
CPSG100 Science & Global Change

First Year Colloquium I:

“Awful Changes”: The Reality of Environmental Crises & the Nature of Science

Fall 2021

Instructors

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Classroom

CCC 1205 Tu 3:30-4:50 pm Eastern

Course Organization

One Colloquium meeting per week, some asynchronous recorded lectures on assorted weeks, one Service Day (required), one Metro Scavenger Hunt (required), one Excursion (required)

Texts

- Kida, Thomas. 2006. *Don't Believe Everything You Think: The 6 Basic Mistakes We Make in Thinking*. Prometheus Books. ISBN-13 978-159102408-8
- Kolbert, Elizabeth. 2014. *The Sixth Extinction: An Unnatural History*. Picador. ISBN-13 978-1-250-06218-5
- Sagan, Carl. 1995. *The Demon-Haunted World: Science as a Candle in the Dark*. Random House. ISBN-13 978-0345409461

Additional online required readings and videos are indicated on and available via ELMS. Reading/viewing assignments must be done by the class time listed.

Course Grades

Grade Scale

The numbers given represent the thresholds that must be passed in order to reach that grade (for example, A+ is 97.000... and any number greater). There is no rounding for letter grades; the thresholds must be passed. F is any grade below D-. Thresholds: 97, A+; 93, A; 90, A-; 87, B+; 83, B; 80, B-; 77, C+; 73, C; 70, C-; 67, D+; 63, D; 60, D-; < 60, F.

The Final Grade is the algebraic sum based on the numerical grades.

Some assignments are given either full points (for completion of the assigned project) or none (for non-completion or disruptive activity). Each general quiz is graded on an 8 point scale; the final quiz is on a 20 point scale.

Grade Components

<i>ITEM</i>	<i>PERCENTAGE</i>
<i>Pre-Course Knowledge Survey</i>	5%
<i>Service Day</i>	5%
<i>Metro Scavenger Hunt</i>	5%
<i>Student-Generated Questions</i>	5%
<i>General Quizzes</i>	10%
<i>Discussion Participation</i>	25%
<i>Academic Portfolio</i>	20%
<i>“Anatomy of a Scientific Paper” Takehome</i>	5%
<i>Excursion Report</i>	10%
<i>Final Quiz</i>	5%
<i>“Expectations vs. Reality” Reflection Essay</i>	5%

Pre-Course Knowledge Survey (5%): In order to assess the effectiveness of the Science & Global Change program in teaching concepts related to our key themes, we survey the incoming cohort to see their pre-existing knowledge about climate change issues. This will be done online on ELMS during the first week of classes. Our goal is to see what you already know; thus, there is every expectation you will score poorly on it. DO NOT PANIC! Your grade for this is based on participation, not on your answers.

Service Day (5%): All Scholars freshmen are expected to participate in Service Day (**August 27**). If you missed Service Day (and were not in a pre-approved excused alternative), you **MUST** see the instructors and work out some arrangements for a make-up task or you will receive a 0 for this portion of your grade.

Metro Scavenger Hunt (5%): This project is to help orient students to the Washington, D.C. area and the Metro System, as well as help you get to know other people in the class. You will be given randomly generated groups (see on ELMS) and a list of items to find and document on the first day of colloquium. You must upload your photos and post your answers on ELMS by class time on **September 21**. The planned date for the Metro Scavenger Hunt this year is **September 12** (Sunday).

Student-Generated Questions (5% total): Every week we will ask you to provide a question, its answer (and in the case of a matching or multiple-choice question, additional incorrect options) from the lecture presented the previous week. Creating your own question is an effective way of better understanding the material. These questions will be made available to all. A selection of these will form part of the discussion in Colloquium and may be used in quizzes.

General Quizzes (10% total): Six quizzes are given throughout the semester. The lowest quiz grade is automatically dropped. Quizzes are open sourced but timed and will be delivered on ELMS.

Discussion Participation (25%): As this is a Scholars Colloquium, all students are expected to attend every Colloquium and be an active participant when appropriate. In some classes, there may be directed interactive activities or discussions. A default grade of 5 will be given for every meeting a student attends. They may be awarded up to 2 more points as extra credit for particularly helpful or effective participation in the meeting. Students who are present for a discussion section but are non-participants or are disruptive may be docked up to 2 and 4 points (respectively) at the instructor's discretion.

While the expectation is that students attend **EVERY** Colloquium meeting, it is recognized that occasionally conditions (accident, illness, power failure, etc.) arise that prevent such. To recognize that, every student is allowed **two** (2) absences from these meetings without penalty, so long as they inform the instructors and TAs by email (beforehand if at all possible), or certainly by the end of that same day that they will be/were absent and the reason for that absence. Should you not inform instructors and TAs in a timely fashion, the students will receive a 0 for the grade for the discussion/participation for that day. Additionally, if there are more than two absences the student will receive a 0 for the grade each additional class time missed. (If there is a medical condition or other extraordinary circumstance that does require missing **more than 2 class meetings**—or missing the date of an individual in-class presentation of some form—the student must provide documentation from the appropriate sort of official (health professional; court official; etc.) explaining the absence.)

Academic Portfolio (20%): Over the semester we will have short lectures teaching the basics of HTML coding and website design. You will be responsible for creating a website to be mounted to a terpconnect.umd.edu server; successful completion of this project will be worth 20% of the total course grade. For this project, you will be a member of a small Peer-Review trouble-shooting group. You will be expected to maintain your website throughout your four semesters in SGC, and you will be adding new webpages to it over time. An html template for the Professional Academic Portfolio is downloadable from the SGC website at <https://www.geol.umd.edu/sgc/resources/website.html>. The assignment itself can be found at <https://www.geol.umd.edu/sgc/docs/webassign.pdf>, and a guide to more detailed HTML commands can be found at <https://www.geol.umd.edu/sgc/resources/htmlguide.html>.

This portfolio has several subcomponents:

- a) **Phase 1** (3%): Uploading an image (ideally, one of you) to be used on the portfolio to your web space. Due online **October 5**
- b) **Phase 2** (10%): Basic html version of the portfolio uploaded. Due online **October 29**
- c) **Phase 3** (3%): CSS-enhanced final version of the portfolio upload. Due online **November 9**
- d) **Phase 4** (4%): Assessment and trouble-shooting suggestions for members of your peer-review group. Due **November 19**

“Anatomy of a Scientific Paper” Takehome (5%): Due on **October 15**, each student will find an example of a recently-published scientific technical paper and “dissect” it, identifying its various subcomponents. Details about this assignment provided later in the semester.

Excursion Report (10%): Each student is responsible for attending and reporting on **one** (1) of several options of extracurricular events. These reports are due as file uploads on ELMS online. The question sheet relevant to specific field trips will be provided in advanced; there are service project forms, as well as an even more generic report form: all will be made available on ELMS. Here are some options of types (and examples) of excursions available this semester; more will be announced in class and on ELMS as the semester progresses:

- A. **SGC FIELD TRIPS**: The SGC faculty will lead a series of field trips during the semester. More details to come.

- B. VIRTUAL EXCURSIONS:** For those who prefer an online rather than in-person activity, a variety of virtual excursion options are provided: see details on ELMS.
- C. SERVICE PROJECT:** There are various opportunities for service on or near the College Park campus throughout the year. Participation in one of these will count as an excursion, with the submission of the report form. Dates and opportunities will be announced during the semester. Those who do organized service for SGC or Scholars (Scholars Advisory Board; Scholars Ambassadors; etc.) may use this for their Excursion Report.
- D. ADDITIONAL OPTIONS:** Other possibilities include: Scholars-wide presentations (or some specific events opened to members of other Scholars programs); presentations (other than class lectures) on-campus or off-campus concerning science, critical thinking, the environment, or related issues; open houses of labs or other facilities; and more. When the faculty become aware of them, we will advertise the time and place of these. However, we encourage you to discover options yourself: if you find a possibility, please send Holtz & Merck the particulars for their approval.

Final Quiz (5%): A longer quiz, due online by **Dec. 10**. This will cover all the material of the semester.

“Expectations vs. Reality” Reflection Essay (5%): Due on the last day of classes (**Dec. 13**), this is a brief reflection essay comparing your expectations about what University life and the Science & Global Change program in particular prior to arriving here with your experience at the end of your first semester.

Late Items: Graded items must be uploaded/posted by the date listed. If there are important extenuating circumstances, discuss this with the faculty & TA as early as possible so that we can make allowances, if we deem it appropriate.

IMPORTANTLY: Any item not turned in by the end of final exam period will be graded as "0", unless special arrangements are made in advance of this date between the student and both faculty. “I forgot to turn it in” or “I was busy with other courses” do not represent “special arrangements”; you must be responsible for your own grade and graded items.

Course Overview

Course Themes

- Science is the application of critical thinking and observation to understand the natural world
- In both the geological and historical past, periods of rapid environmental change have resulted in crises and catastrophes

Learning Outcomes

- Accurately employ understanding of logical fallacies and critical thinking skills in evaluating truth claims.
- Effectively distinguish between scientific and non-scientific approaches to the understanding of the natural world.
- Identify how environmental changes of the past affected the inhabitants of the planet.
- Write webpages using html and css code, upload them to a University server, and maintain their personal portfolio.

EXPECTATIONS & POLICIES

Expectations & Attendance

Attendance in the Colloquium meetings is required. The Scholars Colloquia require you to do more than simply master the information; you must be able to intelligently communicate and discuss the ideas and concepts of the course with your instructor and fellow students.

You should bring the following to every single colloquium meeting:

- A writing implement
- A notebook (hardcopy or computer)
- A willingness to participate constructively, both in small groups and in the class as a whole
- A readiness and ability to discuss the readings and/or recorded lectures for that week

During class time:

- **PLEASE** be courteous to your fellow students and your faculty, and do not engage in side conversations. Even what you might think are hushed whispers in the back row can be heard all the way up front and are disruptive to the attention of your classmates who are interested in getting a good grade in the class.
- All electronic modes of communication must be turned “off” or be in silent mode & stowed away, except when being used for class activities.
- No personal listening devices will be allowed.
- No reading of material not germane to the class activity during class time will be allowed.
- No working on materials for other classes, reading newspapers, doing crosswords or other games, etc., will be allowed.
- This semester we will have a number of small-group in-class projects. We expect everyone to help move tables and chairs when necessary for a particular project, and to help restore the tables and chairs to the “neutral” position when we are done. Many hands make light work!
- Finally, please do not leave any debris behind: pick up all food/beverage containers, papers, newspapers, etc. near your seat and on your desk when you leave and dispose of them properly

Given the nature of the course and program, participation in colloquium meetings is **MANDATORY**. It is up to you to make certain that your presence has been recorded for every class.

Mask Policy: President Pines provided clear expectations to the University about the *wearing of masks for unvaccinated students*. *Face coverings over the nose and mouth are required while you are indoors at all times. There are no exceptions.* Students not wearing a mask will be given a warning and asked to wear one, or will be asked to leave the classroom immediately. Students who have additional issues with the mask expectation after a first warning will be referred to the Office of Student Conduct for failure to comply with a directive of University officials.

Recording Your Presence: In general, your presence will be recorded based on your picking up of your name stand. It is *your* responsibility to make certain that you have signed the quiz, project report, or picked up your name stand.

Students observed leaving the colloquium before 4:50 or before it is formally dismissed will be counted absent; please consult with the TAs and the faculty if you need to leave in advance of 4:50 for excused reasons.

NOTE: We expect students to adhere to proper academic decorum during colloquia. This means focusing your attention on presentations, refraining from conversations or activities that are not relevant (e.g., reading newspapers, doing homework for other classes, etc.), and showing proper respect for student, faculty, and guest presenters. *We reserve the right to count you absent from colloquium if you fail to uphold this standard!*

Excused Absences: If you have a legitimate reason for being absent, such as a family emergency, unavoidable academic conflict, or other excuse according to the University's guidelines, we will usually excuse your absence. However, you must notify us in a timely fashion. Requests for the excusing of an absence **will not be considered** after two workdays from the absence: please contact us by email! Please use the Excused Absence Report form from <https://www.geol.umd.edu/sgc/docs/absence.pdf>

If the absence was for a colloquium for which there was no graded activity other than participation (i.e., no quiz, etc.) **AND** for which this was your first or second absence from colloquium this semester, you may simply complete the Excused Absence form and turn it in. If instead there were a graded activity, **AND/OR** this was not your first or second absence from colloquium this semester, you will need to provide some form of documentation from an independent source supporting your absence. These include, but are not limited to:

- A doctor's note, official notice of court activity, etc.: please attach a copy to your Excused Absence form

Barring the above, a signed statement by an independent party (for example, your RA if you were ill and the RA is willing to verify that they observed this: feel free to use the back of the Excused Absence form for this)

NOTE WELL: Failure to provide the Excused Absence Form will result in the absence being unexcused, and you will face the appropriate penalties.

NOTE: the next colloquium meeting is **too late** for requests for excuses.

Grades and Excused Absences: Even if you miss a class from an excused absence, you are still held responsible for material during that class, included graded assignments such as small group projects. See the faculty about arrangements for a make-up. If the small group project is such that it cannot be done alone, it will not be factored into your grade **if** you have an excused absence that you informed the faculty about within two workdays from the absence.

Unexcused Absences: All other absences are considered unexcused absence. You may have two unexcused absences that do not directly affect your grade (except for missed small group projects: see below). Each subsequent unexcused absence lowers your **final course grade** by 10 percentage points.

If you miss a small group project because of an **unexcused** absence, you will **not** be allowed to make it up.

Missing Field Trips: If you are signed up for a field trip but are unable to make it, please email Drs. Holtz & Merck as soon as possible (before the trip, if at all possible). If it is a field trip is one that SGC has to pay for (i.e., the program pays for tickets or transportation) and you miss it without informing us in advance, this will count as an unexcused absence.

General Policies

The University has provided a page on Academic policies at <http://www.ugst.umd.edu/courserelatedpolicies.html>. Each student is responsible for reviewing this page with regards to issues of Academic Integrity; the Code of Student Conduct; Sexual Misconduct; Discrimination; Accessibility; Attendance, Absences, or Missed Assignments; Student Rights Regarding Undergraduate Courses; Official UMD Communication; Mid-Term Grades; Complaints About Course Final Grades; Copyright and Intellectual Property; Final Exams and Course Evaluations; and Campus Resources.

Laptop/Smartphone/Tablet Use

You will need to upload documents to ELMS and to your terpconnect.umd.edu webspace, take online quizzes, and occasionally watch online lectures this semester, so please make certain that you have access to appropriate hardware, software, and Internet connections. If you are concerned about your ability

to connect remotely for this course, please consult the following information about solutions provided by the Division of Information Technology:

- General Technology Information, including laptop loaner requests: <https://it.umd.edu/tech-resources>
- Network Resources: <https://it.umd.edu/tech-resources#network>

During the Colloquium, please refrain from email, social media, online shopping, streaming videos, and other such communication outside the scope of the colloquium. In other words, please restrict your computer use to the activities of the class.

Communication

Communication in this course will primarily be by means of the ELMS Inbox email system. In the event of unusual inclement weather or other unexpected emergencies, the University may close. Please consult the University main webpage (<http://www.umd.edu>) or call 301-405-7669 (SNOW) to confirm such cancellations. Drs Holtz & Merck will contact students via ELMS in order to inform them what changes to the schedule will occur due to the disruption.

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Schedule of Colloquia and Events

<i>Date</i>	<i>Topic</i>
<i>Move-In Week</i>	Students living on campus, please plan to move in on or before 8/26 8/26 Scholars Under the Lights (7-8 pm, Xfinity fields) 8/27 Service Day
<i>Week of Aug.</i> <i>30</i>	8/31 Colloquium: Introductions; Logistics of Class; Practical Advice for Being an Effective University Student 9/2 Convocation (7 pm, The Clarice) 9/3 Scholas Block Party 2-4 pm, Cambridge Community Quad; also, Pre-Course Knowledge Survey due
<i>Week of Sept.</i> <i>6</i>	9/7 Colloquium: What is Global Change, and Why Should I Care? 9/7 Reading: Kida Introduction & Chaps. 1-3 9/12 (Sun.) Metro Scavenger Hunt
<i>Week of Sept.</i> <i>13</i>	9/14 Colloquium: What is Science? 9/14 Reading: Kida Chaps. 4-6; Sagan Preface & Chap. 1 9/17 Quiz 1 due 9/19 EXCURSION: Fossil hunting at Bayfront Park, Chesapeake Beach, MD
<i>Week of Sept.</i> <i>20</i>	9/21 Colloquium: The Scientific Method 101: Observations & Hypotheses 9/21 Reading: Kida Chaps. 7-9 9/21 Metro Scavenger Hunt submissions due Online Lecture: Overview of Portfolio & Uploading a File

Week of Sept. 27	<p>9/28 Colloquium: Falsifiability & Hypotheses In-Class; Opportunities on Campus Student Panel</p> <p>Reading: Kida Chaps. 10-12, Epilogue</p> <p>10/1 Quiz 2 due</p> <p>10/2 EXCURSION: Smithsonian Environmental Research Center, Edgewater, MD</p>
Week of Oct. 4	<p>10/5 Colloquium: Scientific Method 201: “Just a Theory”</p> <p>10/5 Reading: Sagan Chaps. 1-4</p> <p>10/5 Uploaded image due</p> <p>Online Lecture: Anatomy of a Scientific Paper</p> <p>Online Lecture: Effectiveness & Honesty</p>
Week of Oct. 11	<p>10/12 Colloquium: Anatomy of a Scientific Paper in-class; The Honor Code, Academic Honesty & You in-class</p> <p>10/12 Reading: Sagan Chaps. 5-8</p> <p>Online Lecture: Argumentation & Logical Fallacies</p> <p>Online Lecture: HTML and Website Design</p> <p>10/15 Anatomy of a Scientific Paper Takehome due</p>
Week of Oct. 18	<p>10/19 Colloquium: Identifying Logical Fallacies in-class; HTML review in-class</p> <p>10/19 Reading: Sagan Chaps. 9-12</p> <p>Online Lecture: Sagan’s Toolbox</p> <p>10/22 Quiz 3 due</p> <p>10/23 EXCURSION: Chesapeake Bay Foundation Headquarters, Annapolis, MD</p>
Week of Oct. 25	<p>10/26 Colloquium: Using Sagan’s Toolbox in-class; HTML troubleshooting in-class</p> <p>10/26 Reading: Sagan Chaps. 13-16</p> <p>Online Lecture: Modern Plesiosaurs, Ancient Astronauts, and Hollow-Earth Antarctic Space Nazis: The Lure and Lore of Pseudoscience</p> <p>Online Lecture: Cascading Style Sheets (CSS)</p> <p>10/29 Base HTML Portfolio due</p>
Week of Nov. 1	<p>11/2 Colloquium: Pseudoscience Today in-class; CSS troubleshooting in-class</p> <p>11/2 Reading: Kolbert Prologue & Chaps. I-III</p> <p>11/5 Quiz 4 due</p>
Week of Nov. 8	<p>11/9 Colloquium: Reading the Rocks: Earth and Life Through Time</p> <p>11/9 Reading: Kolbert Chaps. IV-VII</p> <p>11/9 CSS-modified portfolio due</p> <p>11/13 EXCURSION: American Museum of Natural History, New York, NY</p>
Week of Nov. 15	<p>11/16 Colloquium: Environments of the Past: Every Rock is a Record of the Environment in Which It Formed; Portfolio Peer-Review Assessments in-class</p> <p>11/16 Reading: Kolbert Chaps. VIII-X</p> <p>11/19 Peer-Review Group Assessment of Portfolio due</p> <p>11/19 Quiz 5 due</p>
Week of Nov. 22	<p>11/23 Colloquium: Awful Changes: The Fossil Record of Environmental Crises</p> <p>11/23 Reading: Kolbert Chaps. XI-XIII</p> <p>11/24-26 THANKSGIVING BREAK</p>
Week of Nov. 29	<p>11/30 Colloquium: The Sixth Extinction: Reflections and Discussions in-class</p> <p>Online Lecture: Climates and Culture</p>

	12/3 Quiz 6 due
<i>Week of Dec. 6</i>	12/7 Colloquium: Human History and Climate Change in-class; Semester Wrap-Up 12/10 Final Quiz due
<i>Week of Dec. 13</i>	12/13 “Expectations vs. Reality” Reflection Essay due 12/13 Excursion Report due