<table>
<thead>
<tr>
<th>Department/Program Goals</th>
<th>Related College Goals</th>
<th>Related University Goals</th>
<th>Method(s) of Assessment (What is the assessment?)</th>
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<th>When Assessed (term, dates)</th>
<th>Criterion of Achievement (Expectation of how good things should be?)</th>
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<tr>
<td>1. Offer excellent instruction in chemistry to meet the needs of the variety of</td>
<td>Goal 1</td>
<td>Goal 1</td>
<td>- SEOI&lt;br&gt;- Peer teaching evaluations&lt;br&gt;- Student exit portfolios&lt;br&gt;- Student exit surveys&lt;br&gt;- Alumni surveys&lt;br&gt;- ACS exam scores</td>
<td>- Major programs and curricula&lt;br&gt;- Chemistry faculty</td>
<td>- Quarterly SEOI.</td>
<td>- Maintain ACS accreditation&lt;br&gt;- The teaching performance of all faculty rated satisfactory or better during annual performance reviews.&lt;br&gt;- SEOI ratings for teaching effectiveness at or above university average.&lt;br&gt;- ACS exam scores of chemistry majors at or above national averages.&lt;br&gt;- All exit and alumni surveys reflect student satisfaction and confidence in the chemistry training received at CWU.&lt;br&gt;- Routine dissemination of courses through distance education.</td>
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<td>undergraduate and graduate students the department serves.</td>
<td>Goal 3</td>
<td>Goal 3</td>
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<td></td>
<td>Goal 5</td>
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<td>Goal 6</td>
<td>Goal 6</td>
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<tr>
<td>2. Maintain and update instrument, equipment and computing resources for the quality</td>
<td>Goal 1</td>
<td>Goal 1</td>
<td>- Monitor age and performance of chemistry instrumentation and software</td>
<td>- Student and research laboratory facilities&lt;br&gt;- Student computing facilities</td>
<td>- Routinely by instrument technicians.</td>
<td>- All instrumentation and software are modern by the current standards of the discipline.&lt;br&gt;- All instrumentation and software are routinely replaced or upgraded as needed.</td>
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<td>instruction of graduate and undergraduate students.</td>
<td>Goal 4</td>
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<td>Goal 6</td>
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<td>3. Increase the quality and diversity of undergraduate majors in the various chemistry</td>
<td>Goal 1</td>
<td>Goal 1</td>
<td>- Number of faculty searches conforming to OEO guidelines for recruiting woman and minority faculty&lt;br&gt;- Diversity of student population in chemistry relative to regional</td>
<td>- Chemistry majors, minors, and graduate students&lt;br&gt;- Chemistry faculty&lt;br&gt;- Faculty activities</td>
<td>- Annual department retreat.</td>
<td>- All faculty searches conform to OEO guidelines.&lt;br&gt;- Diversity of student population is reflective of regional and university demographics.&lt;br&gt;- At least one-third of faculty involved in outreach activities or STEP program.</td>
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<td>4. Maintain a high quality graduate program in chemistry.</td>
<td>Goal 1</td>
<td>Goal 3</td>
<td>Goal 4</td>
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<td>Goal 6</td>
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<td></td>
<td>- Number of students enrolled in MS program</td>
<td>- Number and variety of graduate courses offered per year</td>
<td>- Dollar amount and number of graduate student stipends</td>
<td>- Dollar amount and number of research grants within the department</td>
<td>- Number of publications produced by research groups in the chemistry department</td>
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<tr>
<td>Goal 1</td>
<td>Goal 1</td>
<td>Goal 3</td>
<td>Goal 4</td>
<td>Goal 5</td>
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<td>- M.S. program and curriculum</td>
<td>- Faculty research programs</td>
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<td>- Annual department retreat.</td>
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<td>5. Maintain an enthusiastic and active faculty.</td>
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<td>Goal 3</td>
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<td>Goal 5</td>
<td>Goal 6</td>
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<td></td>
<td>- Faculty teaching loads.</td>
<td>- Dollar amount and number of research grants within the department</td>
<td>- Number of publications produced by research groups in the chemistry department</td>
<td>- Faculty performance review</td>
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<td>Goal 1</td>
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<td>Goal 4</td>
<td>Goal 5</td>
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<td></td>
<td>- Faculty research programs</td>
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<td>- Teaching loads reviewed quarterly.</td>
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<td>- Annual department retreat.</td>
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<td>- Teaching loads are reflective of individual professor’s needs and are in alignment with ACS accreditation.</td>
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<td>- Every research group is supported by internal or external grant funds.</td>
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<td>- At least two peer reviewed articles are published in international scientific journals by the chemistry department each year.</td>
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<td>- Faculty performance review</td>
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| 6. Maintain an enthusiastic, active staff. | Goal 1 Goal 3 Goal 4 | Goal 1 Goal 3 Goal 6 | - Amount of funding available for professional development of staff  
- Number of training sessions, workshops, or other professional development functions attended by staff  
- Staff performance review  
- Number of staff attending department meetings | - Chemistry department staff  
- Staff support opportunities | - Annual department retreat. | - Sufficient funding is available for all staff to explore professional development opportunities.  
- At least one staff member participates in a professional development opportunity each year.  
- Annual review of staff performance reflect a record of continued growth and achievement  
- 100% of staff attend all department meetings |
| 7. Serve the academic community and the general public through scholarly research and service activities. | Goal 1 Goal 3 Goal 4 Goal 5 | Goal 1 Goal 4 Goal 5 | - Dollar amount and number of research grants within the department  
- Number of publications produced by research groups in the chemistry department  
- Number of faculty memberships in professional organizations / societies  
- Number of faculty attending professional conferences  
- Number of outreach programs involving chemistry faculty  
- Number of faculty involved in outreach programs | - Faculty  
- Faculty research programs | - Every research group is supported by internal or external grant funds.  
- At least two peer reviewed articles are published in international scientific journals by the chemistry department each year.  
- All faculty are members of at least one professional organization / society.  
- At least half of chemistry faculty attend at least one professional conference each year.  
- Department actively involved in at least three outreach activities each year.  
- At least one-third of faculty involved in outreach activities or STEP program. |
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<td>- Grades in relevant courses - Student exit portfolio - Student exit survey - Alumni survey - ACS content exams</td>
<td>- Chemistry majors in all required courses for BS degree in chemistry</td>
<td>- Quarterly - Annual review of student exit portfolios.</td>
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<td>- Chemistry majors in all required courses for BS degree in chemistry. Course exams require some short answer as well as drawing of chemical structures and diagrams - CHEM 183 Lab (written abstracts) - CHEM 361 Lab, 363 Lab, 382 Lab, 383 Lab, 431 Lab, 452 Lab (full or partial lab reports; brief oral presentations) - CHEM 295, 395 or 495, student research reports - CHEM 388 poster presentation - CHEM 488 oral presentation</td>
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### 3. Demonstrate critical thinking skills that utilize qualitative and quantitative problem solving.

- Grades in relevant courses
- ACS content exams
- Chemistry majors in all required courses for BS degree in chemistry
- Quarterly
- Annual review of student exit portfolios.
- Graduates maintain 2.0 for course average and an average of 2.25 in courses within the major.
- ACS exams consistent with national averages

### 4. Use computers and the modern software of the discipline.

- Grades in laboratory courses
- Grades in CHEM 388 and CHEM 48
- Student exit portfolio
- Chemistry majors in laboratory courses. These courses require the use of software for instrumentation control, data analysis, and reporting.
- CHEM 388 and 488
- Chemistry majors submitting exit portfolios (all majors)
- Quarterly
- Annual review of student exit portfolios.
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- All students receive a grade of C+ or better on their oral presentation in CHEM 488.
- The research or lab report component in the students’ portfolio will be rated at satisfactory or higher.

### 5. Retrieve and critically analyze chemical literature.

- Course grades in:
  - CHEM 388
  - CHEM 488
  - Student Research CHEM 295, CHEM 395, and/or CHEM 495
  - Student exit portfolio
- CHEM 388
- CHEM 488
- CHEM 295, 395 or 495 (research)
- Chemistry majors submitting exit portfolios (all majors)
- Quarterly
- Annual review of student exit portfolios.
- All students receive a grade of C+ or better on their poster presentation in CHEM 388.
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### 6. Practice health and safety protocols that are integral to the discipline.

- Grades in laboratory courses
- Chemistry majors in laboratory courses.
- Chemistry majors working in research labs.
- Quarterly
- All students receive a grade of C+ or better in laboratory courses.
- All research students receive a grade of B or better.
| 7. Work effectively in group situations. | Goal 1 | Goal 1 | Goal 1 | Goal 6 | - Grades in laboratory courses  
- Grades in student research courses: CHEM 295, CHEM 395, and/or CHEM 495  
- Exit Survey | - Quarterly review of student exit portfolios. | - All students receive a grade of C+ or better in laboratory courses.  
- All research students receive a grade of B or better.  
- Reflective assessment in student exit portfolio. |

*Method(s) of assessment should include those that are both direct (tests, essays, presentations, projects) and indirect (surveys, interviews) in nature

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<td>- Chemistry majors in all required courses for BA degree in chemistry</td>
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| 4. Use computers and the modern software of the discipline. | Goal 1  
Goal 2 | Goal 1 | Goal 1 | - Grades in laboratory courses  
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- CHEM 388  
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| 6. Practice health and safety protocols that are integral to the discipline. | Goal 1 | Goal 1 | Goal 1 | - Grades in laboratory courses  
- Chemistry majors in laboratory courses.  
- Chemistry majors working in research labs.  
- Quarterly | - All students receive a grade of C+ or better in laboratory courses.  
- All research students receive a grade of B or better. |
| 7. Work effectively in group situations. | Goal 1 Goal 3 | Goal 1 Goal 7 | Goal 1 Goal 6 | - Grades in laboratory courses  
- Grades in student research courses: CHEM 295, CHEM 395, and/or CHEM 495  
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<td>Demonstrate an ability to individually and collaboratively engage in inquiry and integrate the nature of science.</td>
<td>SCED Goal 1, 3, 4 CHEM Goal 1</td>
<td>COTS Goal 1, 4, 6</td>
<td>CWU Goal 1, 6</td>
<td>Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey</td>
<td>All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</td>
<td>End of major/minor program, prior to student teaching</td>
<td>Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</td>
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<td>Explain and apply fundamental science content concepts, principles, and methods.</td>
<td>SCED Goal 1, 3, 5 CHEM Goal 1</td>
<td>COTS Goal 1, 4, 6</td>
<td>CWU Goal 1, 6</td>
<td>Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey</td>
<td>All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</td>
<td>End of major/minor program, prior to student teaching</td>
<td>Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp Assessment.</td>
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| Demonstrate an ability to effectively facilitate learning for all students. | SCED Goal 2, 3, 4, CHEM Goal 1 | COTS Goal 1, 6 | CWU Goal 1, 6 | • Science Program major/minor teaching portfolio, entry to and exit from program survey  
• Practicum field observation  
• WA pedagogy assessment | • All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students | 324 | • Student teaching  
• SCED 324 portfolio performance benchmark proficiency  
• All standards met for WA Pedagogy Assessment |
| Create safe, effective learning environments that support inquiry, collaboration, intellectual risk-taking, ethical decision-making, and student | SCED Goal 1, 2, 3, 4, CHEM Goal 1 | COTS Goal 1, 6, 7 | CWU Goal 1, 6 | • Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey  
• Practicum field | • All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students | • End of major/minor program, prior to student teaching  
• SCED 324  
• Student teaching  
• Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.  
• SCED 324 portfolio performance benchmark proficiency  
• All standards met for WA Pedagogy Assessment |
| Demonstrate an ability to assess teaching and learning outcomes using multiple methods, effectively evaluate teaching and learning effectiveness, and improve practice based on reflection and data. | SCED Goal 2, 3, 4, 7, 8 CHEM Goal 1 | COTS Goal 1, 6 | CWU Goal 1, 6 | • Science Program major/minor teaching portfolio, entry to and exit from program survey  
• Practicum field observation  
• WA pedagogy assessment | • All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students | • End of major/minor program, prior to student teaching  
• SCED 324  
• Student teaching | Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.  
• SCED 324 portfolio performance benchmark proficiency  
• All standards met for WA Pedagogy Assessment |
| Demonstrate an ability to make science personally and socially relevant to individual and community by incorporating current events | SCED Goal 1, 2, 4 CHEM Goal 1 | COTS Goal 1, 5, 6 | CWU Goal 4, 6 | • Science Program major/minor teaching portfolio, entry to and exit from program survey  
• Practicum field | • All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students | • End of major/minor program, prior to student teaching | Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.  
• SCED 324 portfolio performance benchmark proficiency  
• All standards met for WA Pedagogy Assessment |
within collaborative and social networks.

| Participate in a variety of activities that enhance professional development and improve teaching effectiveness. | SCED Goal 2, 7, 8 CHEM Goal 1 | COTS Goal 1, 6 | CWU Goal 1, 6 | • Science Program major/minor teaching portfolio, entry to and exit from program survey  
• Practicum field observation  
• WA pedagogy assessment | • All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students | • End of major/minor program, prior to student teaching  
• SCED 324  
• Student teaching | • Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.  
• SCED 324 portfolio performance benchmark proficiency  
• All standards met for WA Pedagogy Assessment |

*Method(s) of assessment should include those that are both direct (tests, essays, presentations, projects) and indirect (surveys, interviews) in nature

**Data needs to be collected and differentiated by location (Ellensburg campus vs University Centers – see NWCCU standard 2.B.2)

***Timing of assessment should be identified at different transition points of program (i.e., admission, mid-point, end-of-program, post-program)