

Integrated Science 640: Public Service in STEM

This seminar covers the fundamentals of public service and civic engagement in the STEM disciplines from a scholarly perspective, while developing a community around shared experiences. Fellows will get an overview of the core pathways of public service (direct service, community-engaged teaching, public policy, social entrepreneurship, activism, and philanthropy), learn the basics of community partnerships, and reflect on personal experiences with community engagement activities. Upon completion of this course, Fellows will be prepared to begin specializing in a specific pathway and developing relationships with their community partners.

Course Format & Structure:

This is a discussion-based seminar, in which Fellows will work together as a cohort, forming a community of learners that will support understanding of engagement across each of the core pathways of public service. One 2-hour meeting per week of in-class time, and additional out-of-class time to read, reflect, and create materials that should not exceed an additional 4 hours/week (on average).

General Course Information	Contact Information
Credits: 1 Meeting Time: Wed. 1:30-3:30 Location: Room 117, 445 Henry Mall	Instructor: Anna Courtier Email: anna.courtier@wisc.edu Office Location: 445 Henry Mall, Room 104F Office Hours: By Appointment
Have Questions? The best way to get in touch with your instructor is via email or Slack. When using Slack, send a direct message to the instructor. I will do my best to respond to your email/Slack message within 24 hours (Monday-Friday).	

The Fellows program will be successful with your **active participation as a member of our small learning community**. At different times, you may find yourself in a position of having more personal experience or scholarly knowledge a given area than the rest of your cohort and the instructor. Please use these opportunities to share your experiences with the cohort in good faith.

This course may involve more reading than you are accustomed to having in a science course. Please know that completing the reading ensures that our discussions will be engaging and productive, and will help build connections between course concepts and your scholarly identity. We encourage you to contribute to the creation of a safe space for questions and discussion with your peers.

While we expect to have many in-depth discussions over the course of the semester, please keep in mind that we also have a lot of ground to cover. There may be weeks when it feels like we barely scratch the surface of something - and that's okay. **It's not expected that you will obtain complete mastery over every topic, but rather that you take steps along a pathway of development.**

Land Acknowledgement

The Public Service Fellows program focuses on interactions within the community, and a large part of that requires understanding and respecting the communities in which we and others live and work. The University of Wisconsin occupies ancestral Ho-Chunk land, a place their nation has called Teejop (day-JOPE) since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin.

We acknowledge the circumstances that led to the forced removal of the Ho-Chunk people, and honor their legacy of resistance and resilience. This history of colonization informs our work and vision for a collaborative future. We recognize and respect the inherent sovereignty of the Ho-Chunk Nation and the other 11 First Nations within the boundaries of the state of Wisconsin.

To learn more about the First Nations in Wisconsin, you can start here:

<https://union.wisc.edu/about/land-acknowledgement/>.



Modes of Communication

Canvas. We have a Canvas website for this program, on which you will find the readings and assignments for each week. Here you will find guidance on how to prepare for each of our weekly meetings. Please check it regularly.

Google Drive. A shared Google Drive will have individual folders for each person in the cohort. This is where you will upload your completed assignments and find feedback on those assignments. Copies of a few other program-level documents may also be stored in the Drive.

Slack. We have a shared Slack workspace for this program, which we will use for day-to-day informal communication and reminders as necessary. You can also communicate with former PSF participants in Slack. Please turn on notifications and check it frequently.

Projects & Assignments

1. Immersive community explorations. Over the course of the semester, fellows will be asked to participate in at least two community events, using the Haas Center Pathways of Public Service framework to identify areas of interest. Both of these events should be in an area that is new to you, with the goal of experiencing productive discomfort. Feedback will be based on your written critical reflections on these experiences, and how they relate to your work as a scientist or engineer.

2. Personal narrative/scholarly personal narrative. This assignment will draw together direct experiences, understanding of course concepts, and critical self-reflection into a personal narrative sketching out your past, present, and future with community engagement. Fellows will be expected to begin connecting their personal experiences to course concepts and scholarly work in the community engagement field.

3. Participation/Informal Learning Journal. You will be responsible for coming to class prepared to participate in discussion, and for participating in our asynchronous online discussion. You will also provide feedback to your peers and provide support and problem-solving as necessary. Many Fellows find that keeping a personal learning journal is a productive way to organize thoughts and reflections.

Reflection

In this course, you will be asked to reflect on your learning, experiences, and assumptions (to name a few things). A goal is that reflection will be continuous throughout the semester, connected to what we are learning in class, intellectually challenging, and specific to individual and community contexts. Reflection isn't always easy, but it is worth it – what you learn through reflection will guide you through your practicum experiences.

A word on reflection

*“Reflection is a process of seeking clarity about truth... truth in experience, thought, beliefs, instincts and relationships. Reflection can be accomplished independently or as a collective endeavor. Yet, however done, reflection demands consideration of one’s internal state (beliefs, feelings, assumptions) and external circumstances (actions, relationships, power dynamics, obstacles). **Reflection also demands a self-honesty and humility that will hold its own against affront from any quarter.**”*

---Tony Chambers, National Forum on Higher Education for the Public Good (2002)

Current Events

There are many things going on in our local communities, our country, and the world that will have relevance to us, both personally and with regard to the subject matter and intent of this course. If there is something you would like to discuss during class, we invite you to do one of several things:

1. Put it on our weekly agenda ahead of time, via email or our Slack channel
2. If it fits with our topic and readings for the week, feel free to make specific connections between course content and current events as appropriate during class

Acknowledging what’s happening out in the wide world is likely to be an important part of your practicum work, so let’s practice together!

Student Responsibilities

Grading and Contract Development

Working off of a template shared with other WISCIENCE Fellows programs, we will generate a mutually agreed upon charter document that outlines how the cohort will work together with the instructor/program director to accomplish our goals.

This course will be graded based on a contract. By enrolling in this course, you are entering into a simple contract with the Program Director: if you fulfill the requirements outlined in the charter documents, this syllabus, and the Program Guide, you will receive a ‘satisfactory’ grade.

Grade Assignment

Satisfactory	Meets or exceeds expectations. Incorporates new ideas or connects course ideas in new ways. Well organized, clear, professional. Work demonstrates critical thought. Participation includes contributing clear, well-considered creative ideas, promoting group discussion, asking thoughtful questions about others’ ideas and responding well to questions.
Unsatisfactory	Does not meet expectations. Work was not turned in, or directions not followed. There was a lack of meaningful class participation and/or excessive absences.

Attendance

If responsibilities outside of the program (professional meetings, sick children or partners, time-inflexible employers, etc.) cause you to miss class, please notify your cohort (or director, or pathway group, as applicable) as soon as you know that you will miss a class/meeting. As this is a team endeavor, it is important that you discuss with the cohort how you will compensate for your absence. (This may include commenting on shared notes, Zooming in to a class session, taking a greater role in subsequent session, and/or providing thoughts/questions/comments to the team ahead of the session that you will be missing). This process will be defined during the development of the Fellows charter at the start of the program. Note that format of this program is designed for in-person discussion that develops in real time. Having individuals Zoom into class is not ideal and should not be done on a regular basis.

Assignments

Ideally please complete assignments by 12PM on the day BEFORE class. This includes discussion posts on Canvas or files uploaded to your Google Drive. The file name should include the name of the assignment as well as your own name. Some assignments occur over the course of the semester and are not time-sensitive, but they should still be completed and discussed as experiences are encountered.

Course Learning Goals and Objectives

Community Engagement Goals. Fellows will:

1. Develop knowledge, skills, and values that support their engagement with the community from a scholarly perspective
 - Acquire foundational knowledge of community engagement and public service in higher education
 - Network with individuals and organizations within and outside of higher education who are doing community-engaged work
 - Assemble a library of pathways to community engagement in the sciences and engineering
2. Develop an ethical and sustainable approach to building community relationships
 - Explain specific approaches for initiating community partnerships
 - Identify the existing needs and assets of community partners in order to generate shared goals
 - Align techniques for collaborating with community partners with the goals of the relationship and the cultural context
3. Build reflective process and metacognitive skills into community engagement practices to inform personal development

- Identify ways that community engagement intersects disciplinary learning, research, and career preparation
 - Reflect on experiences and incorporate these reflections into your community engagement activities and community relationships
 - Create a personal community engagement philosophy that honors both personal goals and the community context
4. Develop community with colleagues around shared interest and experience in community engagement
- Give and receive constructive feedback
 - Share experiences with colleagues from other scientific backgrounds and pathways of interest
 - Develop a network of colleagues in community engagement that is grounded in problem solving, peer review, and mutual respect

Scientific and Cultural Literacy Goals. Fellows will:

1. Identify and critique ways that science and society interact in diverse contexts
 - Explain the major pathways and barriers to public interaction with scientists and engineers
 - Recognize the ways in which cultural context, power, and privilege influence access to and engagement with science and engineering
 - Contextualize scientific research using a variety of cultural and societal lenses
 - Explain the role of science and engineering in addressing issues of public concern
2. Develop a personal approach to creating a culturally responsive, inclusive environment in campus and community spaces
 - Identify multiple dimensions of diversity in university and community spaces, and describe how they influence the practice, application, and communication of science
 - Explain culturally responsive practices that support inclusion of diverse individuals

Student Rights and Responsibilities

Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can

result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to <https://www.students.wisc.edu/doso/academic-integrity/>.

Accessibility

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform the instructor of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. We will work either directly with you or in coordination with the McBurney Center (mcburney@studentlife.wisc.edu, 608/263-2741) to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Hate and Bias Incidents

We value each member of our community and integral part of this class is engaging with your classmates and the community at large. Hate and bias incidents distract from our classroom community and negatively affect your and your classmates' ability to learn, feel welcome, and feel safe. Hate and bias incidents will not be tolerated in this classroom nor in public service experiences.

Please intervene in incidents of hate and bias when you can, and report incidents to me—if you feel comfortable—and/or to the UW-Madison hate and bias reporting system: www.students.wisc.edu/report hate.

The University and I are dedicated to addressing reports of hate and/or bias seriously, promptly, confidentially, and sensitively. Reports can include, but are not limited to, crimes such as vandalism or physical assault; non-academic misconduct such as online or verbal harassment or disruptive behavior; and/or microaggressions such as derogatory or demeaning speech from another student, TA, or faculty/staff member. A Hate and Bias Incident Team member will respond to your report and provide you with options meet your needs. You can also report anonymously.

Additional academic policies and statements are articulated at <https://teachlearn.wisc.edu/course-syllabi/>.

INTEGSCI 640 – Public Service in STEM			
Week	Topics	In Class	Sample Readings
1 Jan 25	Pathways of public service and civic engagement	• Cohort introductions • Role of public service in society • Pathways of public service • Public purposes of science • Program & course overview	• Pathways of Service framework – Haas Center, Stanford University • Fellow profiles
2 Feb 1	Civic engagement and engaged scholarship in higher education	• Check-in on program expectations • Talkers/listeners activity • Engaged scholarship model	• <i>Publicly Engaged Scholars</i>, Ch2 (Post, Ward, & Longo, Eds., 2016) • New times demand new scholarship (Stanton, 2008) • Principles of Community Engagement, Ch2 (NIH Community Engagement Task Force, 2011)
3 Feb 8	Public engagement with science: historical and contemporary views	• Identifying and aligning norms • The history and current state of public engagement with science	• Navigating a Wayward Path toward Public Engagement (DeNero, 2017) • Public and Scientists' Views on Science and Society, Summary of Findings (Pew Research Center, 2015) • Science's new social contract with society (Gibbons, 1999) • Science and the Public (Shapin, 1990)
4 Feb 15	Exploring community	• Asset-based approaches • Defining community • The Wisconsin Idea • Learning about Madison • Community engagement spectrum	• Asset-Based Community Engagement in Higher Education (Hamerlinck & Plaut, 2014) • A History of Madison (Madden) • Madison Neighborhood Indicators Project, https://madison.apl.wisc.edu/ • The Wisconsin Idea: The Vision That Made Wisconsin Famous (Drury, 2011)
5 Feb 22	Pathways of public service: direct service	• Volunteerism and the danger of the deficit model • Avenues to informal science education and levels of engagement • Citizen science • Assessing community needs • Community collaboration and participation	• Theory of Change for Public Engagement in Science, (AAAS) • Scientists in Public Outreach: Participation, Motivation, and Impediments (Andrews et al., 2005) • Citizen Science as a means for increasing public engagement in science: Presumption or Possibility? (Martin, 2017) • Knowing Me, Knowing You (Carr et al., 2017)
6 Mar 1	Pathways of public service: community-engaged teaching & research	• Introduction to discipline-bridging student outcomes in community-based learning • Approaches to community-based research	• Introduction to Service-Learning, Ch1 + excerpt from Ch8 (Jacoby, 2015) • Principles of Good Practice (Howard, 2001) • The Irony of Service: Charity, Project and Social Change in Service Learning (Morton, 1995) • Illustrations of Community-Based Research (Ochocka & Janzen, 2014) • Community-Based Participatory Research Contributions to Intervention Research (Wallerstein & Duran, 2010)

7 Mar 8	Culture & identity in the community context	- Explore aspects of personal and social identity - Identify non-harmful ways of being in the community	- TedxTalk- The Danger of a Single Story (Chimamanda Ngozi Adiche) - Power and Privilege: Community Service Learning in Tijuana (Camacho, 2004) - Toward an Integrated View of Identity (Vignoles et al., 2011) - Beyond Diversity Training: A Social Infusion for Cultural Inclusion (Chavez and Weisinger, 2008)
• March 15 – Spring Break			
8 Mar 22	Diversity, equity, and inclusion in STEM	- The implications of broadening participation in STEM - Inclusive strategies for science & engineering	- Constructing Inclusive Values in Science (Uriarte et al., 2007) - Unintended Consequences: How Science Professors Discourage Women of Color - Genomics is Failing on Diversity – Nature Comment First immersive community exploration, reflection
9 Mar 29	Pathways of public service: social entrepreneurship and corporate social responsibility	Examples of social enterprise in the sciences and engineering	- Meaning of Social Entrepreneurship (Dees, 2001) - Rediscovering Social Innovation (Phills, 2008) - Cultivate Your Ecosystem (Bloom & Dees, 2008)
10 April 5	Pathways of public service: public policy and governance	- The spectrum of policy work - Political and apolitical perspectives - Importance of scientific communication	- Working with Congress: A Scientist's Guide to Policy (AAAS) - State legislators' sources and use of information: bridging the gap between research and policy (Dodson et al., 2015) - Finding your place on the science-advocacy continuum (Donner, 2014) - General Rules for Organizing for Legislative Advocacy (Community Tool Box) - Calling Your Elected Official (UCS)
11 Apr 12	Building community partnerships: paradigms for partnerships	Identify and critique community engagement paradigms	- To Hell with Good Intentions (Illich, 1968) - Key Elements of Effective Service-Learning Partnerships from the perspective of the community partners (Tinkler et al., 2014) - There's Gotta Be Some Give and Take Community Partner Perspectives on Benefits and Contributions Associated with Community Partnerships for Youth (Alcantara et al., 2015) - Helping Basic Scientists Engage with Community Partners to Enrich and Accelerate Translational Research (Kost et al., 2017)
12 Apr 19	Building community partnerships: perspectives from the community	Panel discussion with community members	- Readings TBD Second immersive community exploration, reflection

13 Apr 26	Pathways of public service: activism & community organizing; philanthropy	Brief introduction to activism and philanthropy in the sciences and engineering	- Four Traditions of Philanthropy (Lynn & Wisely, 2006) - Solving the World's Biggest Problems: Better Philanthropy through Systems Change (Walker, 2017) - Billionaires with Big Ideas are Privatizing American Science (NYT, 2014) - Inside Philanthropy – Science Research Funders
14 May 3	Critical reflection: making meaning from experience	- Reflection as an essential tool for learning through community engagement - Experiment with multiple forms of reflection	- What I Didn't Know Then, by Kelli Covey - What We Don't Talk About When We Don't Talk About Service, by Adam Davis Post-survey/course eval
15 Semester Wrap-Up	Reflection and Transition	- Connecting threads between topics - Recognizing growth - Looking ahead	- Revisit Group Contract - Planning for asynchronous May module and start of 740

***Readings will be posted on Canvas and are subject to change.**

Please see the Weekly Canvas pages for the most up-to-date assignments/readings.

Representative readings

Readings in this course will be a mix of book excerpts, scholarly papers taken from primary sources, and articles from the popular media. To a certain extent, reading selections will be made based on current events and guest speaker preferences, so be sure to check the weekly announcements.

Texts

- Post, M.A., Ward, E., Longo, N.V., Saltmarsh, J. eds. (2016). *Publicly Engaged Scholars*. Sterling, VA: Stylus Publishing.
- Hamerlinck, J. & Plaut, J., eds. (2014). *Asset-Based Community Engagement in Higher Education*. Minneapolis, MN: Minnesota Campus Compact.

Primary literature

- Ash, S.L., Clayton, P.H., 2009. Generating, Deepening, and Documenting Learning: The Power of Critical Reflection in Applied Learning. *Journal of Applied Learning in Higher Education*. 1:25-48.
- Bingle, R.G., Steinberg, K., 2010. Educating for Informed Community Involvement. *American Journal of Community Psychology* 46: 428-441.
- Mitchell, T., 2008. Traditional vs. Critical Service-Learning: Engaging the Literature to Differentiate Two Models. *Michigan Journal of Community Service Learning*, Spring 50-65.
- The National Task Force on Civic Learning and Democratic Engagement. 2012. *A Crucible Moment: College Learning and Democracy's Future*. Washington, DC: Association of American Colleges and Universities.
- Pew Research Center, February 15, 2015, "How Scientists Engage the Public" Available at: <http://www.pewinternet.org/2015/02/15/how-scientists-engage-public/>
- Uriarte, M., Ewing, H.A., Eviner, V.T., Weathers, K.T., 2007. Constructing a Broader and More Inclusive Value System in Science. *BioScience*, 57(1):71-78.