Course Description
SCED492 is a field-based experience in which WWU students teach science in an elementary classroom. The focus of this course is planning, teaching and assessing middle level science lessons with an authentic audience.

Course Objectives
A. Effective Science Teaching
   • Curriculum: Pre-service teachers will use documents such as standards & curriculum to organize and teach a unit of study around a big idea. They will:
     A. Identify big idea/concept
     B. Develop a storyline/learning progression of sub-concepts that will lead to big idea
     C. Help students connect the sub-concepts to building the bigger idea
   *It is strongly recommended that students do not create any new curriculum for this practicum. While some WWU class time will be provided for planning lessons, time outside of class will be necessary in order to adequately prepare.

   • Instruction: Pre-service teachers will design and teach effective science lessons that:
     A. State clear learning targets of lesson (for Nature of Science and for content)
     B. Elicit initial ideas
     C. Communicate learning target
     D. Engage students with phenomena/data
     E. Use evidence to create claims and critique claims of others
     F. Lead students to make sense of the lesson
     G. Apply science concepts in a new context
   • Instruction: Pre-service teachers will differentiate instruction for individual learners by:
     A. Identifying academic language, and teach appropriate academic language
     B. Making accommodations for students who lack grade level literacy skills

   • Assessment: Pre-service teachers will develop an assessment plan for the unit and lessons incorporating pre-, formative, and summative assessments where appropriate.

B. Professional Growth
   • Pre-service teachers will reflect on their experience and growth over the course of the quarter. Students are expected to progress in their understanding of, and performance as excellent science teachers. The cooperating teacher and instructor will assist each student in evaluating progress through regular informal feedback sessions. Regular attendance and participation in weekly seminars will also contribute towards this reflective goal.
Assignments (Shown with weighting in parentheses)

1. **Reflection Papers:** (20%) Each student will complete a paper reflecting on their initial visit to the cooperating classroom as it relates to the *Observation Guide*. Students will keep observation/anecdotal notes throughout the quarter, and at the end, each student will complete a paper reflecting on his/her personal growth as a teacher of science. See details posted on Canvas.

2. **Learning Progression:** (15%) Each individual will develop a Learning Progression for their science kit, which will serve as an outline for their instruction. Required components of the Learning Progression are: a Big Idea Statement, a logical sequence for lessons that build up to that Big Idea, and Learning Targets for each lesson to be taught.

3. **Lesson Planning and Reflection:** (40%) Individuals will schedule teaching dates with their cooperating teacher. Once the lesson is taught, the lesson plan will be recorded/modified and will include a reflection based on the experience and student assessments. At least 1 complete lesson plans, and 1 partial lesson plan will be submitted over the course of the quarter.

4. **Evidence of Student Learning Project:** (15%) Each individual will give a presentation summarizing how the learning targets fit within the big ideas/standards and how students met the objectives. Samples of student work, copies of assessments, etc. are required to be used as evidence to support the analysis.

5. **Teaching Effectiveness, Participation, & Effort:** (10%) Each student will demonstrate growth in the ability to promote science learning in the classroom. This includes demonstration of strategies outlined in the *Observation Guide*. Feedback on classroom teaching will be given by the cooperating teacher throughout the quarter, and the instructor at least once. Students are expected to incorporate feedback, and communicate professionally with the instructor and cooperating teachers. There will also be opportunities to participate and reflect individually and as a group as we discuss relevant topics and share our experiences in the classroom.

Grades will be calculated according to the following scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>94-100%</td>
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<tr>
<td>A-</td>
<td>90-93%</td>
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<tr>
<td>B+</td>
<td>87-89%</td>
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<tr>
<td>B</td>
<td>84-86%</td>
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<tr>
<td>B-</td>
<td>80-83%</td>
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<tr>
<td>C+</td>
<td>77-79%</td>
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<td>C</td>
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<tr>
<td>C-</td>
<td>70-73%</td>
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<td>D+</td>
<td>67-69%</td>
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<tr>
<td>D</td>
<td>64-66%</td>
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<td>D-</td>
<td>60-63%</td>
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<td>F</td>
<td>&lt;60%</td>
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Policies and expectations

Attendance: Failing to attend class, whether at WWU or the participating school, does a disservice to you, your cooperating teacher and the middle school students. An excused absence must have a valid reason and the instructor and cooperating teacher must be contacted prior to class. Valid reasons include:

- If you are ill and don’t feel well enough to participate in class and/or are contagious,
- A planned trip away from campus that is associated with a school organization (e.g., you are a WWU soccer player traveling to a game in Ellensburg), or
- A family emergency (a letter from the Office of Student Life documenting that the student’s absence from the university is excused will need to be provided after the fact.)

Reasons that are not valid include:

- A family vacation for which your plane ticket was already purchased,
- A dentist appointment,
- Going to the office hours of the instructor for one of your other classes, etc.

In general: you must contact your instructor ahead of time, and you should not assume that an absence can be counted as excused. Each unexcused absence will drop your course grade by 3%. If a student has more than three absences, excused or unexcused, he or she will not be able to pass the course.

Professionalism: Please keep in mind that you are a professional. This should be evident in your behavior and appearance. It is your responsibility to communicate with the cooperating teacher about lesson plans in a timely fashion. 5% will be subtracted from a student’s final grade for each instance of unprofessional conduct, including lack of timely communication. It is also recommended that you elicit feedback whenever possible from your cooperating teacher. If they perceive you as a sincere educator, they are more likely to work with you to improve your professional skills.

Academic Dishonesty Policy
Western Washington University students are responsible for reading, understanding, and following the policy and procedures regarding academic dishonesty as set forth in the WWU Academic Dishonesty Policy and Procedure (see Appendix D of the University Bulletin).

Reasonable Accommodation Policy
It is the policy of Western Washington University to provide reasonable accommodation to the known physical, sensory, or mental limitations of qualified individuals except where such accommodation would impose undue hardship on the institution. To request accommodation, students must contact WWU disability Resources for Students at 360-650-3844 or www.wwu.edu/depts/drs/

References:

*How People Learn: Brain, Mind, Experience and School*

*Benchmarks for Science Literacy (AAAS Project 2061)*, Oxford (1993) [Benchmarks]
http://www.project2061.org/tools/benchol/bolintro.htm
http://www.nap.edu/openbook.php?record_id=9596

*Next Generation Science Standards (NGSS)*
http://www.nextgenscience.org/next-generation-science-standards