
CPSG101 Science & Global Change
First Year Colloquium II:
Welcome to the Anthropocene: Causes and Impacts of the
Climate Crisis

Spring 2022

Instructors

	<u>Dr. Thomas R. Holtz, Jr.</u>	<u>Dr. John W. Merck, Jr.</u>
Office:	Centreville 1216	Geology 1119
Office Hours:	M 11 am-noon or by appt	Th 2-4 pm or by appointment
Email:	ELMS (preferred) or tholtz@umd.edu	ELMS or jmerck@umd.edu
Phone:	301-405-4084	301-405-4379

Undergraduate Teaching Assistants

	<u>Ka'Liyah Burnett</u>	<u>Benjamin Tran</u>
Office:	Cent 1214	Cent 1214
Office Hours:	M 2-3 pm	Tue 2-3 pm
Email:	ELMS or kburnet3@terpmail.umd.edu	ELMS or tran.sang.ben@gmail.com

Classroom

CCC 1205 Tu 3:30-4:50 pm

Course Organization

One Colloquium meeting per week, one Excursion (required), attendance at the Scholars Academic Showcase (4-5:30 pm, ESJ, Friday May 6) required

Texts

Mann, Michael E. & Lee R. Kump. 2016. *Dire Predictions: Understanding Climate Change. The Visual Guide to the Findings of the IPCC*. 2nd Edition. Dorling Kindersley. ISBN-13 978-0-1339-0977-7
Wallace-Wells, David. 2019. *The Uninhabitable Earth: Life After Warming*. Tim Duggan Books. ISBN-13 978-0-525-5760-9

Additional online required readings are indicated on the schedule, and available via ELMS. Reading 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.

The One-on-One Scholars Status Interview is 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

ITEM	PERCENTAGE
General Quizzes	10%
Final Quiz	5%
Participation	25%
Student-Generated Questions	8%
Homework	10%
One-on-One Scholars Status Interview	5%
“Awareness of Global Change” Survey	5%
Academic Showcase Report	10%
Excursion Report	10%
Freshman Time Capsule Essay	10%
Portfolio Maintenance	2%

General Quizzes (10% total): Five quizzes are given throughout the semester. The lowest quiz grade is automatically dropped: this includes quizzes missed for unexcused absences. Quizzes will be delivered on ELMS.

Final Quiz (5%): A longer quiz, also delivered on ELMS. This will cover all the material of the semester, and even draw on concepts earlier in the SGC program.

Discussion Participation (25%): As this is a Scholars Colloquium, all students are expected to attend every Colloquium meeting and be an active participant when appropriate. In some classes, there may be directed interactive activities or discussions. Some meetings will involve small groups. 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, 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.)

Student-Generated Questions (8% 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.

Homework (10%): There are two individual homework assignments this semester. The first (due **Feb. 8**) is calculating your individual carbon footprint; the second (due on **Mar. 8**) is on reconstructing paleoclimates from proxy data. Details about the assignments are provided later this semester.

One-on-one Scholars Status Interview (5%): How are you doing at University of Maryland? How are you progressing towards your Scholars citation? In order to help make sure things are going well, and that you are progressing to completion of your SGC citation, we require all students to have a one-on-one interview with Dr. Holtz, Dr. Merck, or the TAs during the middle part of the semester. There will be an online sign-up sheet to register for a particular time slot later in the semester. These interviews are brief (~15 minutes). More details to come.

“Awareness of Climate Change Impact” Survey (5%): How well does the general public understand the potential impacts of climate change? You’re going to find out. Each student will be responsible for obtaining **five** (5) respondents to a brief survey about the types of impacts global climate change can be (we will provide the survey). The respondents may **NOT** be current or former Science & Global Change scholars; they may be students from any other Scholars program; non-Scholars; University faculty, staff, or graduate students; family; friends not at University of Maryland; people you only know online; total strangers; etc. By **March 29** classtime you must have had responses from five different individual (in other words, you might have to ask more than five in order to get five responses). You will input their responses on ELMS. This data will be examined in Colloquium and be incorporated into the various “Impacts of Climate Change” Team Project videos.

Academic Showcase Report (10%): Later this semester your sophomore colleagues will be presenting the results of their individual research, service-learning, or internship work during the Scholars Academic Showcase. The Academic Showcase will take place on the afternoon of **May 6**; make sure to attend. You are required to attend the Showcase, and interview at least **five (5)** of the presenters, at least **three (3)** of whom must be SGC students and at least **one (1)** must be from another program. Your report on these short interviews will be part of the grade for this semester but will also give you an idea of some of the experiential learning opportunities afforded by Scholars. (**NOTE WELL**: Next Spring **YOU** will be presenting at the Academic Showcase, so observe carefully!! Don't just talk to five sophomores and leave as soon as you can; instead, use this time to survey a large number of these projects so that you get an idea of the possibilities.) The report is due **May 10**.

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. A list of opportunities are provided on ELMS; some may be added as the semester progresses.

NOTE: You may not use the same specific Excursion this semester which you used last semester.

Freshman Time Capsule Reflection Essay (5%): You are now completing your first academic year, and one way or another you have learned much. In some ways, your life here may have gone according to plan and in other ways, it will have been full of surprises. Due on the last day of colloquium, your assignment is in the form of an essay letting next year's incoming students know what to expect.

Portfolio Maintenance (2%): 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; all pages use the same css; 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

- Climate change is the byproduct of the interaction of a number of factors, both natural and anthropogenic
- Global climate change and related phenomena impact human society and the natural environment in many different ways

Learning Outcomes

- Identify the major factors which contribute to global climate systems and predict in general how perturbations in these factors result in changes in climate.
- Understand how proxies of past conditions are used to reconstruct paleoclimates and be able to interpret plots of these changing conditions over time.
- Recognize how climatic factors control the distribution and abundance of organisms (including crops and pathogens) and how changing global conditions result in redistribution and loss of important elements of the biosphere.

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: The University has [clear expectations about the wearing of masks in classroom situations](#). **KN95 masks 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, including 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.

Of course, the Colloquium doesn't stop existing outside 3:30-4:50 pm once a week. Every student should be expected to be spending a few hours every week on Colloquium-related materials outside of the classroom. This involves doing the readings, working on homework, watching required videos, filling out surveys, doing excursions, and so forth. You should not expect to be working on this—and indeed, any—course **ONLY** in the meeting classtime!!

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>Week of Jan. 24</i>	1/25 Colloquium: Welcome Back; Logistics of Class; Mini-Lecture: Welcome to the Anthropocene
<i>Week of Jan. 31</i>	2/1 Colloquium: Energy, Systems & Resources; Carbon Footprints (intro to assignment) Reading: Mann & Kump 6-55
<i>Week of Feb. 7</i>	2/8 Colloquium: Carbon Footprint GROUP PROJECT ; Guest Presentation: The Chesapeake Bay Foundation (David Tana, Maryland Outreach Manager); 2/8 Carbon Footprint HW due (must be completed by Colloquium time) Reading: Mann & Kump 56-81 2/11 Quiz 1 due 2/13 (Sun.) EXCURSION National Museum of Natural History, Washington, DC
<i>Week of Feb. 14</i>	2/15 Colloquium: Guest Presentation: Strategies for Finding an Internship (Kevin Kenneally, Program Director, Internships, University Career Center); Lecture Paleoclimatology

	Reading: Mann & Kump 82-117
Week of Feb. 21	2/22 Colloquium: Climatology 101: Insolation & Atmospheres Reading: Mann & Kump 118-149 2/25 Quiz 2 due
Week of Feb. 28	3/1 Colloquium: Climatology 201: Oceans, Geography, Seasons Reading: Mann & Kump pp. 150-163
Week of Mar. 7	3/8 Colloquium: Climate Change: How We Know It Happens & How We Know It's Us 3/8 Proxies HW due (must be completed by Colloquium time) Reading: Mann & Kump pp. 164-189 3/12 (Sat.) EXCURSION "Futures", Arts & Industries Building, Washington, DC
Week of Mar. 14	3/15 Colloquium: Storms of our Grandchildren: Climate Change Effects on Weather and Water Reading: Mann & Kump pp. 190-213 3/18 Quiz 3 due
Week of Mar. 21	SPRING BREAK!
Week of Mar. 28	3/29 Colloquium: Guest Presentation: Green Fellowship Winner(s) Reading: Wallace-Wells Part I 3/29 Awareness of Climate Change Impacts Survey due
Week of Apr. 4	4/5 Colloquium: The Importance of the Biosphere Reading: Wallace-Wells Part II pp. 37-93
Week of Apr. 11	4/12 Colloquium: Wildlife in the Climate Crisis Reading: Wallace-Wells Part II pp. 94-140 4/15 Quiz 4 due
Week of Apr. 18	4/19 Colloquium: Climate Change, Economics & National Security Reading: Wallace-Wells Part III pp. 141-170 4/23 (Sat.) EXCURSION National Museum of Natural History, Washington, DC
Week of Apr. 25	4/26 Colloquium: What's the Worst That Could Happen? Abrupt Climate Change, the Sixth Extinction, and Other Ongoing Existential Crises Reading: Wallace-Wells Part III pp. 171-216 5/1 (Sun.) EXCURSION National Zoo, Washington DC
Week of May 2	5/3 Colloquium: "Possible Futures" Group Project Reading: Provided on ELMS; also Wallace-Wells Part IV 5/6 Quiz 5 due 5/6 Scholars Academic Showcase, 4-5:30 pm, Edward St. John Building: Please attend!!
Week of May 9	5/10 Colloquium: Is There Hope? Planning to Live in a Changing World; Semester Wrap-Up 5/10 Academic Showcase Report, Final Quiz, Excursion Report, Freshman Time Capsule Essay due