Boston College Mission Statement

Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry.

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

Course description: The course "Natural Disasters and Catastrophes" is global treatment of environmental history and science of natural and man-made disasters. The class presents basic science, along with detailed case studies of past and present events. The course examines a range of disasters including volcanoes, earthquakes, floods, tsunami, fire, landslides, hurricanes, famines, pandemic diseases, meteorite impacts, and hurricanes.

Class lectures and discussions will highlight the role of science in studying natural disasters and will describe the mechanisms responsible for these phenomena. Nightly readings will expand upon, and galvanize students' newfound knowledge using a range of case studies. Natural Disasters and Catastrophes traces the transition of our understanding of disasters from religious and superstitious explanations to contemporary scientific accounts.

Course Objectives
1. To learn about tectonic and atmospheric processes, and how they shape Earth
2. To gain experience working with data sets and quantitative analysis of Earth processes
3. The student will demonstrate knowledge, skill and competency, in atmospheric, tectonic, and surficial processes as demonstrated by analytical analysis and case study readings.
4. The student will demonstrate ethical competency pertaining to relief and rebuilding efforts, as demonstrated by several case studies through time and across the globe.

Grading
Grading is based on five exams, each worth 15 % of your grade. The labs are worth 25% of your grade. There will be an optional, cumulative final examination. If you elect to take this exam, the exam will each count for 10%, labs 25%, and the final exam will be worth 25%. There is no late make-up of quizzes or labs without documentation of an emergency, medical or otherwise. PLEASE NOTE: The cumulative grade you see on Canvas is not your actual grade, as it weights all of the assignments equally.

The undergraduate grading system consists of twelve categories: A (4.00), A- (3.67), excellent; B+ (3.33), B (3.00), B- (2.67), good; C+ (2.33), C (2.00), C- (1.67), satisfactory; D+ (1.33), D (1.00), D- (.67), passing but unsatisfactory; F (.00), failure; I (.00), incomplete; F (.00), course dropped without notifying office; W (.00),
official withdrawal from course. The graduate grading system is A (4.00), A- (3.67), Excellent; B+ (3.33), B (3.00), good; B- (2.67), C (2.00), passing but not for degree credit; F (.00), failure.

Grade Reports. All students are required to log into the web through Agora to access their semester grades. Students must utilize their BC username and password to log on. If your username or password is not known the HELP Desk located in the Campus Technology Resource Center (CTRC) in O’Neill Library will issue a new one. The CTRC requires a valid picture ID (a BC ID, driver’s license or passport) to obtain your password.

Text(s)/Readings (Required)
Natural Disasters in a Global Environment, Penna/Rivers Wiley-Blackwell

Important Policies
http://www.bc.edu/content/bc/schools/adystudies/guide/academicinteg.html

Written Work
Graduate and undergraduate students are expected to prepare professional, polished written work. Written materials must be typed in the format required by your instructor. Strive for a thorough, yet concise style. Cite literature appropriately, using APA, MLA, CLA format per instructors decision. Develop your thoughts fully, clearly, logically and specifically. Proofread all materials to ensure the use of proper grammar, punctuation, and spelling. You are encouraged to make use of campus resources for refining writing skills as needed [http://www.bc.edu/libraries/help/tutoring.html].

Scholarship and Academic Integrity
It is expected that students will produce original work and cite references appropriately. Failure to reference properly is plagiarism. Scholastic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on examinations or assignments, and submitting the same paper or substantially similar papers to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student’s work.

Request for Accommodations
If you have a disability and will be requesting accommodations for this course, please register with either Dr. Kathy Duggan (dugganka@bc.edu), Associate Director, Connors Family Learning Center (learning disabilities or AHD) or Dean Paulette Durrett, (paulette.durrett@bc.edu), Assistant Dean for students with disabilities, (all other disabilities). Advance notice and appropriate documentation are required for accommodations. For further information, you can locate the disability resources on the web at http://www.bc.edu/content/bc/libraries/help/tutoring/specialservices.html.

Attendance
Class attendance is an important component of learning. Students are expected to attend all classes and to arrive by the beginning of and remain for the entire class period. When an occasion occurs that prevents a student from attending class, it is the student’s obligation to inform the instructor of the conflict before the class meets. The student is still expected to meet all assignment deadlines. If a student knows that he or she will be absent on a particular day, the student is responsible for seeing the instructor beforehand to obtain the assignments for that day. If a student misses a class, he or she is responsible for making up the work by obtaining a classmate's notes and handouts and turning in any assignments due. Furthermore, many instructors give points for participation in class. If you miss class, you cannot make up participation points associated with that class. Types of absences that are not typically excused include weddings, showers, vacations, birthday parties, graduations, etc. Additional assignments, penalties and correctives are at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class. In all cases, students are expected to accept the decision of the
instructor regarding attendance policies specific to the class.

Consistent with our commitment of creating an academic community that is respectful of and welcoming to persons of differing backgrounds, we believe that every reasonable effort should be made to allow members of the university community to observe their religious holidays without jeopardizing the fulfillment of their academic obligations. It is the responsibility of students to review course syllabi as soon as they are distributed and to consult the faculty member promptly regarding any possible conflicts with observed religious holidays. If asked, the student should provide accurate information about the obligations entailed in the observance of that particular holiday. However, it is the responsibility of the student to complete any and all class requirements for days that are missed due to conflicts due to religious holidays.

There may be circumstances that necessitate a departure from this policy. Feel free to contact the WCAS at 617-552-3900 for consultation.

**Deadlines**

Assignments are due at the beginning of the class period on the specified dates. Late assignments will not be accepted without appropriate medical or other documentation.

**Attendance and Participation:** Attendance is mandatory at all classes. When you are absent for any reason, you are responsible for finding out what happened during class and for turning in the work required for that day.

**Academic Honesty**

Plagiarism (or Academic Dishonesty) is any attempt by a student to represent the work of another as his or her own. This includes copying the answers of another student on an examination or copying or substantially restating the work of another person in an oral or written work without citing the appropriate source. Please familiarize yourself with BC’s academic honesty policy.

**Class Structure:** We will be together for over three hours at a stretch, twice a week. To break this time up, and so you’re not being lecturing to for the whole time, we will (APPROXIMATLEY) follow the following plan:

6:15 – 8:15: lecture
8:15 – 8:30 break
8:30 – 9:15 lab, in-class group activity, or film with time for group response and reflection

**Course Outline:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic:</th>
<th>Reading/Homework:</th>
<th>Due</th>
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<tbody>
<tr>
<td>9/10</td>
<td><strong>Volcanoes and Supervolcanoes</strong> (Mt. Toba Eruption (73,000 BP), Thera (Santorini) Eruption in the Aegean Sea (1600 BCE), Mt. Tambora (1815) and Krakatau (1883), The Mt. Pinatubo Eruption (1991), A Threatening Future Scenario)</td>
<td>Chapter 1 Volcanoes Lab</td>
<td>9/17</td>
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<tr>
<td>Date</td>
<td>Quiz</td>
<td>Film 1</td>
<td>Film 2</td>
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<tr>
<td>9/17</td>
<td>Quiz 1</td>
<td>Film: Earth’s Story - Journey to the Center of Earth (<a href="https://www.youtube.com/watch?v=bg0tsqQFtXY">https://www.youtube.com/watch?v=bg0tsqQFtXY</a>)</td>
<td>Film: Supervolcano (<a href="http://topdocumentaryfilms.com/supervolcano/">http://topdocumentaryfilms.com/supervolcano/</a>)</td>
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<td>9/24</td>
<td>Earthquakes (San Francisco Earthquake (1906), Great Kanto Earthquake (1923), Haitian Earthquake (2010)) and Tsunamis (Lisbon, Portugal: The Quadruple Disaster (1755), Lituya Bay Mega-Tsunami (1958), Sumatra–Andaman Earthquake (2004), The Tōhoku (Japan) Tsunami (2011))</td>
<td></td>
<td>Chapters 2 and 3 Earthquake Triangulation Lab</td>
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<tr>
<td>10/1</td>
<td>Hurricanes, Cyclones, and Typhoons (The Labor Day Hurricane in the Florida Keys (1935), The Bhola Cyclone (1970), Super-Typhoon Nina (1975))</td>
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<td>Chapter 8 Weather Lab</td>
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<td>10/8</td>
<td>Quiz 2</td>
<td>Film: Frontline: The Quake (Haiti) (<a href="http://www.pbs.org/wgbh/pages/frontline/haiti/view/">http://www.pbs.org/wgbh/pages/frontline/haiti/view/</a>)</td>
<td>Film: Japan Tsunami - How it Happened (<a href="https://www.youtube.com/watch?v=alJo5m1y0uM">https://www.youtube.com/watch?v=alJo5m1y0uM</a>)</td>
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<td>10/15</td>
<td>Floods (Central China Floods (1931), The Dutch Flood Disaster (1953), The Bangladesh Floods (1997–98))</td>
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<td>Chapter 5</td>
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<td>10/29</td>
<td>QUIZ 3</td>
<td>Killer Landslide Film (<a href="https://www.youtube.com/watch?v=VJ_ykqJuGI0">https://www.youtube.com/watch?v=VJ_ykqJuGI0</a>)</td>
<td>Mystery of the Mega Flood (<a href="https://www.youtube.com/watch?v=5aALx19USeg">https://www.youtube.com/watch?v=5aALx19USeg</a>)</td>
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<td>11/5</td>
<td>Fire (The Burning of Rome (68 CE), The Great Fire of London (1666), The Chicago and Peshtigo Fires (1871)) and Pandemic Diseases (The Bubonic Plague (1347–51 and After), The Great Influenza Pandemic (1918–20), HIV/AIDS (1985–))</td>
<td></td>
<td>Chapter 4 Chapter 7 Pandemics Lab</td>
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11/12 **Famines and Droughts** (The Irish Potato Famine (1845–51), The “Dust Bowl” Drought in the American West (1930–40), The Great Leap Forward Chinese Famine (1958–61))

and

**Meteorite Impacts** (The Creation of Earth’s Moon and the Origins of Meteorites, The Yucatán Chicxulub Crater, Mexico (65 MYA), The Clovis Extinction (12,500–12,900 BP), The Tunguska (Siberia) Event (1908), Investigating Future Impacts)

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<tr>
<th>11/19</th>
<th><strong>QUIZ 4</strong></th>
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|       | **Asteroid – The Doomsday Rock**  
https://www.youtube.com/watch?v=Pu1t1Fevajk |
|       | **Famine to Freedom –The Great Irish Journey**  
https://www.youtube.com/watch?v=6jIVOgvZ6Ig |

| 12/3  | **Climate Change and Atmospheric Disasters** (atmospheric processes, climate change, ozone thinning, regulatory processes and guidelines) |

| 12/10 | **Population Increase** and combination with other disasters and Climate Change/Population Lab |

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<th>12/17</th>
<th><strong>QUIZ 5</strong></th>
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|       | **Earth Under Water – Climate Change**  
https://www.youtube.com/watch?v=AGAvG13gEpI |
|       | **World in the Balance: The People Paradox**  
https://www.youtube.com/watch?v=gubSO_U8MW0 |
|       | **World in the Balance: China Revs Up**  
https://www.youtube.com/watch?v=m7ZdedsyYII |