

Course Syllabus

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Welcome to Science Education 480!

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SCED 480: Science Methods and Curriculum for the Elementary School

Credits: 5

Study of theory, curriculum, science content, processes and effective teaching methods in the context of national and Washington State standards.

Note: It is strongly advised that students are prepared to take SCED 480 and SCED 490 in consecutive quarters.

Prerequisites & Notes: Completion of Natural Science GURs, including SCED 201 or permission of instructor; SCED 202, SCED 203, and SCED 204 are highly desired GURs; ELED 370 or ELED 372 or SPED 420.

Instructor:	Dr. Caroline Hardin pronouns she/her/hers
In person meeting space:	SL 230
Virtual meeting Space:	Zoom Office Hours: Set up a meeting with me using this link: bit.ly/2meetdrhardin _ (http://bit.ly/2meetdrhardin) Zoom link: bit.ly/drhardinzoom _ (https://bit.ly/drhardinzoom) In person Office hours:

	Monday Tuesday 2:00- 3:00 in CF 463
Communication :	<p>Please use Canvas to communicate!</p> <p>(my email can get really overfull, so using Canvas helps me prioritize your messages. However if you need to email me: caroline.hardin@wwu.edu (mailto:caroline.hardin@wwu.edu))</p>

In order to be flexible and responsive to the needs and interests of students and the course, this syllabus and course agenda is subject to change. Changes, if any, will be announced in Canvas Announcements, and assignments will be updated. Students will be held responsible for all changes.

Meeting times/location:

The course is normally scheduled to meet Tuesday/Thursday/Friday 10:00am-11:50am. We will meet in person in SL 230 on Tues/Thurs and in room 240 on Friday. However, if the instructor is sick or the pandemic otherwise necessitates it, we may meet some classes on Zoom: when this occurs, it will be announced through canvas.

COVID Safety Information:

Western Washington University has made masks optional inside all WWU buildings. However as the instructor has a vulnerable family member, the wearing of masks while in class is greatly appreciated.

- Free COVID testing for students will remain available at the College Hall testing facility on campus. The first two weeks of the quarter will inform testing decisions for the remainder of the quarter, and we will communicate any changes.
- If you test positive for COVID on a home test or through an off-campus testing facility not associated with the university, please notify Western. Students can log into your MyWesternHealth patient portal and send a secure message with your positive test result attached. Employees can send an email to HR.COVID.Assistance@wwu.edu.

Illness including COVID: Some students, even among the vaccinated student population, will test positive for COVID during the Quarter and miss class as a result. On a case by case basis, I will provide additional learning materials for ill/quarantining students. If the illness develops further, a more-lengthy absence may be necessary and students should contact the Office of Student:

<https://wp.wwu.edu/officeofstudentlife/> (<https://wp.wwu.edu/officeofstudentlife/>).

Grading Scheme:

Assignments will be graded, and course grades determined as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F/Z
4-point	4.0	3.9	3.7	3.3	3	2.7	2.3	2	1.7	1.3	1	0.7	0
10-point	10	9.6	9.3	8.9	8.6	8.3	7.9	7.6	7.3	6.9	6.6	6.3	6.3>
100-point	100	96	93	89	86	83	79	76	73	69	66	63	63>

Note: A grade of C- or lower in this course will require you to re-take SCED 480. In addition, you will be asked to meet with your academic advisor for support and to develop an improvement plan.

Course Goals & Objectives:

In this course, prospective teachers (you!) will:

1. Examine your beliefs in relation to a vision of effective science teaching and learning
 - Preservice teachers will analyze how their experiences as a learner have shaped their definition of, attitudes toward, and interest in science
 - Preservice teachers will critically examine their conception of 'effective' science teaching and learning, informed by their experiences as both a learner and teacher of science
2. Deepen your subject matter knowledge for teaching science
 - Preservice teachers will critically examine classroom interactions for evidence of student engagement in the practices of science (ie, 'doing science')
 - Preservice teachers will describe elements of the Nature Of Science (NOS), and explain its importance to science instruction
 - Preservice teachers will be able to articulate what students should learn in elementary science, identify big ideas or concepts, and build coherent conceptual storylines
3. Develop an understanding of learners, learning, and issues of diversity and equity in science
 - Preservice teachers will unpack the implicit messages experienced in the educational setting that convey *who* can be a scientist and *how* science is learned
 - Preservice teachers will utilize developmentally appropriate and productive approaches to meet the diverse needs, interests, and abilities of students and create inclusive and equitable science classrooms
 - Preservice teachers will understand the role of place and importance of cultural relevance in science education
4. Develop a beginning repertoire of strategies for science instruction and assessment
 - Preservice teachers will design lessons aligned to the Next Generation Science Standards that reflect principles of effective science teaching and learning
 - Preservice teachers demonstrate appropriate design of assessment for formative and summative purposes
5. Develop the tools and dispositions to study and learn from teaching

c. Develop the skills and dispositions to study and learn from teaching

- Preservice teachers will utilize feedback and reflection (from peers/instructors /cooperating teachers) to improve their teaching
 - Preservice teachers will apply different lenses (e.g., instructional frameworks, research) to analyze and learn from their science teaching and learning experiences
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Assignments:

Major assignments are intended to help you meet specific objectives that align with the course goals listed above. Each assignment will be explained in detail with a rationale and evaluation criteria.

Weighting of individual assignments towards the final course grade are indicated.

- Foundational work (50%)
 - Science Autobiography
 - Lesson plan pre
 - Scientist like me
 - Moon Observations
 - Analyze model lesson
 - Personal Inquiry/Wonder assignment
 - Connecting Science and Research
 - Curriculum Analysis
 - DEI assignment
 - Learning Journal: Module work (30%)
 - Weekly readings
 - Reflections and writing activities in Learning Journal
 - Attendance/Participation and Professionalism (20%)
 - Attendance & participation
 - Professionalism
 - Evidence-based self-reflection final project
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Course Organization and Requirements:

- **You must complete 60% of each weekly Module to pass the course.** Incomplete modules may result in the need for an incomplete (K) grade to be assigned. To receive a K grade, a student must print an [incomplete \(K\) grade contract.](https://registrar.wvu.edu/student-services/records-and-grading) [_ \(https://registrar.wvu.edu/student-services/records-and-grading\)](https://registrar.wvu.edu/student-services/records-and-grading)
- You will keep your **Learning Journal** in OneNote, and will receive feedback right into your journal.
- **Attendance/participation:** Unless previously excused, your attendance is mandatory for all class meetings. If you need to miss a meeting for any reason (illness/personal), please let me know ASAP via Canvas message.
- **Late Work:** due to current circumstances late work will be accepted but will affect your Participation

late work due to current circumstances, late work will be accepted but will affect your Participation & Professionalism grade, unless you have made arrangements with me before the deadline. Please try to stay on schedule with due dates as we'll be using the assigned material in our in-person section. Showing up unprepared means you will lose a valuable opportunity to develop essential knowledge for your future career as a teacher, and deprives your classmates of your valuable insights into the material.

- **Written assignments** must model appropriate grammar, spelling, usage and punctuation. All written work which is submitted as a separate file (i.e., not in OneNote) is to be word-processed (double-spaced, 12 point font) unless otherwise specified. Proofread your papers as you would if you were developing a handout for students or parents. The instructor reserves the right to return work for correction prior to grading if there are multiple mistakes in grammar, spelling, and or punctuation.
 - **Netiquette Statement:** Please read about netiquette on this [website](http://www.albion.com/netiquette/corerules.html) (<http://www.albion.com/netiquette/corerules.html>) (<http://www.albion.com/netiquette/corerules.html>) (<http://www.albion.com/netiquette/corerules.html>) We will abide by these netiquette rules outlined on this website.
 - In addition to this netiquette statement, we will come up with virtual classroom norms during our first synchronous meeting.
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Texts and required materials:

- Readings and supplemental materials will be provided in this Canvas site or made available via the web or Western Libraries.
 - Internet access for various resources and platforms, not limited to: [Zoom](https://zoom.us/home?zcid=2478) (<https://zoom.us/home?zcid=2478>), [Flipgrid](https://info.flipgrid.com/) (<https://info.flipgrid.com/>), Canvas, [Office 365 OneNote](https://www.office.com/launch/onenote?auth=2) (<https://www.office.com/launch/onenote?auth=2>), [G-Suite Apps](https://gsuite.google.com/?utm_source=google&utm_medium=cpc&utm_campaign=na-US-all-en-dr-bkws-all-all-trial-e-dr-1008072&utm_content=text-ad-none-any-DEV_c-CRE_331696211006-ADGP_Hybrid%20%7C%20AW%20SEM%20%7C%20BKWS%20~%20EXA%20%2F%2F%20GSuite%20%5EKWID_43700015362134797-kwd-74870110717&utm_term=KW_gsuite-ST_gsuite&gclid=Cj0KCQjwyPbzBRDsARIsAFh15JZcNFuzHyeD6SpoVAhmqO6Vlsc1S_A-F4ElnRbcDlnGFv6f5Hh9YkUaAt8xEALw_wcB&gclsrc=aw.ds) (https://gsuite.google.com/?utm_source=google&utm_medium=cpc&utm_campaign=na-US-all-en-dr-bkws-all-all-trial-e-dr-1008072&utm_content=text-ad-none-any-DEV_c-CRE_331696211006-ADGP_Hybrid%20%7C%20AW%20SEM%20%7C%20BKWS%20~%20EXA%20%2F%2F%20GSuite%20%5EKWID_43700015362134797-kwd-74870110717&utm_term=KW_gsuite-ST_gsuite&gclid=Cj0KCQjwyPbzBRDsARIsAFh15JZcNFuzHyeD6SpoVAhmqO6Vlsc1S_A-F4ElnRbcDlnGFv6f5Hh9YkUaAt8xEALw_wcB&gclsrc=aw.ds)
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Syllabus Policies:

This course will adhere to Western's [Syllabi Policies](https://syllabi.wvu.edu/) (<https://syllabi.wvu.edu/>) for Academic Honesty, Accommodations, Ethical Conduct with WWU Network and Computing Resources, Equal Opportunity, Student Conduct Code, and Medical Excuse Policy.

Third-Party Software and FERPA: During this course you might have the opportunity to use public online


services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these are required assignments, you need not make any personally identifying information available on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname (ensuring the facilitators know how to identify you). Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identifiable/sensitive information. If you have any concerns about this, please contact your instructor. See [FERPA Toolkit \(https://www.wvu.edu/teachinghandbook/resources_support/ferpa_toolkit.shtml\)](https://www.wvu.edu/teachinghandbook/resources_support/ferpa_toolkit.shtml).

Student Services:












Western encourages students to seek assistance and support at the onset of an illness, difficulty, or crisis. As your instructor, I can be a first point of contact to help you find the campus-based resources you may need. Here are some of the resources WWU offers students:





- In the case of a **medical concern or question**, please contact the Health Center (360) 650-3400 or visit its website: <https://studenthealth.wvu.edu/> (<https://studenthealth.wvu.edu/>)
- In the case of an **emotional or psychological concern or question**, please contact the Counseling Center: (360) 650-3400 or visit its website: <http://www.wvu.edu/counseling/> (<http://www.wvu.edu/counseling/>)
- In the case of a **safety concern**, please contact the University Police: (360) 650-3555 or visit its website: <http://www.wvu.edu/ps/police/> (<http://www.wvu.edu/ps/police/>)
- In the case of a **family or personal crisis or emergency**, please contact the Office of Student Life (360) 650-3706 or its website: <https://wp.wvu.edu/officeofstudentlife/> (<https://wp.wvu.edu/officeofstudentlife/>) (<https://wp.wvu.edu/officeofstudentlife/>)
- In case of need for **academic support** of assignments/writing papers, please contact The Hacherl Writing Center on the second floor of Haggard Hall : <https://library.wvu.edu/rws> (Links to an external site.) (<https://wp.wvu.edu/officeofstudentlife/>)

Course Summary:

Date	Details	Due
Fri Sep 23, 2022	 Lesson Plan : assessing prior knowledge (https://www.instructure.com/courses/1591438/assignments/7656584)	due by 11:59pm

Date	Details	Due
Mon Sep 26, 2022	 Module 1: Set up your Learning Journal https://www.instructure.com/courses/1591438/assignments/7656587	due by 11:59pm
Wed Sep 28, 2022	 Science Autobiography https://www.instructure.com/courses/1591438/assignments/7656601	due by 11:59pm
Wed Sep 28, 2022	 Scientist like me https://www.instructure.com/courses/1591438/assignments/7656602	due by 11:59pm
Mon Oct 3, 2022	 Module 2 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656588	due by 11:59pm
Wed Oct 5, 2022	 Personal Inquiry/Wonder part 2 https://www.instructure.com/courses/1591438/assignments/7656598	due by 11:59pm
Mon Oct 10, 2022	 Module 3 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656589	due by 11:59pm
Wed Oct 12, 2022	 Analyze model Lesson https://www.instructure.com/courses/1591438/assignments/7656578	due by 11:59pm
Mon Oct 17, 2022	 Module 4 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656590	due by 11:59pm
Wed Oct 19, 2022	 Connecting Science and Research https://www.instructure.com/courses/1591438/assignments/7656579	due by 11:59pm
Fri Oct 21, 2022	 Lesson Plan: 2nd draft https://www.instructure.com/courses/1591438/assignments/7656583	due by 11:59pm
Mon Oct 24, 2022	 Module 5 learning journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656591	due by 11:59pm
Wed Oct 26, 2022	 Curriculum Analysis https://www.instructure.com/courses/1591438/assignments/7657251	due by 11:59pm

Date	Details	Due
Fri Oct 28, 2022	 Lesson Plan Peer Review https://www.instructure.com/courses/1591438/assignments/7656586	due by 11:59pm
Sun Oct 30, 2022	 (Module 5) Slesnick Symposium 2022 https://www.instructure.com/courses/1591438/assignments/7656592	due by 11:59pm
Mon Oct 31, 2022	 Module 6 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656593	due by 11:59pm
Fri Nov 4, 2022	 Lesson plan final draft https://www.instructure.com/courses/1591438/assignments/7656585	due by 11:59pm
Mon Nov 7, 2022	 Module 7 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656594	due by 11:59pm
Wed Nov 9, 2022	 Moon Observations https://www.instructure.com/courses/1591438/assignments/7657220	due by 11:59pm
Mon Nov 14, 2022	 Module 8 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656595	due by 11:59pm
Tue Nov 22, 2022	 DEI assignment https://www.instructure.com/courses/1591438/assignments/7656580	due by 11:59pm
Mon Nov 28, 2022	 Module 10 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656824	due by 11:59pm
	 Module 9 Learning Journal (complete in OneNote) https://www.instructure.com/courses/1591438/assignments/7656596	due by 11:59pm
Wed Nov 30, 2022	 Personal Inquiry/Wonder part 3 https://www.instructure.com/courses/1591438/assignments/7656599	due by 11:59pm

Date	Details	Due
Tue Dec 6, 2022	 Evidence-Based Self Reflection (in lieu of final exam) (https://www.instructure.com/courses/1591438/assignments/7656581)	due by 10am
	 Final letter grade (https://www.instructure.com/courses/1591438/assignments/7656582)	
	 Participation and Professionalism (https://www.instructure.com/courses/1591438/assignments/7656597)	
	 Roll Call Attendance (https://www.instructure.com/courses/1591438/assignments/7656600)	