Making Sense of Climate Change: Science, Art, and Agency
GCC 3013/5013
LE: Civic Life and Ethics

Course meeting location: INFLUX Auditorium, Regis Center for Art
Meets: Tuesday/Thursday, 1:00-2:30 pm
Credit hours: 3

Course teaching staff:

<table>
<thead>
<tr>
<th>Christine Baeumler</th>
<th>Rebecca Montgomery</th>
</tr>
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<tbody>
<tr>
<td>Office: 223 C, Regis Center for Art (WB)</td>
<td>Office: 314, Green Hall (STP)</td>
</tr>
<tr>
<td>Phone: 612-625-8096</td>
<td>Phone: 612-624-7249</td>
</tr>
<tr>
<td>Email: <a href="mailto:baeum002@umn.edu">baeum002@umn.edu</a></td>
<td>Email: <a href="mailto:rebeccam@umn.edu">rebeccam@umn.edu</a></td>
</tr>
<tr>
<td>Office hours: Tuesdays 2:30-3:30 pm and by appointment</td>
<td>Office hours: TBA</td>
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<tr>
<td>Teaching Assistant: Rebecca Limerick</td>
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</tr>
<tr>
<td>Email: <a href="mailto:limer004@umn.edu">limer004@umn.edu</a></td>
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Course description

It is widely understood that the ‘grand challenges’ facing humans must be addressed by collective action, i.e., concerted efforts across a range of societal sectors. Therefore, a critical question is this: how can society build capacity for collective action? Such capacity can be construed as ‘collective agency’, i.e., the ability of a group to freely choose a course of action, to marshal power to implement the action, and to collectively evaluate and learn from the outcomes of action.

This course will explore the role(s) of artistic/humanistic ways of knowing, in interaction with scientific ways of knowing, as tools for creating collective agency to address grand challenges. We focus on how artistic/humanistic ways of knowing can enable groups to make sense and meaning in the face of grand challenges. Our culture tends to privilege science, and to isolate it from the “purposive” disciplines – arts, humanities – that help humanity ask and answer difficult questions about what should be done about our grand challenges. As has long been recognized, the alienation of scientific and purposive disciplines greatly undermines our societal capacity to translate the abstracted understandings of science – “how the world seems to work” – into the realm of collective agency and action, i.e., “what we should do and how we should do
it”. By integrating purposive disciplines with other disciplines that focus on the “how and what” of grand challenges (including but not limited to science), groups are better able to make sense of, and determine meaning of, grand challenges in their inherent complexity, and thereby to choose a course of action, implement it, and evaluate and learn from outcomes of action.

The history of public art and other efforts to engage art and humanities in addressing complex public problems shows that these can have powerfully transformative effects, moving individuals and groups away from narrow, abstracted, and disinterested understandings of grand challenges, toward deeper, more emotionally-engaged, and contextually rich understandings that are the basis of collective agency. By putting global grand challenges such as climate change into a place-based and agency-focused perspective via the integration of scientific and artistic ways of knowing, participants will expand their understanding of how humanity might address grand challenges. This expanded understanding builds a foundation for a life of citizenship that does not shy from grand challenges, but instead strives to engage and address them.

Course Instructors and Their Roles

Throughout the semester, students will meet with all three instructors in a workshop format to develop conceptual foundations, reflect critically on learning experiences, and develop their public art project. In this way, the instructors will create an interdisciplinary learning environment, which will be expanded through the participation of guest instructors in many class meetings, who will provide perspectives from a wide range of practical and professional disciplines. The instructors have backgrounds in public and environmental art (Baeumler), ecological science (Montgomery), and use of deliberative and learning-focused methods for addressing complex environmental problems, including impacts of climate change (Montgomery).

Course Structure and Themes

In this course, we will examine, engage, and integrate three foundational notions: climate-change science, collective agency and place, and public art.

**Climate Change Science**
Climate-change science will frame grand challenges as complex problems that are multi-faceted, poorly understood, and viewed differently by different societal sectors. This theme will focus on current knowledge of climate change science, how climate change is expected to affect key ecological systems such as forest, farms, and vital biodiversity (e.g., pollinators) and how to communicate about climate change with diverse audiences.

**Collective Agency and Place**
We will explore collective agency as a means to address complex problems. Collective agency is closely related to the notion of ‘place’. In our course ‘place’ represents the land and its inhabitants (humans included), with flexible and fluid boundaries in biophysical, social, and temporal dimensions. We will use a range of active and
experiential learning to explore the notion of place-based collective agency.

Public Art Project
Finally, we will work on proposals towards creating a collaborative public art project that will frame the role of artistic/humanistic ways of knowing as “purposive” disciplines that are essential to the formation and expression of collective agency. Students will work collaboratively on proposals. These proposals will be juried and a final idea will be moved forward for presentation the night of Northern Spark (see below).

Public art is created with the intention of engaging with a particular community – a public – in a particular place, in order to draw that public into engagement with the subjects that the art addresses. We will study the work of public environmental artists who have responded to climate change science through their work. We will use these works to begin, in dialogue, to make sense and meaning of climate change, as individuals, and citizens, and as members of our communities, and to explore and experience the impact of public art on the collective agency of a particular public, in a particular place.

The final project will be presented at the Northern Spark festival, Climate Rising, an all-night art festival that in 2017 will focus on climate change. We will work in close dialogue with Steve Dietz, the Director of Northern Spark as well as with staff members, Sarah Peters and Ady Olson. Northern Spark will be held on Saturday, June 10-11th (9 pm- 6 am).

Course Learning Goals
Learning is not a passive activity in which you simply absorb and repeat back facts given by an instructor. Rather, learning requires you to take an active role. You must construct your own personal interpretation of the concepts and store them away in a form that is meaningful to you. As a teaching staff, we are here to help you and to facilitate your learning in an active way, but ultimately you bear the responsibility for understanding the material and making it your own. We are here to actively involve you in the learning process. During class time we will all be involved in working towards the common goal of learning and making sense of the material and its implications in our community and beyond. Although facts and vocabulary are important to any discipline, we ask you to interconnect those facts to concepts, applications and problems; to ask meaningful questions; to develop a range of intellectual abilities, including critical thinking, logical argument, appropriate uses of evidence and interpretation of varied kinds of information; and communication of your understanding in writing and orally.

At the end of this course you will be able to:

- Understand the nature of grand challenges (e.g., climate change) as complex problems
- Understand collective agency as a means for addressing grand challenges
- Understand how public art can integrate a wide range of knowledge, providing tools that enable place-based collective agency on grand challenges such as climate
change.
- Articulate contemporary notions of place, connection to place, and citizenship
- Articulate key aspects of global climate change and its local implications
- Design a public art piece that addresses a grand challenge for society
- Develop your ability to learn within different perspectives. This involves shifting your own frame of reference to experience and accommodate disparate views of the world
- Critically reflect upon inequalities, disparities and different perspectives associated with place, agency and action on climate change. Communicate effectively across difference when you engage in the exchange of thoughtfully considered views (visual, written, verbal and other) and practice active listening and reflection skills
- Work as a member of a productive collaborative team that respects members differences and reflects on successes and struggles
- Reflect on your personal and collective agency in relation to grand challenges

This course meets the Liberal Education Theme: Civic Life and Ethics

The course explores how the ethical principles of a society or societies have been derived and developed through group processes, and debated in various arenas. This exploration will be richly experiential and transdisciplinary, and will be enabled by our examination of three of the foundational notions that the course addresses: climate-change science, collective agency and place, and public art. First, exploring climate-change science will explore the potential impacts and consequences of climate change, and highlight the complex issues on which an ethical stance must be taken. In this part of students’ learning experience, they will gain perspective on the multiple dimensions of climate change, the inherent uncertainty, and the multiple and sometimes conflicting societal interests that are at stake. In considering collective agency and place, the question of the ethical behavior of a public will come to the fore, and the notion of deliberative examination of ethical choices as a means of developing ethical principles will be examined and experienced. Finally, through study and then creation of public art, the role of arts and humanities in expressing viewpoints on complex and ethically challenging issues, and thus stimulating deliberation about ethical choices and the formation of ethical principles will be richly experienced. Throughout the course, we will combine learning experiences with individual and collective reflection, to help students integrate these experiences to develop individual and collective understanding of how the ethical principles of a society or societies have been derived and developed.
Evaluation and grade guidelines

The course will be graded from A through F (with pluses and minuses). All written assignments, participation, and presentations will be given a numerical grade and multiplied by their respective contribution as a percent of the calculated final grade.

<table>
<thead>
<tr>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B-</th>
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<th>C</th>
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<tr>
<td>≥ 93</td>
<td>90</td>
<td>87</td>
<td>83</td>
<td>80</td>
<td>77</td>
<td>73</td>
<td>70</td>
<td>67</td>
<td>60</td>
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A = Outstanding achievement that demonstrates superior mastery of the material and exemplary performance. The distinction between A and B will depend on the student’s ability to understand and articulate explicit and implicit concepts.

B = Achievement that significantly exceeds the level necessary to meet the course requirements. C = Achievement that meets all course requirements at an average level.

D = Achievement worthy of credit, but which does not fully meet the course requirements. F = Failure to complete the course requirements, not worthy of credit without pre-arranged agreement between the student and the instructor regarding a grade of incomplete.

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<thead>
<tr>
<th>GCC 3013 Course Grade</th>
<th>% of grade</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Participation</td>
<td>20%</td>
<td>throughout</td>
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<tr>
<td>Attendance</td>
<td>10%</td>
<td>throughout</td>
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<tr>
<td>Place-based experience journal</td>
<td>15%</td>
<td>February 12, March 5, March 26, April 16, May 7</td>
</tr>
<tr>
<td>Change agent-precedent research paper and in-class presentation</td>
<td>20%</td>
<td>March 7 &amp; 9 = presentations March 9 = paper due date</td>
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<tr>
<td>Shaking hands with the landscape</td>
<td>5%</td>
<td>March 21</td>
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<tr>
<td>Public art proposal and project</td>
<td>25%</td>
<td>April 6</td>
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<tr>
<td>Final reflective essay</td>
<td>5%</td>
<td>May 11</td>
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<td><strong>Total</strong></td>
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<td>GCC 5013 Course Grade</td>
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<td><strong>Component</strong></td>
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<td>Participation and class leadership</td>
<td>20%</td>
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<td>Attendance</td>
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<td>throughout</td>
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<tr>
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| Change agent-precedent research paper and in-class presentation | 20%            | March 7 & 9 = presentations  
|                        |                | March 9 = paper due date           |
| Shaking hands with the landscape | 5%             | March 21                           |
| Final public art proposal and project | 20%            | April 6                           |
| Final reflective essay, including components of advisory role. | 5%             | May 11                             |
| Ways of Knowing symposium | 5%             | April 8                           |
| **Total**              | **100%**       |                                   |

The 5xxx level is expected to serve an advisory role to undergraduate students. We will create teams and the 5xxx level will take a leadership role within the teams as facilitators.

In the project development stage, they will be expected to help guide and coordinate the 3xxx level students, particularly in relation to creation of the public art project.

In this way, the 5xxx students will have additional opportunities to integrate, reflect and present on the content and experiences that make up the course, as befits their greater experience and sophistication.

**Description of Assignments**

1. **Participation (and class leadership for 5xxx)**

Participation will be evaluated based on in-class and take-home exercises including hands-on learning activities, in-class writing, written responses to readings and guest speakers, reflective practices, evaluation of contributions to team efforts, etc. In-class exercises generally cannot be made up if you miss class unless prior arrangements are made. Attendance is critical to success in this course.
2. Attendance

As a seminar, this course depends on collaboration and active participation. It is important that students attend each class and be punctual. Attendance will be taken at the beginning of class through sign in sheets at the back of the classroom. Please sign in to get credit for your attendance. Excessive unexcused attendance will negatively impact your final grade.

We recognized that unavoidable circumstances may affect participation and will work with students in these situations using University policy as a guideline:

According to University policy, “students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html.”

3. Place-based experience and reflection journal

This exercise requires you to choose an outdoor place at which you will spend 30 minutes each week sitting and observing. These “sits” will form the basis of a journal. The format of the journal is open-ended but has to include written or spoken word that interprets any visual images, abstract writing, video or audio material. Whatever you choose it will need to be uploaded to Moodle for evaluation five times throughout the course at ~ 3-week intervals (February 12, March 5, March 26, April 16, May 7).

4. Change agent-precedent research paper and class presentation

In this assignment students write a five page paper about a community change agent working on climate change issues (can be an artist, scientist, activist). You are encouraged to connect with or interview a local person who represents a unique perspective. Another option is to research the work of a contemporary artist, scientist or activist who is not local if the work is particularly relevant to your interests. In addition to the paper, students will present their change agent-precedent research to class in the form of lightning talks, short 5 minute oral presentations.

5. Shaking Hands with the Landscape

Students will create a site specific artwork through a gesture/observation in the landscape, document it and share it with the class. We will look at examples of work by Andy Goldsworthy and Ana Mendieta. These artists will provide a point of departure. Students will upload photo documentation or a short video clip documentation (you can use a phone) to document your work and share it with the rest of the class. This will be based on a site that you connect to—it may be your “sit spot”, a place in the Twin Cities or elsewhere during your spring break.
6. Collaborative Public Art Project Proposal and Project Participation

ALL students will participate in the group design charette and idea generation for the final project. The final project for Northern Spark will be selected through a juried process. To integrate understanding, the class will collectively develop ideas, discuss options, and ultimately create a public art project to contribute to the dialogue on climate change in the university community and beyond. (Due to the collaborative nature of the project, the faculty will facilitate and guide rather than pre-determine the nature of the public art in terms of its specific conceptual approach or material form).

Process. Students will work in teams, and will be encouraged to bring their particular set of skills, capacities, knowledge, and creativity to the process around shared interests. Through the design charette and class exercises, students will generate ideas for a project around climate change related themes. Students will write and present to the class collaborative proposals which will identify the theme/issue, stakeholders, collaborators, audience, approaches, media, siting and implementation plan. These proposals will be also be informed by class lectures, readings, visiting speakers, and precedent studies.

Through a collective process and with input from the Northern Spark team, one will move forward for implementation and the project(s) will be installed and presented at the Northern Spark Climate Chaos event in June. There is some funding and materials and equipment.

Evaluation of Final Public Art Project. Students will be evaluated on quality of the engagement in the development of the proposal ideas and effort in realizing the proposal. We recognize that not all students will be available for the Northern Spark event. We will discuss the logistics and those that want actively participate in the Northern Spark event in June.

7. Final Reflection Essay (3 pages for 3xxx, 5 pages for 5xxx level)

All students will write a 3-5 page reflective essay which will ask them to synthesize materials and personal experiences, reflecting on course themes such as collective agency, place, interdisciplinarity.

8. Public “Poster” Session at the Ways of Knowing Symposium, April 8th at Best Buy Theater, Northrop (5xxx level only, 3xxxx invited to attend)

One of the goals of this class is to cross-boundaries between disciplines and communities through various communication tools. Public dissemination of processes and ideas is an important component of transformative action. This assignment requires that students at the 5xxx level develop a visual presentation for an informative event, the Ways of Knowing Symposium, organized by the instructors and collaborators. This presentation can be done individually or as a group. You will be expected to relate a perspective on a climate change topic to the expected audience. Please consider what are the key messages that the audience
needs to know about climate change, ethical and transformative action, creative inquiry processes, and art as expression for change. You will be expected to hand in an outline of your presentation and write a short reflection on your experience with the presentation, audience engagement with the topic, challenges and strengths in communicating with the broader public, and audience responses.

**Other opportunities**

The Grand Challenges Curriculum committee will also be hosting an event for all GCC classes the week of April 10th. One group of presenters from our class will be selected to participate in this event to represent the course.
Classroom climate - policy statements

Student Engagement: To get the most of the experience, you are expected to attend all class meetings, access resources on Moodle, participate in class discussions through active listening and thoughtful contributions to discourse. Because of the potential disruptive nature of personal electronic devices in the classroom, their use may be restricted by teaching staff.

- http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html

Access to Learning for Students with Disabilities: If you have a documented disability that may impact your learning and/or participation in this course, please talk with teaching staff so that we can develop a plan to effectively support your learning and participation. If you have an undocumented disability you’d like us to know about, or are opting to not register your disability with the university, or just want to talk about learning to learn, you are invited also to set up a conversation so we can plan for ways you might collaborate with me, peers, others on campus, and family members to maximize your learning. The Disability Resource Center link provides information regarding student access and support:

https://diversity.umn.edu/disability/studentservices

Wellbeing / Mental Health: Academic research encourages human beings to address special circumstances as well as factors of everyday life that can cause stress and erect barriers to learning – such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. Useful University resources include:

- Student Mental Health Website, a resource developed by UMN’s psychological health services
- Dealing with Stress, a UMN Extension resource
- On WellBeing, see Center for Spirituality & International Student & Scholar Services resources.

Diversity and Collegiality: Drawing on the diversity of participants’ cultural contexts, academic experiences, assumptions regarding knowledge, and ways of approaching learning, teaching, will enrich this course. All participants in the course will be expected to learn ways of exploring, shifting, acknowledging, and expressing perspectives.

In our course, every attempt will be made to address interpersonal conflicts and tense moments in a timely, direct, educative, and respectful manner. If a participant’s behavior violates ground rules we establish to support diversity and learning, or aspects of the Student Conduct Code, that person may be referred to the Office for Student Conduct.

- Together we all create a climate in which it’s safe to take risk – to interact, ask, reflect, learn.
- The primary responsibility for asking participants to moderate behaviors, or to ask disruptive students to leave a class sits with the course instructor.

Integrity and Harassment: The university holds instructors and students responsible for maintaining climates in which students can expect to be treated civilly, interact with integrity, and deepen their understandings regarding respect. Individuals with concerns might contact...
the Office for Equity and Diversity with concerns about sexual harassment, and GLBTQA concerns,
and the teaching staff or a campus ombuds person.
Know that the teaching staff will address observed and reported incivility forthrightly and confidentially.

Academic Integrity / Plagiarism: The core values cited in “10 Principles of Academic Integrity for Faculty” and the framework of UM policy on academic integrity establish the default expectations for this course. In short:

- the work you submit must be your own,
- you will cite sources for ideas, text, images, teaching materials incorporated into your work,
- any suspected or unintentional plagiarism will be addressed via individual conversations,
- and intentional academic dishonesty may lead to earning a failing grade for the course and/or to conversation with the participant’s departmental advisor, Director of Graduate Studies, department chair, and/or dean about the serious transgression.