog).