Directions: Please complete this form to document your progress toward improving student learning. For each item, indicate your progress and your anticipated next steps. Thank you!

Course/Program Title: CHM105 Introductory Organic Chemistry

Date: January 2015

Course/Program Team: N. Thorpe, Adjuncts

Expected Learning Outcomes
1. Solve a variety of problems posed in organic chemistry by using quantitative and qualitative reasoning skills.
2. Communicate organic chemistry concepts in writing while using appropriate technology and proper terminology.
3. Synthesize and analyze chemical compounds and use instruments to collect and evaluate empirical data to substantiate chemical concepts.
4. Relate organic chemistry to current events, professional life, and our natural world.

Assessment (How do or will students demonstrate achievement of each outcome? Please attach a copy of your assessment electronically.)
1. In-class exams and quizzes with combination of multiple-choice, short answer, and essay.
2. Written laboratory worksheets with a grading rubric.
3. Written laboratory mid-term and final exams.
4. Various homework assignments.
5. Comprehensive final exam.

Validation (What methods have you used or will you use to validate your assessment?)
We offer only one section of this course once per year so we have only been using our standard exams. For the future we will look into the American Chemical Society (ACS) exam for this course.

Results (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)
This is the first time we are reporting any data for this course. We are still working on the process. Instructor has noted that students are weakest in understanding reactions and reaction mechanisms. This course was not taught in Spring 2014 or 2015, so no further data has been collected.

Follow-up (How have you used or how will you use the data to improve student learning?)
Instructors will use the detailed analysis of the exams to help improve their teaching styles and content delivery for the course. Instructor will need to emphasize and incorporate more reaction chemistry and reaction mechanisms into the course material.

Budget Justification (What resources are necessary to improve student learning?)
We will need resources to purchase any standardized exams we decided to use.

<table>
<thead>
<tr>
<th>Course: CHM 105</th>
<th>SLOA Data</th>
<th>Faculty Team: N. Thorpe</th>
</tr>
</thead>
<tbody>
<tr>
<td># Active students</td>
<td>4</td>
<td>SP 2013</td>
</tr>
<tr>
<td>%W</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>% Walk-away Fs</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>No final exam/grade = F</td>
<td></td>
<td></td>
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<tr>
<td>% Success (A,B,C)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Mean Common Lab Practical Score</td>
<td>88.6</td>
<td></td>
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<tr>
<td>Common Comprehensive Final Exam Score</td>
<td>83.1</td>
<td></td>
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<tr>
<td>Mean course grade</td>
<td>90.7</td>
<td></td>
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<tr>
<td><strong>Item Analysis</strong> <strong>Weakest Content Areas</strong></td>
<td>Reactions--students did not grasp the concept of the reactions; even trying to break it down was difficult</td>
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*% Walk-away Fs = Did not take the final exam and received a grade of F.*

**Content Areas**
Learning outcomes #1 and 2 need more work, especially in the area of reactions. One way of communicating in chemistry is through the ability to read and write an equation that represents a reaction. More emphasis will need to be placed in this area.