
CPSG200 Science & Global Change

Second Year Colloquium:

The Search for Solutions:

Resiliency in the Decade of Consequences

Fall 2021

Instructors

	<u>Dr. Thomas R. Holtz, Jr.</u>	<u>Dr. John W. Merck, Jr.</u>
Office:	Centreville 1216	Geology 1119
Office Hours:	Tues 10-12 or by appointment	Th 12-2 pm or by appointment
Email:	ELMS (preferred) or tholtz@umd.edu	ELMS or jmerck@umd.edu
Phone:	301-405-4084	301-405-2808

Undergraduate Teaching Assistants

	<u>Brittan Farley</u>	<u>Andrea Johnson</u>
Email:	ELMS or bfarley3@terpmail.umd.edu	ELMS or johnson118alj@gmail.com
Office Hours:	Centreville 1215 M 2-3 pm	Centreville 1214 W 12-1 pm
	<u>Tessa Quade</u>	
Email:	ELMS or tquade@terpmail.umd.edu	
Office Hours:	Centreville 1215 Th 2-3 pm	

Classroom

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

Course Organization

One Colloquium meeting per week, some asynchronous recorded lectures on assorted weeks, one Excursion (required).

Texts

Hawken, Paul (ed). 2017. *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. Penguin. ISBN-13 978-0-143130444

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.

Practicum Proposal and Learning Contract are given either full points (for completion of the assigned project) or none (for non-completion). 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>General Quizzes</i>	5%
<i>Final Quiz</i>	5%
<i>Student-Generated Questions</i>	5%
<i>Discussion Participation</i>	25%
<i>Excursion Report</i>	5%
<i>Science & the Media Report</i>	5%
<i>“Search for Solutions” (S4S) Team Presentations</i>	30%
<i>Practicum Proposal</i>	5%
<i>Learning Contract</i>	5%
<i>Portfolio Maintenance</i>	5%
<i>SGC 3-Semester Review Essay</i>	5%

General Quizzes (5% total): Five 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.

Final Quiz (5%): A longer quiz, also delivered on ELMS. This will cover material from all three SGC colloquium semesters. Due online by **Dec. 13**.

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.

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.)

Excursion Report (5%): 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.

NOTE: You may not use the same specific Excursion this semester which you used in either of the previous two semesters.

Science & the Media Report (5%): The take home project this semester deals with a comparison of the news report about a specific scientific study with the technical paper of that study. This project is due **October 1**. The assignment will be submitted electronically via ELMS.

“Search for Solutions” (S4S) Team Project (30% total): The capstone of your time in the Scholars Colloquium is the “Search for Solutions” (S4S) Team Project. During the middle part of the semester, each team of 3 students will report on some issue related to global change. The final deliverable product will be a platform presentation in class. This project has several different subcomponents:

- a) **Team Formation & Topic Choice** (2%): Due **Sept. 24**.
- b) **Contract** (1%): Due **Sept. 24**, a contract among all team members stating the agreed-upon responsibilities of each person.

- c) **Presentation: Faculty Evaluation** (20%): A draft of your PowerPoint/Keynote must be uploaded on ELMS on **Oct. 15** for comments and evaluation by the faculty. Your team will present in class sometime on the colloquia on **Oct. 25, Nov. 1, or Nov. 8** (depending on the topic).
- d) **Presentations: Student Evaluations** (3%): Each student will watch the presentations they are not part of and provide evaluations of these online. These evaluations must be completed and uploaded onto ELMS. The averaged score of these will be entered as the Student Evaluation for the presentation grade
- e) **Participation in Student Evaluations** (2%): The fact of your own participation as an evaluator is part of your grade; failure to turn in evaluations of the presentations will result in a 0 for this part of the grade.
- f) **Within-Team Peer Evaluation** (2%): You will evaluate other team members, and be evaluated by them, in terms of your contributions to the project. Due on ELMS on **Nov. 12**.

Details on the specifics of these reports and their grading scheme will be provided later in the semester.

Practicum Proposal (5%): All SGC students must participate in a practicum in order to complete their Citation. While the work for the practicum will be done after this semester, we use this semester to help you organize your projects. By **November 15** you will have to turn in a proposal for your practicum work, giving a preliminary view of a) where you will be doing your work; b) what that work will likely entail; and c) what you expect to get out of this project. Students who intend to use one of the pre-approved courses rather than developing their own project must send a proposal stating which course they intend to take. Failure to provide a proposal will not only mean loss of 5% of your grade, but it will also prevent you from receiving any credit from the practicum!!

Learning Contract (5%): The second practicum-related portion of your grade this semester is the Learning Contract. This is a formal agreement between you, your site supervisor, and our office, making clear the tasks and hours for which you will be responsible and the credit level to which your practicum course will be given. (Students using one of the pre-approved courses to fulfill the course component of their Practicum must instead provide a screen capture demonstrating their registration in that class.) The Learning Contract is due on the last colloquium day of the semester (**December 13**). Failure to provide a proposal will not only mean loss of 5% of your grade, but it will also prevent you from receiving any credit from the practicum!! You can download the Learning Contract from <http://www.geol.umd.edu/pages/sgc/docs/learncontract.pdf>

SGC 3-Semester Review Essay (5%): Also due on **December 13**, you will write and post a short essay detailing your experiences with the Science & Global Change Program so far. This will be mounted as a unique webpage linked to your SGC site. Specifics about the review will be given later, but your target audience will be prospective incoming students. A template is available at <http://www.geol.umd.edu/sgc/resources/threesemester.html>.

Portfolio Maintenance (5%): Be certain that your Academic Portfolio is updated (i.e., your current class status, major, age, contact information, etc.); that all links are operational; that all text is properly spelled; that all images and code are used legally; that all pages use the same css code; etc.

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

- Many approaches have been proposed to reduce the effects of global change or to help make society more resilient
- Science has many roles in society; an informed citizen needs to understand the interactions between Science, the media, government, culture, and the populace in general

Learning Outcomes

- Assess the scientific validity of proposed methods of mediating or adapting to current and future climate change.
- Evaluate the degree to which media portrayal of STEM issues accurately reflect the discoveries of those fields
- Present information about scientific and related issues by means of poster presentations and websites

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 (containing this syllabus)
- 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 does 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>
Week of Aug. 30	8/30 Colloquium: Welcome Back; Logistics of Class; Resiliency in the Age of Consequences 9/3 Scholas Block Party 2-4 pm, Cambridge Community Quad
Week of Sept. 6	9/6 Colloquium: None – LABOR DAY
Week of Sept. 13	9/13 Colloquium: Agents of Change & Geoengineering; Overview of Practicum Options; Review of Team Project 9/13 Reading: <i>Drawdown</i> pp. ix-xv 9/19 EXCURSION: <i>Fossil hunting at Bayfront Park, Chesapeake Beach, MD</i>
Week of Sept. 20	9/20 Colloquium: Future Shock: The Unexpected Impacts of Technology 9/20 Reading: <i>Drawdown</i> “Energy”, “Transport”; Sagan Chap. 22 Online Lecture: Communicating Science: Science & the News Media 9/24 Quiz 1 due 9/24 S4S Team Project Team List/Topic Choice & Team Project Contract due
Week of Sept. 27	9/27 Colloquium: Science Communication in-class 9/27 Reading: Sagan Chaps. 17-19 10/1 Science & the Media Report due 10/2 EXCURSION: <i>Smithsonian Environmental Research Center, Edgewater, MD</i>
Week of Oct. 4	10/4 Colloquium: Science on the Fringes 10/4 Reading: <i>Drawdown</i> “Coming Attractions” Online Lecture: An Examination of Climate Change Deniers and Other “Science Skeptics” 10/8 Quiz 2 due
Week of Oct. 11	10/11 Colloquium: Denialism in-class 10/11 Reading: <i>Drawdown</i> “Buildings and Cities”, “Land Use”, “Materials” Online Lecture: The Culture of Science: Who Does Science? 10/15 “Search for Solutions” draft presentations due
Week of Oct. 18	10/18 Colloquium: Who Pays for Science? In-class 10/18 Reading: <i>Drawdown</i> “Food” Online Lecture: Natural History Matters: Common Misunderstandings within the Environmental Community 10/23 EXCURSION: <i>Chesapeake Bay Foundation Headquarters, Annapolis, MD</i>
Week of Oct. 25	10/25 Colloquium: “Search for Solutions” Presentations I 10/25 Reading: <i>Drawdown</i> “Women and Girls” 10/29 Quiz 3 due
Week of Nov. 1	11/1 Colloquium: “Search for Solutions” Presentations II
Week of Nov. 8	11/8 Colloquium: “Search for Solutions” Presentations III 11/12 S4S Peer Evaluations & Within-Team Evaluations due 11/13 EXCURSION: <i>American Museum of Natural History, New York, NY</i>

Week of Nov. 15	11/15 Colloquium: Energy & Environment Policy Choices in-class 11/15 Practicum Proposal due 11/19 Quiz 4 due
Week of Nov. 22	11/22 Colloquium: Energy & Environment Policy Simulation in-class 11/24-26 THANKSGIVING BREAK
Week of Nov. 29	11/29 Colloquium: Mad Science in Culture and in History 11/29 Reading: Sagan Chap. 25
Week of Dec. 6	12/6 Colloquium: Science as a Defense Against Tyranny 12/10 Quiz 5 due
Week of Dec. 13	12/13 Colloquium: The World Set Free: The Enlightenment and the New Revolution 12/13 Final Quiz, 3-Semester Review, Excursion Report, Learning Contract due