

# **GEO 2006: Natural Hazards Geography**

Department of Geography College of Liberal Arts & Sciences, University of Florida

# COURSE SYLLABUS

Instructor:	Dr. Kevin Ash	Term:	Fall 2021
Office:	TUR 3128 (Office visits via Zoom or in office)	Class Meeting Days:	Online asynchronous
Phone:	352-294-6956	<b>Class Meeting Hours:</b>	Online asynchronous
Email:	kash78@ufl.edu	Class Location:	UF Canvas
Office Hours:	Tues, Wed, Thurs 9-10 am, or by appointment	Course Credits:	3 hours

### I. Course Overview

In this course, students will gain an international perspective on the societal and environmental impacts of natural hazards with the goal of equipping students to contribute to effective policies and decision-making to aid individuals, communities, and even national governments to reduce the impacts associated with hazards and disasters. This course integrates perspectives from geography and cognate social sciences to enhance understanding of how disasters emerge from a complex interaction of social, psychological, cultural, political, and economic forces with extreme meteorological, climatological, and geophysical phenomena. Comparative geographic and historical analyses will be used to explain why, despite investments in warning systems, preparedness and mitigation projects, and emergency response & recovery initiatives, global losses associated with natural hazards have thus far continued to rise.

### II. General Education Objectives

This course is both a social and behavioral sciences (S) and international (N) subject area course in the UF General Education Program.

Social and behavioral sciences courses provide instruction in the history, key themes, principles, terminology, and underlying theory or methodologies used in the social and behavioral sciences. Students will learn to identify, describe and explain social institutions, structures, and processes. These courses emphasize the effective application of accepted problem-solving techniques. Students will apply formal and informal qualitative or quantitative analysis to examine the processes and means by which individuals make personal and group decisions. Students are expected to assess and analyze ethical perspectives in individual and societal decisions.

International courses equip students to identify, describe, and explain the historical, cultural, economic, political, and/or social experiences and processes that characterize the contemporary world. Students will exercise critical thinking to analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate understandings of an increasingly connected contemporary world.

These general education objectives will be accomplished through:

- Discussion and explanation of why disasters occur in terms of risk, vulnerability, and resilience, and how individual and institutional perceptions play key roles in policy initiatives intended to reduce hazard impacts
- Description and explanation of world regions that suffered particularly severe societal impacts from hazards and disasters in the past and/or are likely to be severe impacted in the future
- Analysis of historical global data and case studies to discern instances in which risk reduction policies have effectively addressed hazard-related problems from those which have been ineffective

- Evaluation and discussion of recent and ongoing hazard events to understand how negative consequences emerge and propagate through interconnected national and international economic and political systems
- Analysis and critique of ethical considerations and competing goals/values inherent in disaster management decisions in local, national, and international contexts

### III. Student Learning Outcomes

At the end of this course, students will be expected to achieve the following learning outcomes in content, communication, and critical thinking:

- **Content**: *Students demonstrate competence in the terminology, concepts, theories, and methodologies used within the subject area.* Students will acquire basic knowledge of how hazards and disasters are conceptualized and managed from a social scientific perspective. Students will also enhance their understanding of global geographic variability of disaster risk reduction capabilities and the societal impacts associated with hazard events and disasters. Achievement of this learning outcome will be assessed through reading quizzes, six written summaries and related peer review activities about recent notable hazard events, five of the six assignments, and a midterm and final assessment.
- **Communication**: *Students clearly and effectively communicate knowledge, ideas, and reasoning in written or oral forms appropriate to the subject area.* Students will individually prepare brief written summaries and then participate in peer review activities for six course modules. The written summaries and review participation will be assessed according to the rubric provided on Canvas. Students must communicate their ideas and reasoning about causal factors and potential actions to lessen impacts for recent and ongoing hazard events; then, students will read & provide constructive feedback for other students' summaries. Additionally, students will practice effective written communication as part of all six assignments which will require students to write several paragraphs to answer one or more short answer or essay questions. Achievement of this learning outcome will be assessed through six written summaries and related peer reviews about recent notable hazard events, as well as six written assignments.
- Critical Thinking: Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the subject area. Students will analyze data and information and will be asked to reason with course content and empirical data in the assignments to develop potential solutions for individuals and institutions to reduce disastrous hazard impacts on society. In addition, event summaries and peer review activities will require students to engage with ongoing debates about potential solutions to reduce short- and long-term health and economic impacts stemming from recent and ongoing hazard events drawn from international examples. Achievement of this learning outcome will be assessed through six written summaries and related peer reviews about recent notable hazard events, as well as all six assignments.

### IV. Materials and Supplies: Laptop Computer

This course will be conducted via UF Canvas. <u>Students must provide their own computer on which to work on quizzes,</u> <u>assignments, and exams during the semester</u>. Any required software (such as Microsoft Excel) will be available on students' laptops through UF Apps at <u>https://info.apps.ufl.edu</u> or will be available for free download (such as GeoDa).

## V. Minimum Technology Requirements

The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to his or her degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the Internet and related equipment (Cable/DSL modem)
- Microsoft Office Suite installed (provided by the university)

Individual colleges may have additional requirements or recommendations, which students should review prior to the start of their program.

### VI. Minimum Technical Skills

To complete your tasks in this course, you will need a basic understanding of how to operate a computer, and how to use word processing software.

#### VII. Materials/Supply Fees

There is no supply fee for this course.

### VIII. Required Texts and Useful Online Resources

The required text for this course is *Natural Hazards: Explanation and Integration* by Montz, Tobin, & Hagelman, published in 2017 (2<sup>nd</sup> Edition). The required text may be purchased via the links provided below. Any additional reading materials will be available via UF Canvas. A digital version of the textbook will suffice if students prefer that to a hard copy.

https://www.guilford.com/books/Natural-Hazards/Montz-Tobin-Hagelman/9781462529179 https://www.amazon.com/Natural-Hazards-Second-Explanation-Integration/dp/1462529178

#### IX. Honorlock

Honorlock is an online proctoring service that allows students to take exams on-demand 24/7. There are no scheduling requirements or fees.

You will need a laptop or desktop computer with a webcam, a microphone, and a photo ID. The webcam and microphone can be either integrated or external USB devices.

Honorlock requires that you use the <u>Google Chrome</u> browser; furthermore, the Honorlock extension must be added to Chrome. You can download Chrome here: <u>https://www.google.com/chrome/</u>

For further information, FAQs, and technical support, please visit Honorlock at <a href="https://honorlock.com/students/">https://honorlock.com/students/</a>

### X. Course Format, Activities, and Basis for Evaluation

The class will be conducted online via UF Canvas and in an asynchronous format, meaning that students should work through the modules themselves throughout the semester, paying close attention to the schedule and deadlines. All lectures will be available for viewing via UF Canvas, and students will be able also to download the Powerpoint files and a transcription of each lecture. There will be assignments and/or discussions each module during the semester, and there will also be short reading quizzes taken via Canvas which must be finished by the end of the week corresponding to the module in which they are assigned. There will be two exams, a midterm and a final exam, both administered via UF Canvas and Honorlock.

#### Evaluation and Grading: A minimum grade of C is required for general education credit.

• Event Summaries and Discussion: 30% of the final grade will consist of written summaries & online discussion of hazard/disaster events during the six modules in which students participate in these exercises. Students are expected to write brief summaries on recent events including information describing key geographic event attributes; preparedness and warning systems; relevant social, cultural, economic, & political vulnerabilities; losses and impacts; and post-event response activities. Students will also review two other summaries written by peers in the class.

#### Rubric for Evaluation: Written Hazard Event Summaries & Group Activity

(Adapted from two sources: Solan & Linardopoulos 2011, <u>http://jolt.merlot.org/vol7no4/linardopoulos\_1211.htm</u>; Reflection/Discussion Critique Rubric, <u>http://www.rcampus.com/rubricshowc.cfm?sp=yes&code=D97AAC&</u>.

Evaluation Category	Standards for Excellent Work	Points	Instructor Comments
Provide Basic Event Facts	-Describe geographic locations -Give dates/times of events	/5	

	-Describe hazard event types		
	-Include maps as appropriate		
	-Include maps as appropriate		
Physical Dimensions of Hazard Events	magnitude/intensity, spatial distribution, areal extent, rate of onset, seasonality, etc. -Discuss briefly local climate and/or topography of event	/10	
Societal Vulnerability and Impacts	locations, if relevant -Describe the direct & indirect impacts of the disaster (based on tentative available information) -Discuss key features of the exposed & affected area's people & systems, such as population size, prominent livelihoods, and demographicsWhat was the role of any forecasts or warnings in moderating impacts?	/10	
Writing & Communication Proficiency	<ul> <li>Organize writing with clear structure: <ul> <li>Introduction</li> <li>Body</li> <li>Conclusion</li> </ul> </li> <li>Avoid spelling, grammar, syntax, punctuation, or other writing errors</li> </ul>	/5	
Group Discussion Participation	<ul> <li>Comment on the post of at least two group members with substantive feedback and/or insight</li> <li>Engage in constructive debate, when appropriate</li> <li>Ask questions if you do not understand content or terms</li> </ul>	/20	

- **Reading Quizzes:** Students are required to read portions from the textbook for each module time period that roughly correspond to the lectures. To make sure that students keep up with the reading, there will be quizzes that must be completed on a regular basis. These quizzes will be administered via UF Canvas and will consist of multiple choice and short answer questions. The quizzes comprise 20% of the total credit for the course.
- Assignments: Students will complete six assignments during this course, which in total will comprise 30% of the final grade. These assignments will correspond to the topics of the reading and lectures roughly every two weeks. The assignments will require students to analyze and interpret data using Microsoft Excel and mapping software, evaluate a social scientific approach to understanding individual decision-making for hurricane evacuation, and write a review of international hazard reduction policy initiatives. The assignments must be completed individually by each student.

• **Exams:** In total, the two exams will account for 20% of the final grade, 10% each for the Midterm and Final exams. The exams will be closed book and will consist of multiple choice questions.

Assignments and Exams	Percent of Final Grade
Reading Quizzes	20%
Event Summaries & Discussion	30%
Assignments	30%
Exam #1: Midterm	10%
Exam #2: Final (not cumulative)	10%

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Grading Scale (%)				
92.5 – 100	А			
89.5 – 92.4	A-			
86.5 – 89.4	B+			
82.5 - 86.4	В			
79.5 – 82.4	B-			
76.5 – 79.4	C+			
72.5 – 76.4	С			
69.5 – 72.5	C-			
66.5 – 69.4	D+			
62.5 - 66.4	D			
59.5 – 62.4	D-			
< 59.5	Е			

XI. Important Dates to Remember: The due dates below are tentative and can be changed at the discretion of the instructor.

Drop/Add Ends:	Fri, Aug 27 <sup>th</sup> 2021
Labor Day	Mon, Sep 6 <sup>th</sup> 2021
Homecoming/Fall Break	Fri, Oct 8 <sup>th</sup> 2021
Midterm Exam	Thurs, Oct 21 <sup>st</sup> 2021
Veterans Day	Thurs, Nov 11 <sup>th</sup> 2021
Thanksgiving Break	Wed-Fri, Nov 24-26 <sup>th</sup> 2021
Reading Days	Thurs-Fri, Dec 9-10 <sup>th</sup> 2021
Final Exam	Thurs, Dec 16 <sup>th</sup> 2021
Fall 2021 Grades Visible on https://one.uf.edu/dashboard/	Wed, Dec 22 <sup>nd</sup> 2021

### XII. Weekly Topic Schedule, Assignments, and Exams (Schedule is provisional and subject to change)

Dates	Modules	Class Topics	Assessments	Required Readings
		Course Orientation & Introduction	Syllabus Quiz	Syllabus
Aug 23-27	0-1	Hazards & Disasters: When Potential Becomes Reality	Reading Quiz, Ch. 1	Montz et al. 2017, pp 1-25
Aug 30- Sep 3	2	Physical Dimensions of Natural Hazards: Meteorological Events	Assignment #1: Mapping the World Risk Index	Montz et al. 2017, pp 25-58
Sep 6-10	3	Physical Dimensions of Natural Hazards: Hydrometeorological & Climatological Events	Recent Hazard Events Summary #1 (from Aug 16-29)	Montz et al. 2017, pp 59-84
Sep 13-17	4	Physical Dimensions of Natural Hazards: Geophysical Events	Assignment #2: Mapping International Disaster	Montz et al. 2017, pp 84-101

			Casualties; Reading Quiz, Ch. 2	
Sep 20-24	5-6	Spatial & Temporal Characteristics of Natural Hazards: Spatial Distribution & Frequency	Recent Hazard Events Summary #2 (Aug 30-Sep 12)	Montz et al. 2017, pp 102- 124
Sep 27- Oct 1	5-6	Spatial & Temporal Characteristics of Natural Hazards: Seasonality & Speed of Onset	Reading Quiz, Ch. 3	Montz et al. 2017, pp 124- 142
Oct 4-8	7	The Individual in Natural Hazards: Decision-Making & Philosophical Approaches	Recent Hazard Events Summary #3 (Sept 13-26)	Montz et al. 2017, pp 143- 163
Oct 11-15	8	The Individual in Natural Hazards: Situational & Personal Factors	Assignment #3: Hurricane Evacuation Decision Factors & Coping Capacity; Reading Quiz, Ch. 4	Montz et al. 2017, pp 163- 184
Oct 18-22	Exam	Midterm Exam, October 21	None	Review for exam using study guide
Oct 25-29	9	Community Behaviors & Attitudes Toward Hazard Adjustments	Recent Hazard Events Summary #4 (Sep 27-Oct 17); Reading Quiz, Ch. 5	Montz et al. 2017, pp 185- 215
Nov 1-5	10	Public Policy & Natural Hazards: Disaster Relief & Recovery	Assignment #4: International Disaster Aid	Montz et al. 2017, pp 216- 242
Nov 8-12	11	Public Policy & Natural Hazards: Mitigation & Preparedness	Recent Hazard Events Summary #5 (Oct 18-31); Reading Quiz, Ch. 6	Montz et al. 2017, pp 242- 260
Nov 15- 19	12	Evacuation & Impacts of Hazards & Disasters	Assignment #5: Mapping International Disaster Damages	Montz et al. 2017, pp 261- 278
Nov 22- 23	13	Risk Assessment & International Disaster Risk Reduction Policy	Assignment #6: Reflection on Sendai Framework	Montz et al. 2017, pp 278- 296
Nov 29- Dec 3	14	Risk Communication	Recent Hazard Events Summary #6 (Nov 1-21); Reading Quiz, Ch. 7	Montz et al. 2017, pp 297- 327
Dec 6-8	15	An Integrated Approach to Natural Hazards	Reading Quiz, Ch. 8	Montz et al. 2017, pp 327- 340
Dec 16	Exam	Final Exam, December 16	None	Review for exam using study guide

#### XIII. Course Policies: Attendance, Make-Ups, and Grades

**Make-Up Exams and Assignments:** Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found at catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/.

As this is an online class, you are responsible for observing all posted due dates, and are encouraged to be self-directed and take responsibility for your learning.

**Examination Policies and Reading Days:** Course policies are consistent with University policies on during-term exams, final exams, reading days, and make-up exams. Students must notify the instructor as soon as possible in case of absence during an exam and provide documentation as to the reason for the absence. If deemed an excused absence, the student will be

permitted a reasonable amount of time to make up the missed exam. More details can be found at <u>https://catalog.ufl.edu/UGRD/academic-regulations/examination-policies-reading-days/</u>.

**Grade Dissemination:** You can access your scores at any time using the Grade function in Canvas. The instructor will post grades within about one week of the due date of each assignment and the mid-term exam.

**Grading Policies for Assigning Grade Points:** Information on current UF grading policies for assigning grade points may be found at <u>https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx</u>.

**Grades of "Incomplete"**: The current university policy concerning incomplete grades will be followed in this course. An incomplete grade may be assigned at the discretion of the instructor as an interim grade for a course in which you have completed a major portion of the course with a passing grade, been unable to complete course requirements before the end of the term because of extenuating circumstances, and obtained agreement from the instructor and arranged for resolution of the incomplete grade. Instructors are not required to assign incomplete grades.

#### XIV. Course Policies: Technology and Media

**Email**: Each of you has a UF email address. It is vital that you maintain an active UF email account and that you **check it often**. This tentative syllabus is **subject to change**, and any changes will be transmitted to you via your UF email account and Canvas (see below). Students should email the instructor if they have questions about any of the lectures, readings, assignments, or exams. You should expect a response within about 24 hours during weekdays. On holidays or weekends, expect a response on the next business day. The instructor will reasonably expect similar time frames for responses to emails sent to students.

**Canvas**: Course materials such as lectures, readings, the syllabus, and assignment instructions will be available through Canvas (<u>https://elearning.ufl.edu</u>). You will also find all due dates and grades on Canvas. Students must activate their UF GatorLink account in order to use Canvas. If you need help learning how to perform various tasks related to this course or other courses that utilize Canvas, please consult the above webpage. You may also contact the UF Computing Help Desk at (352) 392-HELP (4357) or <u>helpdesk@ufl.edu</u>.

**Online Course Evaluation:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <u>gatorevals.aa.ufl.edu/</u>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <u>gatorevals.aa.ufl.edu/public-results/</u>.

**Recordings and Notes:** It is not permitted to sell notes or recordings from this class without written consent of the instructor. Nor are students permitted to disseminate recordings of the instructor lecturing or post copies of assignments or exams on the internet.

### XV. Course Policies: Student Expectations

#### **Disabilities Statement:**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <u>www.dso.ufl.edu/drc/</u>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Academic Honesty & Conduct Policy: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor code (sccr.dso.ufl/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and

the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

### XVI. Campus Resources for Students:

#### Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via email at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services at career.ufl.edu/.

*Library Support*: <u>http://cms.uflib.ufl.edu/ask</u>. Various ways to receive assistance with respect to using the libraries or finding resources.

*Teaching Center:* Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring. <a href="http://teachingcenter.ufl.edu/">http://teachingcenter.ufl.edu/</a>

*Writing Studio:* 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. <u>http://writing.ufl.edu/writing-studio/</u>

Student Complaints On-Campus: <a href="mailto:sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/">sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/</a>

On-Line Students Complaints: distance.ufl.edu/student-complaint-process/

#### Health and Wellness Resources

*U Matter, We Care*: If you or someone you know is in distress, please contact <u>umatter@ufl.edu</u>, 352-392-1575, or visit <u>umatter.ufl.edu/</u> to refer or report a concern and a team member will reach out to the student in distress.

*Counseling and Wellness Center*: Visit <u>https://counseling.ufl.edu/</u> or call 352-392-1575 for information on crisis services as well as non-crisis services.

*Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <u>https://shcc.ufl.edu/</u>.

University Police Department: Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).

*UF Health Shands Emergency Room / Trauma Center:* For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; <u>ufhealth.org/emergency-room-trauma-center</u>.

*COVID-19:* If you are experiencing COVID-19 symptoms, please use the UF Health screening system and follow the instructions on whether you are able to attend class. You will be given a reasonable amount of time to make up work if deadlines are missed due to COVID-19 related health problems. Please consult the following links for more information:

- CDC Guidance on Coronavirus Symptoms: <u>https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html</u>
- UF Health COVID-19 Exposure & Symptoms Quick Reference Guide: <u>https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/</u>
- UF Guidance for Return to Campus for Fall 2021 Semester: <u>https://coronavirus.ufl.edu/health-guidance/</u>