

SCED480-Course Syllabus

Classroom/laboratory study of theory, curriculum, science content and processes and effective teaching methods in the context of national and Washington state standards in science and with activities appropriate for the elementary classroom. 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.

Credits: 5

Grade Mode: Letter

Instructor: Alejandro Acevedo-Gutierrez, BIOL 309, aceveda@wwu.edu

Meeting times/location:

Monday/Wednesday and some Fridays from 12:00-13:50 h in SL 230

Office Hours:

Mondays 15:30-16:00 h, Thursdays 13:00-13:30 h, Fridays 10:30-11:00 h, and by appointment.

Practicum School Partner:

To be determined with SCED490 Instructor for Spring 2020.

For a detailed list of activities and assignments week-by-week, visit the [Course Agenda](#).

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

Course Requirements

Science Education 480 demands active participation and a willingness to learn and explore teaching and learning science. It is an investigation-intensive class and will require all students to be prepared each day. Excellent attendance is essential for success in this course.

1. The class is organized around many small and large group class activities during class sessions. Your attendance is necessary not only for your learning but also for the learning of others. In the event you will be missing class, as a professional courtesy you should notify your instructor (and group-members, if applicable) in advance and make an appointment to be informed about missed material and assignments. It is not recommended that you rely on your peers to provide you this information. Note that due to the hands-on and collaborative nature of the in-class activities, it may not be possible to 'make up' missed work in all cases. Absences, even excused absences, 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](#), and meet with the course instructor to negotiate a formal written agreement specifying the work done and the remaining work to complete the course and earn a grade. You can miss up to two classes. Every class after that you miss will result in a lower grade.
2. Late work will be penalized a letter grade for each day late unless you have spoken to me about an unusual situation **PRIOR** to the due date.
3. Written assignments must model appropriate grammar, spelling, usage and punctuation. All written work 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.

Course Goals & Objectives:

In this course, pre-service teachers (you!) will:

1. Examine your beliefs in relation to a vision of effective science teaching and learning
 - Pre-service teachers will critically examine their own sense of wonder and the role of wonder in science and science learning.
2. Deepen your subject matter knowledge for teaching science
 - Pre-service teachers will describe elements of the Nature Of Science (NOS), and explain its importance to science instruction.
 - Pre-service teachers will describe why units are organized around a big idea and how assessment informs instruction.
3. Develop an understanding of learners, learning, and issues of diversity and equity in science
 - Pre-service teachers will be able to identify developmentally appropriate and productive approaches to meet the diverse needs, interests, and abilities of students.
 - Pre-service 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
 - Pre-service teachers will design lessons that reflect *How People Learn* and principles of *Effective Science Instruction* and that align with the *Next Generation Science Standards*
 - *Pre-service teachers demonstrate appropriate design of assessment for formative and summative purposes.*
5. Develop the tools and dispositions to study and learn from teaching
 - Pre-service teachers demonstrate appropriate design of assessment for formative and summative purposes.
 - Pre-service teachers will utilize feedback (from peers/instructors /cooperating teachers) to improve performance.
 - Pre-service teachers will apply different lenses (e.g., instructional frameworks, research) to analyze teaching and learning experiences.

Major 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. Note that in addition to the graded assignments listed below, you will complete a number of assignments that will act as baseline assessments or that as 'works in progress' will not be counted towards your final grade. Weighting of individual assignments towards the final course grade are indicated.

- [Lesson Plan Task \(n/a - nongraded\)](#)
- Class Participation & Professionalism (10%)
- [Reading Responses \(10%\)](#)
- [Science Autobiography \(10%\)](#)
- [Connecting Research & Practice \(10%\)](#)
- [Personal Inquiry/Wondering \(10%\)](#)
- [Group Lesson \(15%\)](#)
- [Individual Lesson \(15%\)](#)
- [Evidence-based self-assessment \(20%\)](#)

Grades: The grading scale is as follows:

| | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|--------|--|
| A 94-100% | A- 90-93% | B+ 87-89% | B 84-86% | B- 80-83% | | | |
| C+ 77-79% | C 74-76% | C- 70-73% | D+ 67-69% | D 64-66% | D- 60-63% | F <60% | |

Note: A grade of C- or lower in this course will require you to re-take SCED480. In addition, you will be asked to meet with your academic advisor for support and to develop an improvement plan.

Texts and required materials:

- Readings and supplemental materials will be provided in class and/or in this Canvas site.
- No textbook is required, however the texts below are suggested resources to support your learning in the course and your future teaching.
 - [Mudpies to Magnets - A Preschool Science Curriculum](#) by Sherwood, Williams, & Rockwell (A sourcebook for activities for young learners)
 - [Making & Tinkering with STEM - Solving Design Challenges with Young Children](#) by Cate Heroman (Features design challenges for ages 3-8, a planning template to create your own, and other resources)
 - [Talking Their Way Into Science](#) by Karen Gallas (A helpful and illustrative guide to science talks with young learners)
 - [Spotlight on Young Children - Exploring Science](#), edited by Amy Shillady (A collection of key articles from [NAEYC](#).)
 - [Nature Education with Young Children - Integrating Inquiry and Practice](#), edited by Daniel Meier & Stehanie Sisk-Hilton (includes ideas for infants through preschool for integrating nature education and science)

Syllabus Policies

This course will adhere to Western's [Syllabi Policies](#) for Academic Honesty, Accommodations, Ethical Conduct with WWU Network and Computing Resources, Equal Opportunity, Student Conduct Code, and Medical Excuse Policy.

Inclusiveness and Respect

You are encouraged to speak up and participate during class. Because the class will represent a diversity of individual beliefs, backgrounds, and experiences, each one of us will respect, appreciate, and embrace every other member of this class.

I am firmly committed to diversity and equality in all areas of life. In this class, I will work to promote an inclusive environment where everyone feels safe and welcome. I recognize that discrimination can be direct or indirect and take place at both institutional and personal levels. I believe that such discrimination is unacceptable and I am committed to providing equality of opportunity for all by eliminating any and all discrimination, harassment, bullying, or victimization. The success of this policy relies on the support and understanding of everyone in this class. We all have a responsibility not to be offensive to each other, or to participate in, or condone harassment or discrimination of any kind. Without failing to speak up, we also have the opportunity to think the best of everyone and give one another the benefit of the doubt.

You need to behave appropriately throughout the course to receive a grade in the class.

Equal Opportunity Rights

You have the right to an educational experience that is free from illegal harassment or discrimination on the basis of race, color, creed, religion, national origin, sex, disability, age, veteran status, sexual orientation, gender identity or expression, marital status or genetic information. If you believe you have experienced harassment or discrimination, inform your instructor or Western's Equal Opportunity Office as soon as possible. The Equal Opportunity Office may be reached at ooo@wwu.edu or (360) 650-3307.

Intellectual Honesty

Science is based on trust. If a scientist states that she carried out a particular study and obtained certain results, the rest of us trust that she did such thing. This is one reason why there is no tolerance for people who are not intellectually honest, and this class will be no exception.

<https://wp.wwu.edu/academichonesty/>

From WWU's web site: 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.

Examples include but are not limited to:

- Using another person's written or spoken words.
- Using information from a World Wide Web site, CD-ROM or other electronic sources.
- Using statistics, graphs, charts and facts without acknowledging the source of the ideas.
- Paraphrasing, which is using someone else's argument without acknowledging the source by imitating the argument using other words.
- [Understanding and Avoiding Plagiarism](#)

Religious Accommodations

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 the specific dates for which they will be absent. "Reasonable accommodation" means that 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](#).

Resources

- *Do you have any concerns about your ability to learn in the classroom or your ability to take assessments in the classroom?* Contact the Disability Access Center for advice, help, and to request accommodation (650-3844 or <https://disability.wvu.edu/>).
- *Do you feel unwell or have a health-related question?* Contact the Health Center (650-3400) or visit the website of Student Health (http://www.wvu.edu/chw/student_health/).
- *Do you have an emotional or psychological concern or question?* Contact the Counseling Center (650-3400) or visit the website of Counseling Services (<http://www.wvu.edu/counseling/>).
- *Do you have a safety concern?* Contact the University Police (650-3555) or visit their website (<http://www.wvu.edu/ps/police/index.shtml>).
- *Do you have a family or personal crisis or emergency?* Contact the Dean of Students (650-3450) or visit their website (<https://wp.wvu.edu/students/>).
- *Have you or someone you know experienced bias of any kind on campus?* Contact the Equal Opportunity Office for advice and help. (<http://www.wvu.edu/eoo/bias-incident-response.shtml>).
- *Do you have concerns related to being an undocumented student?* Contact Student Outreach Services. (<https://wp.wvu.edu/sos/undocumentedstudents/>).
- *Do you have financial difficulties?* Go to the Financial Aid Services Center and schedule an appointment with a financial aid counselor (http://www.finaid.wvu.edu/client_services/pages/contact.php)
- Do you identify as a member of the LGBTQ+ Community? Learn about resources and support by emailing L. K. Langley (they/them/theirs) at L.K.langley@wvu.edu or by visiting <https://lgbtq.wvu.edu/>
- *Do you or someone you know need confidential support related to sexual violence?* Contact CASAS (650-3700 or <https://pws.wvu.edu/consultation-and-sexual-assault-support-casas>), the Student Health Center, and/or the Counseling Center.
- To report sexual violence, please contact University Police, Bellingham Police, and/or the Title IX Coordinator in Western's Equal Opportunity Office (650-3307). Faculty are required to report sex discrimination, including sexual violence that they learn about to the Title IX Coordinator.
- *Are you or someone you know in distress?* Help is available anytime, all the time. <https://suicideprevention.wvu.edu/get-help/>