Outcome 1: Chemical knowledge: Students should have competence in the following basic chemical knowledge areas: Atomic and molecular structure, stoichiometry, periodicity, stereochemistry, thermodynamics, reaction kinetics, synthetic transformations, nomenclature, equilibria, spectroscopy, electrochemistry, oxidation-reduction, chemical and physical properties, and solutions.

Measure 1.1: Scores of graduating seniors on ETS-MFT in chemistry, which is required for all students enrolled in CHEM 4190, Senior Seminar, a required course for all chemistry majors.

Performance Criterion 1.1: Our group cohort will meet or exceed 50 percentile scores of the national average.

Yes ☐ No ☒ X ☒ Do your data indicate that this Performance Criterion was met? Ave score = 64.5

If “yes,” use this space to discuss any components of the program that you believe contributed to this result. What does this tell you about student learning in this program?

If “no,” use this space to discuss any components of the program that you believe contributed to this result. What does this tell you about student learning in this program?

The overall average for the cohort was above the 50th percentile. However, there were 3 students that scored significantly lower than the rest of the cohort. These students were all BA majors confirming that the BA program does not provide the depth of the BS program.
Outcome 2:  **Scientific inquiry competence:** Graduating majors will have obtained the ability to carry out an independent library or laboratory research project, and to present their results in both a written and oral presentation using modern technology (e.g. Microsoft Word, Power Point, etc.)

**Measure 1.1:** Students will give oral and poster presentations to faculty and students during their senior year when they are required to take CHEM 4190, Senior Seminar.

| 9 | Number of students included in data collection for this measure.

**Sampling strategy used for this measure.**

We used chem 4190 grades

**Performance Criterion 1.1:** Passing grade in capstone course, CHEM 4190

Yes [X] No [ ] Do your data indicate that this Performance Criterion was met?

If “yes,” use this space to discuss any components of the program that you believe contributed to this result. What does this tell you about student learning in this program?

Having students give posters along with their oral presentations gave them a chance to discuss the material with professors in more detail.

If “no,” use this space to discuss any components of the program that you believe contributed to this result. What does this tell you about student learning in this program?

Please describe any programmatic changes that are planned as a result of these findings. Please include a brief rationale for those changes and the timeline for implementation. How will these changes impact student learning?

Please describe any changes in your assessment processes that are planned as a result of these findings. Please include a brief rationale for those changes. How will these changes impact your ability to measure student learning?

Please outline your 2013 assessment plan below. Please include a minimum of two, and not more than five, outcomes.

<table>
<thead>
<tr>
<th>OUTCOME 1</th>
<th>Chemical knowledge: Students should have competence in the following basic chemical knowledge areas: Atomic and molecular structure, stoichiometry, periodicity, stereochemistry, thermodynamics, reaction kinetics, synthetic transformations, nomenclature, equilibria, spectroscopy, electrochemistry, oxidation-reduction, chemical and physical properties, and solutions.</th>
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<td>Measure 2.1</td>
<td>Students will give oral and poster presentations to faculty and students during their senior year when they are required to take CHEM 4190, Senior Seminar.</td>
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<tr>
<td>Performance Criterion 2.1</td>
<td>Passing grade in capstone course, CHEM 4190</td>
</tr>
</tbody>
</table>