
Integrated Science 240: Service with Youth in STEM

Service with Youth in STEM is a course with the goal of providing students with the communication skills, cultural competency, and personal/social awareness necessary to build effective community partnerships.

Course Format and Structure:

Credits: 2 credit course, In-Person

Lecture: Tuesday, 9:30 – 10:45am **Lab:** Thursday, 9:30 – 10:45am

Course Location: 445 Henry Mall, Room 117

Course Instructor:

Anna Courtier

Email: anna.courtier@wisc.edu

Office: Rm. 104F, 445 Henry Mall

Drop-In or Available by appointment

WISCIENCE Program Coordinator:

Miranda Mellen

Email: mlmellen@wisc.edu

Office: Rm. 104G, 445 Henry Mall

Drop-In or Available by appointment

Peer Leader:

N

Email: @wisc.edu

Questions?

The best way to get in touch is via email. When sending an email, please put IntegSci240 or SWYIS in the subject line. I'll do my best to respond to your email within 24 hours (Monday-Friday). You can also ask to discuss something in person after class, and we can either have a short conversation then, or schedule a time for a more in-depth conversation, if needed.

Course Description

The credit standard for this course is met by an expectation of a total of 90 hours of student engagement with the course learning activities (at least 45 hours per credit), which include regularly scheduled instructor-student meeting times reading, writing, problem sets, studio time, labs, field trips, and other student work as described in the syllabus.

Lecture:

- Students will learn the theoretical basis for the role of the university in service, types of community engagement, partnership building processes, informal vs formal science education targeted appropriately for different levels of child development, and cultural considerations necessary to work with community members from a wide variety of backgrounds.
- Students will learn the importance of leadership, especially as it applies to science literacy, access to science, and equity in science. Students will focus on the role of reflection as a means for considering changes in their personal experiences and perspectives over the course of the semester.
- Students will discuss best-practices for community engagement that directly applies learning from UW STEM (Science, Technology, Engineering, and Math) courses, research labs, or other campus partners. Students will learn about the nature of science as well as the interdisciplinary nature of scientific fields.

Lab:

- The lab portion of the class provides the opportunity to apply concepts that are introduced in a theoretical framework as part of the lecture. The in-class lab sessions will focus on the process of preparing for and implementing informal science outreach activities.
- The labs will center on sample educational activities, role-playing, and just-in-time teaching to address students' impressions and questions of the teaching approach to the activity and/or its connections to the lecture component of the class.
- The lab will also provide a venue to critically debrief issues or events from the related service component that occurs outside of the classroom. This practical, applied experience is a crucial part of the learning process that students experience prior to participating in the weekly service components of the course.

Service:

- Students will apply the skills learned in lecture and practiced in lab to build an effective community partnership with an after-school support organization through participation in an after-school science club for elementary schoolers.
- Students will discuss scientific concepts and processes through implementing hands-on science lessons with the elementary students with whom they work.
- They will also practice communication skills with different audiences, and will reflect upon their personal experiences throughout the course.
- The combined lecture and lab approach will allow the theory and practice covered in lecture to be applied in a service-learning opportunity working with children in hands-on scientific learning, using an integrative approach.
- ***Note: As a service-learning class, a minimum of 25 hours of direct service is required in addition to the scheduled class time and associated assignments.***

Goals and Objectives

Main goals of this course are to:

- Understand and identify different pathways and opportunities within servant leadership
- Contextualize different types of community interactions including the development of mutually beneficial relationships
- Encourage interaction between scientists and community members of a variety ages and diverse social backgrounds
- Deepen students' self-awareness with regard to culture and privilege

After participating in this course, students will:

- Develop leadership skills & recognize their application to multiple contexts
- Develop competencies to work in an after-school setting with children and adult staff from a variety of cultures and backgrounds
- Effectively facilitate the scientific thought process in a way that is age/developmentally appropriate
- Develop and understand personal scientific identity
- Connect community experience to personal perspectives through reflection

Land Acknowledgment

Service Learning courses in particular focus 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/>



Assignments and Grading

Your learning experience in Service with Youth in STEM will be centered around active in-class participation and discussion, as part of a **group-learning environment**. Your understanding of course content will be assessed through participation and **individual** written reflection assignments.

Grading

- **After-School Site Visits**
Goal of 8; Student and community partner must be in communication.
Note: Community partner agreement must be completed prior to beginning on-site activities. Your grade is incorporated into the post-club reflections below.
- **Online Discussions:** 25% of the total grade
 - Reading Reactions: 15% Due Weekly
**Due by Noon on the day before lecture*
 - Post-club reflections* 10% Due Weekly
**Should be completed within 1 week of your club*
- **Attendance/Participation** 5%
Graded on in-person attendance and engagement. Online completion of assignments alone does not satisfy this requirement.
- **Community Exploration** 5%
Floating Deadline; Due 2 weeks after completion of the community activity. See assignment for more details.
- **Guest Connections Exit Surveys:** 5% of the total grade
These will be due at the end of class and will occur intermittently over the semester, dependent upon the availability of guest speakers. Excused absences must be notified/documentated as soon as possible.
- **Written Reflections:** 25% of the total grade
 - Reflection 1:
 - Reflection 5%
 - Reaction to peer review 5%
 - Reflection 2:
 - Reflection 10%
 - Reaction to peer review 5%
- **Other Assignments:**
 - Leadership Assessment 5%
- **Final Portfolio:** 30% of the total grade
 - 3-minute PowerPoint 10%
 - Proposed Activity 10%
 - Public Engagement Plan 10%

Details on Assignments

* All materials for the course including readings, assignments, discussion posts, rubrics, etc. can be found on the course's Canvas page.

* Brief reading reactions are **due each week on Canvas, at Noon on the day before class**. All readings will be posted on Canvas. Specific questions/prompts are listed in Canvas in the "Reading Reactions" discussion section. When guest speakers attend the class, assigned readings include items to prepare you for effective interaction with the guest speaker.

* Once you start your after-school site visits, submit a post-club reflection. **Your post-club reflection should be submitted within 7 days of your usual club meeting time. Please report on the club experience that falls within the date range given.** You should submit a survey response every week, whether you held club or not.

* Guest connections are brief exit surveys that summarize your impressions of the connections between the guest and your personal experiences in the course or within the context of your academic major assignments are due **at the end of class on the day a guest presents**.

Grading Scale

Grade Assignment: Scores that fall between these ranges will be rounded up.	
A 92-100%	Exceeded expectations. Incorporated new ideas or connected course ideas in new or creative ways. Work was well-organized, clear, and professional. Work demonstrated critical thought. Participation included contributing clear, well-considered, creative ideas, promoting group discussion, asking thoughtful questions about others' ideas and responding well to questions. Completed service hours in a timely fashion.
AB 89-91%	Exceeded expectations. Demonstrated a deep understanding of the material. Well organized, clear and professional. Participation included contributing clear, well-considered, and creative ideas, promoting group discussion, asking thoughtful questions about others' ideas, and responding to questions. Completed service hours in a timely fashion.
B 82-88%	Met expectations. Work was well organized and clear. Regular and respectful contributions to class and group discussion, both asking and responding to others' questions.
BC 77-81%	Directions were followed and work indicates that student understood the concepts of the assignment. Regular and respectful contributions to class and group discussion.
C 68-76%	Directions were followed. Regular and respectful contributions to class and group discussions.
D 60-67%	Directions were not followed, and a significant portion of the work was not turned in or was incomplete. Little to no meaningful participation in group discussion.
F 0-59%	Work was not turned in. Class participation was lacking.

**** IMPORTANCE OF ATTENDANCE and SERVICE SITE ENGAGEMENT ****

Please be flexible if we have to modify assignments, requirements, or class periods around illness or public health mandates set by either the university or the county. Any changes to masking policies by the University or the county during the semester must be followed. Finally, if you feel sick, stay home and email us!

You must follow UW regulations for attendance in class **AND** after-school site regulations for off-campus work. If a site requires a mask and social distancing, you must follow those rules even if UW is not requiring masks and social distancing. Please ask your instructors if you need clarification.

Your goal is to participate in 8 after-school sessions at your site. Your attendance at the after-school site is crucial for the success of the elementary school students who are depending on you. **Your final grade will be REDUCED by 4% for unexcused ("no show") after-school club sessions.**

Students will not be penalized for after-school sessions that are canceled by the after-school site due to weather, early-release, school field trips, etc. Set up a communication plan with your partner so that you can notify each other in "real time" if there is a school cancellation, or if your transportation is late, etc. Other excusable absences include but are not limited to religious holidays, illness, family emergency, and University-sponsored events that require your participation.

****Mandated Reporting****

Mandated Reporters are required by law to report child abuse and/or neglect to a county or law enforcement. Wisconsin law [48.981(2)] indicates that any mandated reporter who has a reasonable cause to suspect that a child seen by the person in the course of professional duties has been abused or neglected, or who has reason to believe that a child seen by the person in the course of professional duties has been threatened with abuse or neglect and that abuse or neglect of the child will occur is required to make a report.

University employees, school district employees, and child care providers are among the groups who are considered mandated reporters by the state. ***As a student in Service with Youth in STEM, you are not officially a mandated reporter.*** However, if you suspect a case of neglect or abuse for one of the students in your group, please talk to one of the on-site staffers so that person is able to make a judgment call on whether an issue must be reported. ***Do not contact your UW course instructor about these issues.***

*****IF YOU'VE READ THE SYLLABUS UNTIL THIS POINT, SEND ANNA A MEME/GIF/TIKTOK FROM A TV SHOW OR MOVIE TO LET HER KNOW YOU'VE READ IT. These points are imaginary, this is not part of your grade.*****

Academic Integrity

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion. For more information, refer to <https://www.students.wisc.edu/doso/academic-integrity/>.

Accommodations for Students with Disabilities Statement

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 faculty [me] 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. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center 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. (See: [McBurney Disability Resource Center](#))

Diversity Inclusion Statement

[Diversity](#) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

For more information, support, and resources regarding addressing hate and bias on campus, please visit www.students.wisc.edu/repothate.

Course Evaluations

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your confidential feedback is important to us. We strongly encourage you to participate in the course evaluation.

Students' Rules, Rights & Responsibilities

The university's privacy rights are available at <https://guide.wisc.edu/undergraduate/#rulesrightsandresponsibilitiestext>.

How to Succeed in This Course

In addition to following the guidelines in this syllabus, there are other resources on campus that can help you to success in this class and others. Some of these resources may also be useful outside of an academic context.

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Students Office](#)

Academic Calendar

Information about the current and future academic calendars, along with the university's religious observance policy can be found at <https://secfac.wisc.edu/academic-calendar/>

Privacy of Student Records & the Use of Audio Recorded Lectures Statement

View [more information about FERPA](#).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability who has an approved accommodation that includes recording. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities, with the exception of sharing copies of your personal notes as a notetaker through the McBurney Disability Resource Center. Students are otherwise prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

****Mental Health****

Students sometimes feel overwhelmed, lost, experience anxiety or depression, struggle with relationship difficulties or diminished self- esteem. These issues may be school-related or personal. The no-cost mental health services at University Health Services include individual, couple/partner, group counseling, stress management, and psychiatry services. Most importantly, there's a system in place so students can immediately speak with someone if they are in crisis. Please consult <https://www.uhs.wisc.edu/mental-health/> if you feel you or someone you know needs mental health support.

If you miss a lot of class without notice and are difficult to contact/don't respond for a long period of time, we may contact the Dean of Students. This does NOT mean you are in trouble. They just have more resources to contact you to see if there is support available that may help you.

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/reporthate.

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/>.

*****CONGRATULATIONS! YOU'RE THE BEST! YOU READ THE SYLLABUS! TO LET ME KNOW YOU DID THIS, EMAIL ME A MEME ABOUT BEING A STUDENT, OR ABOUT COLLEGES, UNIVERSITIES IN GENERAL. *****

PS (You might have missed something earlier. Do you want to go back and check? Please read what's above it.)

Integrated Science 240: Service with Youth in STEM
University of Wisconsin-Madison
Tentative Weekly Schedule

Lecture: Tuesday, 9:30-10:45 am

Lab: Thursday, 9:30-10:45 am

Week	Date	Topic
0	9/3 9/5	<i>No lecture. yes, lab on 9/5.</i> Laboratory Overview Introduction to instructors, peer leaders Student Introductions Comfort/Stretch/Panic (Don't Panic!) Logistics: <i>Fill out schedule availability – Need Computers</i> After-school site matches, roles and responsibilities, background checks and photo releases; examples of different club “spaces” and locations, transportation
1	9/10 9/12	Course Overview and Basics of Public Service Course/student expectations – Read the syllabus! Basic of public service Previous community experiences Lab: Establishing Partnerships Activity: Butterfly Camouflage Community Partnership Agreement Advice for new leaders Behavior strategies for positive learning environments
2	9/17 9/19	Building Community Partnerships Development of shared goals – “Shut up and listen” Talkers vs Listeners Concept map Activity: Human Traits Differentiation and Inclusion <i>Target date for after-school club assignments</i>
3	9/24	Understanding Who You Serve Discussion Norms and Expectations Danger of a Single Story <i>Neighborhood Indicators Project - Need Computers</i> Who are your students? Context vs Stereotype

	9/26	<p><i>In-class Community maps</i></p> <p>Activity: Owl Pellets Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion <i>Finalized club dates – Begin Community Partner meetings</i> <i>Intro to Post-Club Reflection surveys</i></p>
4	10/1	<p>Identity and Self-Efficacy Who is a scientist? Teacher? Leader? Individual experiences Shifting perspectives <i>In-class identity timelines</i></p>
	10/3	<p>Activity: Revisit Neighborhood Indicators Project - Need Computers Activity: Body Systems Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion <i>Initial clubs start this week</i> <i>Initial sharing of partnership introduction and club experiences</i> <i>(Will continue weekly)</i></p>
5	10/8	<p>Importance of Reflection Importance of reflection Reflecting upon past Service Experiences Types of reflection: Oral, written, informal, structured <i>Reflection #1 Assigned</i> <i>Community exploration assigned; Due 2 weeks after participation</i></p>
	10/10	<p>Activity: Ozobots Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion</p>
6	10/15	<p>Communication Styles and Approaches – Guest: Paige Kinsly, Argonne National Labs <i>Reflection #1 Due</i> <i>In-class peer review of Reflection #1</i></p>
	10/17	<p>Activity: Heart Rate Practicing Storytelling in Science Class/Community Connections</p>

		Learning objectives and learning cycles Sharing successes and opportunities for growth Differentiation and Inclusion
7	10/22	Audience and Engagement Stories in science Know your audience <i>Response to Peer Review due</i>
	10/24	Activity: Alka-Seltzer Rockets Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion
8	10/29	Lecture: Lesson Design by Dr. Anna Courtier Substitute Lecturer Developing a lesson plan One-time interactions Long vs Short Term Interactions
	10/31	Activity: Microscopes Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion
9	11/5	Privilege, Impacts, and Perspectives Informal and authentic feedback Reflective privilege and impact Guest Facilitator: Isa Hernandez-White
	11/7	Activity: DNA + Fingerprints Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion
10	11/12	Privilege and Diversity: Privilege in STEM Need for diversity in STEM <i>Reflection #2 Assigned</i>
	11/14	Activity: Bees – Life Cycle Class/Community Connections Direct experiences from after-school clubs Differentiation and Inclusion

11	11/19	<i>Self and Peer Assessment</i> Informal assessment in science outreach Feedback to peers Connections to Rubrics <i>Reflection #2 Due</i> <i>In-class peer review of Reflection #2</i> <i>Assign final portfolio:</i> <i>Presentation (Due Monday 12/9 at Noon; Present in-class 12/10);</i> <i>Activity Lesson Plan; (Due 12/17th at 9:30am)</i> <i>Public Engagement Plan (Due 12/17th at 9:30am)</i> <i>Lab: Presentation Preparation (Mandatory Attendance)</i> Detailed overview of final portfolio Tips: How to give a good presentation?
	11/21	
12	11/26	<i>Community Engaged Learning Framework & Leadership in Service</i> “Hidden” components, benefits, and viewpoints of community engagement <i>Response to Peer Review #2 Due</i>
	11/28	<i>No Lab Thanksgiving</i>
13	12/3	<i>Pathways to Service – Guest from Morgridge Center for Public Service</i> Civic Engagement, Community-engaged learning; Direct Service and Outreach; Policy and Governance; Social Entrepreneurship
	12/5	<i>Lab: Presentation Preparation and Practice (Mandatory Attendance)</i> Class/Community Connections 3-minute presentation preparation
14	12/10	Final Portfolio Part 1: <i>Presentations – At the BioCommons in Steenbock Library</i> <i>Submit on Canvas by Noon on Monday, December 9th</i> <i>Present in-class on Tuesday December 10th</i>
	12/12	<i>No Lab Meeting this week</i>
15	12/17	Final Portfolio Parts 2&3 due on Canvas by Tuesday, Dec 17 at 9:30AM. <i>Activity Lesson Plan Due (On Canvas; No in-person meeting)</i> <i>Public Engagement Plan Due (On Canvas; No in-person meeting)</i>