

SCED 370: STEM & Society

Fall Quarter 2024

Course Details

Class Meetings:	Tuesdays and Thursday, 10:00 - 11:20 am in SL240S
Instructor:	Dr. Robyn Mieko Dahl (she/her)
Email:	dahlr4@wwu.edu
Office:	ES 340
Office Hours:	Mondays 2-3pm, Tuesdays 1-2pm or by appointment
TA:	Thaseus Karkabe-Olson
Email:	karkabt@wwu.edu
Office:	
Office Hours:	

Course Description

Welcome to SCED 370: STEM in Society! In this course, we will explore the meaning and importance of scientific literacy and consider how scientific literacy relates to issues of equity and social justice. We will discuss different types of scientific controversy, study how scientific research is portrayed in news and popular media, and examine frameworks for teaching scientific literacy at the secondary level.

Communication is paramount to applying science to societal issues, so your development of written and oral communication skills will be a major goal of this course. You will have several opportunities to practice developing scientific arguments in written and oral form. Because this course is worth 3 Writing Points (WP), you will also have several opportunities to revise your arguments based on peer and instructor feedback.

Classroom Climate

Your active participation in this course will ensure that you and your classmates will have a productive and positive learning experience. We will work together to maintain a classroom environment that is inclusive and respectful of all members and makes active participation productive and fun.

Learning includes being able to voice and hear a variety of perspectives. While students' ideas may vary, it is important that we engage respectfully with each other. We will make our best efforts to pronounce each other's names correctly and to respect one another's personal pronouns. Discriminatory talk and actions will not be tolerated.

Course Outcomes

By the end of the course, you will:

1. Understand why science involves controversy and what its strengths and limitations are in solving societal issues.
2. Develop the skills to productively analyze scientific claims and claims about science-related topics in the media.
3. Gain an awareness of how issues of equity and social justice are inextricably linked to the scientific enterprise.
4. Gain skill in developing and expressing scientific arguments in oral and written form (this is a WP-3 course).

Attendance and Participation

This is a seminar-style course and thus relies heavily on your participation. Class meetings will generally revolve around discussions of assigned reading and your own research. Part of your grade will be determined by participation. Several different data points will contribute to your participation grade, including periodic self, peer, and instructor evaluations.

Missing a class: Because this course centers discussion and collaboration, a missed class cannot simply be made up by getting the notes from a peer or the instructor. Because of this, attendance is required unless you have a valid excuse AND have communicated with instructor prior to class. If you do miss a class, you must make up the work prior to the next class period, and assigned homework is still due at the assigned time unless otherwise agreed upon with your instructor.

COVID accommodations: Keeping our community safe and healthy is a priority, so please do not attend class if you are experiencing COVID symptoms or have tested positive for COVID. Absences due to COVID will not have any impact on your grade as long as you coordinate with your instructor about the missed meeting(s). Wearing a mask in the classroom will reduce the chance of contraction or spread.

Assignments and Grading

Position Paper	20%
Positionality Statement	10%
Science in the News project	5%
Causal links poster	15%
SciFi Movie Review	10%
Final Reflection	20%
Homework and Participation	20%

The grade scale used in this course is as follows:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
> 94%	90 - 93.9%	87 - 89.9%	84 - 86.9%	80 - 83.9%	77 - 79.9%	74 - 76.9%	70 - 73.9%	67 - 69.9%	64 - 66.9%	60 - 63.9%	< 60%

Late Policy: You can submit work up until the class meeting of the term (Wednesday, December 6), but your score will be adjusted depending on how late the work is submitted. Assignments that are submitted within 2 days (48 hrs) of the due date will have their score reduced by 10%. Assignments that are submitted more than 2 days after the due date will have their score reduced by 50%.

Office Hours and Instructor Availability

You are encouraged to attend office hours to discuss course content, questions or concerns. Office hours are listed at the top of Page 1 of this syllabus. I (Robyn Dahl) will be holding my office hours in-person in my office (ES 340) but you may also connect via Zoom during that time if you prefer virtual meetings. If you plan to connect via Zoom, please send me an email ahead of time to alert me of your plans and use the Zoom link posted on the course Canvas site. If you would like to meet during a different time, email me to schedule the meeting.

I am available for email, in-person meetings, and virtual meetings during regular work hours (Monday-Friday, 9am to 5pm, schedule permitting). If you contact me during that time, you can expect a prompt response. If you contact me outside of that time, I will most likely read your email but will not respond until the next work day, unless there is a time-sensitive reason to do so.

University Resources and Policies

Reasonable Accommodation

Reasonable accommodation for persons with documented disabilities should be established within the first week of class and arranged through the Disability Access Center: telephone 360-650-3083; email drs@wwu.edu; and on the web at <https://disabilitywwu.edu>. Review their Documentation Guidelines (<https://disabilitywwu.edu/new-students/documentation-guidelines>) for the procedure for providing reasonable accommodations for students with disabilities.

Western provides reasonable accommodation for students to take holidays for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization. Students seeking such accommodation must provide written notice to their faculty within the first two weeks of the course, citing specific dates for which they will be absent. "Reasonable accommodation" means faculty will coordinate with the student on scheduling examinations or other activities necessary for completion of the course or program and includes rescheduling examinations or activities or offering different times for examinations or activities. Additional information about this accommodation can be found in SB 5166: Providing Religious Accommodations for Postsecondary Students.

Student Services

Western encourages students to seek assistance and support at the onset of an illness, difficulty, or crises.

- In the case of a medical concern or question, please contact the Student Health Center: 360-650-3400 or <https://studenthealth.wvu.edu>
- In the case of an emotional or psychological concern or question, please contact the Counseling and Wellness Center: 360-650-3164 or <https://cwc.wvu.edu>
- In the case of a health and safety concern, please contact the University Police: 360-650-3555 or <https://police.wvu.edu>
- In case of a family or personal crisis or emergency, please contact the Office of Student Life: 360-650-3706 or <https://wp.wvu.edu/officeofstudentlife/>

Integrity: Integrity applies to all of the principles, values and behaviors that contribute to good character, including honesty, fairness, respect, courage and responsibility. All members of the Western community have the right to be treated fairly, and to have support and representation if accused of violating university policies related to integrity. They also have the responsibility to exhibit honest behavior, and to encourage others to do the same. If a student is suspected of dishonest behavior, the instructor must address the issue with the student by use of the official university procedures. Not only does this ensure continuity in dealing with such issues, but provides students formal opportunity for representation and appeal. *Note that these incidents do not appear in a student's academic record.* See [Western Coalition for Integrity](#) for procedures and details.

Academic Honesty: All Western students have an obligation to fulfill their responsibilities as members of an academic community. Academic integrity is demanded; moreover, academic dishonesty at Western is a serious infraction dealt with severely. No student shall claim as his or her own achievements, work, or arguments of others, nor shall he or she be party to such claims. It is the instructor's responsibility to confront a student and to take appropriate action if such academic dishonesty has occurred. See [Appendix D: Academic Honesty Policy & Procedure](#) of the catalog for examples, procedures, and methods of appeal and Ensuring Academic Honesty for appeal rules and timeline.

Plagiarism: Plagiarism is presenting as one's own – in whole or in part – the argument, language, creations, conclusions, or scientific data of another without explicit acknowledgement. See the Library's [Plagiarism Policies and Guidelines](#) for examples and citation guidelines. Plagiarism includes using Artificial Intelligence such as ChatGTP3 to generate text for coursework.

Title IX and Sex Discrimination: Title IX makes it clear that violence and harassment based on sex, which includes sexual harassment, gender-based harassment, and sexual violence (sexual assault, domestic violence, dating violence, stalking) is prohibited. Under Title IX, rape and sexual assault are forms of illegal sex discrimination. Survivors of sexual violence have the right to file a discrimination complaint or seek advice and assistance from the Equal Opportunity Office (EOO) in Old Main 345, (360) 650-3307; University Police, (360) 650-3911 (emergency) or (360) 650-3555 (report); Bellingham Police, 911 (emergency) or (360) 778-8800 (report).

Student Services

<p><u>Disability Access Center</u> Old Main 110 P: (360) 650-3083 E: DRSFrontDesk@wwu.edu</p>	<p><u>Health Center</u> Campus Services 2001 Bill McDonald Parkway P: (360) 650-3400</p>	<p><u>Counseling Center</u> Old Main 540 P: (360) 650-3164</p>
<p><u>Survivor Advocacy</u> Deirdre Evans, MSW WWU Survivor Advocate P: (360) 650-7982 E: Deirdre.Evans@wwu.edu</p>	<p><u>Office of Student Life</u> Old Main 240 P: (360) 650-3706 E: student.life@wwu.edu</p>	<p><u>Tutoring Center</u> Wilson Library 280 P: (360) 650-3855 E: tutoring.center@wwu.edu</p>
<p><u>Hacherl Research & Writing Studio</u> 2nd Floor of Haggard Hall P: (360) 650-3219 E: rws@wwu.edu</p>	<p><u>Multicultural Student Services</u> Multicultural Center, Viking Union Includes: Ethnic Student Center, Black Student Coalition, Blue Resource Center</p>	<p><u>LGBTQ+ Western</u> Multicultural Center, VU 746 JoeHahn (Director) P: (360) 650-7583 E: hahnj7@wwu.edu</p>
<p><u>University Police</u> Campus Services 2001 Bill McDonald Parkway P: (360) 650-3555 E: university.police@wwu.edu</p>		

Course Schedule

Dates and times are tentative and subject to change. See Canvas for the most up-to-date schedule, as well as daily homework assignments, which are not listed here.

Date	Daily Topic	Major Assignments Due
Th 9/27	Course introduction	
Tu 10/1	AI in the Classroom Pt. 1	
Th 10/3	AI in the Classroom Pt. 2	
Tu 10/8	Scientific Argument	Science in News: public survey data collection due
Th 10/10	Science Literacy	
Tu 10/15	Nature of Science	
Th 10/17	Equity in STEM	

Tu 10/22	Scientific Study Design	
Th 10/24	Peer review and effective feedback	Position Paper: draft #1 due
Tu 10/29	Scientific Models	
Th 10/31	Scientific Controversy	Position Paper: draft #2 due
Tu 11/5	Underrepresentation Curriculum: Multiple Identities and Positionality	
Th 11/7	Gender-inclusive Science Teaching	Position Paper: final draft due
Tu 11/12	Scientific Method	Positionality Statement: draft #1 due
Th 11/14	Science in the Media	Positionality Statement: final draft due
Tu 11/19	Poster Project work day	
Th 11/21	Causal Links Poster Presentations	Causal Links Poster: due
Tu 11/26	NO CLASS - THANKSGIVING BREAK	
Th 11/28	NO CLASS - THANKSGIVING BREAK	
Tu 12/3	Science Representation in SciFi	Movie Review: due
Th 12/5	Course Wrap Up	
Finals Week		Final Reflection: due by Tuesday (12/10) at midnight