Course Inventory Change Request

New Course Proposal

Date Submitted: 11/19/14 1:41 pm

Viewing: CHEM 4910: Chemistry Senior Seminar

Last edit: 01/20/15 8:37 pm

Changes proposed by: kbringhurst

<table>
<thead>
<tr>
<th>Course Prefix:</th>
<th>CHEM 4910</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number:</td>
<td>4910</td>
</tr>
</tbody>
</table>

Effective Semester: Spring 2015

Department: Physical Sciences (PS)

School: School of Science & Technology

Course Title: In Workflow

In Workflow
1. PS Chair
2. SC Admin
3. SC Dean
4. University Curriculum Committee Chair
5. Banner

Approval Path
1. 12/03/14 3:01 pm
   Kelly Bringhurst (kbringhurst): Approved for PS Chair
2. 12/08/14 10:33 am
   Ruth Bruckert (bruckert): Rollback to PS Chair for SC Admin
3. 12/16/14 10:11 am
   Kelly Bringhurst (kbringhurst): Approved for PS Chair
4. 12/16/14 10:58 am
   Ruth Bruckert (bruckert): Approved for SC Admin
5. 01/20/15 8:37 pm
   Sharon Lee (lee_s): Rollback to SC Admin for SC Dean
6. 01/21/15 8:59 am
   Ruth Bruckert (bruckert): Approved for SC Admin
<table>
<thead>
<tr>
<th>Chemistry Senior Seminar</th>
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<tbody>
<tr>
<td><strong>Short Course Title:</strong></td>
<td>Chemistry Senior Seminar</td>
</tr>
<tr>
<td><strong>Credits:</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Workload Factors:</strong></td>
<td>1</td>
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<tr>
<td><strong>Primary Grade Type:</strong></td>
<td>Standard Letter</td>
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<tr>
<td><strong>Secondary Grade Type:</strong></td>
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<tr>
<td><strong>Instructor Permission Required:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Repeatable for Credit:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Schedule Type:</strong></td>
<td>Hrs/Wk: %contact_hours.eschtml%</td>
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<tr>
<td><strong>Catalog Prerequisites?</strong></td>
<td>Yes</td>
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</tbody>
</table>

**Catalog Prerequisites:**
CHEM 2310/2320/2325, Advanced Standing; ENGL 2010 or ENGL 2010A and Instructor Permission.

**Grade Required on Prerequisite(s):**
C

**Corequisites?**
No

**Course/Lab Fee?**
No

**Instruction Index Code:**
NAT202

**GE Status Requested:**
No

**Catalog Description**
A seminar course where students will share their research results or literature searches with fellow students and faculty in written and oral formats.
Course Rotation:
Fall (every)
Spring (every)

Justification for course/change:
This is a senior capstone seminar course that will allow students to study a literature topic or hypothesis-driven research project, and present those results as a seminar to faculty and students. As a result, the students will compile years of their studies in chemistry into a comprehensive study of their topic of interest.

Library Resources Adequate: Yes
Tech Resources Adequate: Yes

Comparable Courses:
(use USHE course first)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Prefix/Number</th>
<th>Credit(s)</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SUU</td>
<td>CHEM 4990</td>
<td>1</td>
<td>Chemistry Literature/Seminar</td>
</tr>
<tr>
<td>WSU</td>
<td>CHEM 4990</td>
<td>1</td>
<td>Senior Seminar</td>
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<tr>
<td>UVU</td>
<td>CHEM 490R</td>
<td>2</td>
<td>Chemistry Seminar</td>
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</tbody>
</table>

Course Learning Outcomes:
1. Use the scientific method to develop hypotheses, search literature or utilize results from experimentation, and defend in an oral presentation to faculty and students
2. Become extremely familiar with using literature to support a topic or idea and discuss pros/cons and scientific validity of prior results
3. Communicate results and discuss relevant scientific topics in oral presentations in a scientific group setting
4. Interact with other students and faculty that are engaged in scientific discussion to analyze data, results, and different perspectives, participate in scientific discussion
5. Utilize outside resources (scientific databases, literature, etc.) to help interpret results and compare to existing and previous work in the field
6. Prepare written reports that effectively summarize a chosen scientific topic using the vast literature and compiled data

How do your Course Learning Outcomes align to your Program Learning Outcomes?
Physical Science Learning Outcomes:
1. Will be able to demonstrate knowledge of the skills required to make informed personal and social decisions about the issues that we will face locally as well as globally.
2. Will be able to demonstrate knowledge of basic fundamental laws, concepts, and theories in the physical sciences and be able to apply them to everyday life.
3. Will understand the process of science — how scientific knowledge is generated and validated — so that they can make independent, empirical inquiries about the natural world.
4. Will be able to demonstrate knowledge of the process of science by being able to interpret data in the form of tables, graphs, and charts and then communicate those findings in oral and or written form.

CLO #1 aligns with PLO # 2, 3, 4
CLO #2 aligns with PLO # 1, 4
CLO #3 aligns with PLO # 2, 4
CLO #4 aligns with PLO # 3, 4
CLO #5 aligns with PLO # 3, 4
CLO #6 aligns with PLO # 1, 2, 3, 4

Schedule of lessons
activities that meet
Course Learning
Outcomes
Students will be required the first half of the semester to attend chemistry seminars and write up a report describing what the seminars were about. The second half of the semester students will evaluate their fellow students presenting their own literature or research seminars and evaluate the presentations for content and communication skills. Students will each present a literature or research seminar and write a one page paper on their topic.

Assessment activities
that provide
evidence of student
learning
Assessment of student learning will be on completeness and competency shown on seminar evaluations. Assessment on the student’s own research and communication skills during their oral presentation. Written communication will be assessed using the student’s written report turned in at the end of the semester. The student’s written and oral report will also provide an overall summary of the student’s progress at the end of the semester.

Course Reviewer
Comments
bruckert (12/08/14 10:33 am): Rollback: See Sharon Lee’s 12 4 14 email.
lee_s (01/20/15 8:37 pm): Rollback: slee: By putting the Grade of C on the prereq, CourseLeaf is going to assess the C on ALL courses in the prerequisite. Is this what Kelly intended?