



**College of Arts and Sciences**  
**Ph.D. in Chemistry**  
*Assessment Plan Form*

**Date Plan was Approved by Department: Spring, 2016**

**Name of Persons Submitting Plan: John I Gelder, Allen Aplett, and Ron Rahaim**

**A. Program Information:**

**Assessment Coordinator's Name: John I Gelder**

**Assessment Coordinator's Email Address: john.gelder@okstate.edu**

**B. Program Mission Statement**

**In the box below, provide the mission statement for the program.**

*The mission statement, educational objectives, and goals for program should guide the assessment process. The mission statement should align with department, college, and institutional mission statements.*

- A. The Department of Chemistry at Oklahoma State University: promotes the advancement and dissemination of knowledge that is central to many science reliant degree programs both within A&S and across College lines; nurtures the growth of future scientists through undergraduate and graduate research; supports creative endeavors in innovative instruction paradigms and scientific research by faculty and staff; enriches civilization by contributing to education and new technological developments.

**C. Student Learning Outcomes**

On the pages that follow, list the Student Learning Outcomes associated with the program identified in this assessment form.

**C1) Student Learning Outcome #1: *Comprehension of fundamental principles:*** Program graduates will demonstrate comprehension of fundamental chemical principles covering: Analytical, Inorganic, Organic, Physical Chemistry and/or recognized areas of chemistry that involve a blend of biology and chemistry.

**Identify opportunities for students to learn this outcome during the academic program:**

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

Graduate student enroll in approximately 20 credit hours of graduate courses in their field of concentration and related areas. These courses are taken, and completed during their first two years of enrollment in the Ph.D. program.

**How will students be selected to participate in the assessment of this outcome?**

**Depending on the course selected, all students in that course will be assessed using Rubric I attached to the end of this document.**

#### Assessment Methods

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Survey  | <input type="checkbox"/> Satisfaction Survey  | <input type="checkbox"/> Internship  |
| <input checked="" type="checkbox"/> Rating of skills (e.g., rubrics)           | <input type="checkbox"/> Benchmarking   | <input type="checkbox"/> Interviews  |
| <input checked="" type="checkbox"/> Analysis of written artifacts              | <input type="checkbox"/> Measuring effectiveness relative to professional standards | <input type="checkbox"/> Performance or jury   |
| <input type="checkbox"/> Comprehensive, certification, or professional exam(s) | <input type="checkbox"/> Review of thesis/dissertation/ creative component          | <input type="checkbox"/> Visual collection (photos, videos, etc.)                          |
| <input type="checkbox"/> Oral presentation                                     | <input type="checkbox"/> Capstone project   | <input type="checkbox"/> Review of student research  |
| <input type="checkbox"/> Course project  |   | <input type="checkbox"/> Other (please specify):<br><a href="#">Click here to specify.</a> |

**Describe the how the assessment method will be implemented, administered, and/or conducted.**

Student artifacts will be collected during the semester students are enrolled in the particular course selected for this LO. Student names will be redacted from the artifacts. A list of course goals will be provided by the division the course is associated with (analytical, inorganic, organic, physical, biological chemistry). Artifacts will be reviewed and the characteristics listed in Rubric I will be assessed.

**Does your department/program faculty have a goal set for this learning outcome?**  Yes  No

*For example, "80% of students included in the assessment will receive a 4 on the rubric" or "80% of students included in the assessment will achieve a passing score on the certification exam." If yes, please describe the goal below.*

75% of students assessed will receive a 4 on the rubric.

#### Timeline for Planned Assessment

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*

- |   |                                 |  |
|---|---------------------------------|--|
| <input type="checkbox"/> Each Semester  | <input type="checkbox"/> Yearly | <input checked="" type="checkbox"/> Every other year |
| <input type="checkbox"/> Other (please specify): If the assessment of Learning Outcome 1 occurs on a cycle or rotation, click here to describe and provide the rationale. |                                 |  |

**C2) Student Learning Outcome #2: Oral communication skills:** This outcome will be assessed during each student's CHEM 5011 and 6011 seminar, proposal defense and public presentation of the dissertation. Each faculty member on the student's advisory committee will independently apply a rubric (Rubric II) to evaluate application of the scientific method and effectiveness of communication, and these individual evaluations will be averaged per student.

**Identify opportunities for students to learn this outcome during the academic program:**

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

All students enrolled in the Ph.D. program, during their enrollment at OSU must complete CHEM 5011 and 6011 seminar, a proposal defense and public presentation of the dissertation.

**How will students be selected to participate in the assessment of this outcome?**

All students enrolled in the Ph.D. program will be included in the measurement of this LO.

**Assessment Methods**

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Survey  | <input type="checkbox"/> Satisfaction Survey  | <input type="checkbox"/> Internship                               |
| <input checked="" type="checkbox"/> Rating of skills (e.g., rubrics)           | <input type="checkbox"/> Benchmarking   | <input type="checkbox"/> Interviews                               |
| <input type="checkbox"/> Analysis of written artifacts                         | <input type="checkbox"/> Measuring effectiveness relative to professional standards | <input type="checkbox"/> Performance or jury                      |
| <input type="checkbox"/> Comprehensive, certification, or professional exam(s) | <input type="checkbox"/> Review of thesis/dissertation/ creative component          | <input type="checkbox"/> Visual collection (photos, videos, etc.) |
| <input checked="" type="checkbox"/> Oral presentation                          | <input type="checkbox"/> Capstone project   | <input type="checkbox"/> Review of student research               |
| <input type="checkbox"/> Course project  |   | <input type="checkbox"/> Other (please specify):                  |
- [Click here to specify.](#)

**Describe the how the assessment method will be implemented, administered, and/or conducted.**

Faulty attending the student's 5011 and 6011 seminar will use the CHEM 5011 and 6011 rubric at the end of this document as their method of assessment. Their responses will be collected by the faculty member responsible for the CHEM 5011 and 6011. A similar rubric for the Candidacy Exam and Final Thesis Defense will be used during those oral presentations. Copies of the committee's review will be provided to the department's assessment committee.

**Does your department/program faculty have a goal set for this learning outcome?**     Yes     No

*For example, "80% of students included in the assessment will receive a 4 on the rubric" or "80% of students included in the assessment will achieve a passing score on the certification exam." If yes, please describe the goal below.*

75% of students assessed will receive a 4 on the rubric.

**Timeline for Planned Assessment**

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*

- |  |                                 |   |
|--|---------------------------------|---|
| <input type="checkbox"/> Each Semester | <input type="checkbox"/> Yearly | <input type="checkbox"/> Every other year |
|--|---------------------------------|---|
- Other (please specify): The time frame for a student's completion of the four components of this LO will depend on the student's progress. However, a typical student would complete their CHEM 5011 seminar during their 2<sup>nd</sup> year of residency, their Candidacy Exam during their third or fourth year, and their CHEM 6011 and Final Defense during their fourth or fifth year.

### C3) Student Learning Outcome #3: *Written communication skills:*

The committee will collect written examples of the students' written work. Examples could include: reports/reviews as requested by the supervising faculty member, dissertations, poster presentations and publications of student's research.

#### Identify opportunities for students to learn this outcome during the academic program:

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

These skills would be developed in course work, and their research as guided by their major professor/mentor.

#### How will students be selected to participate in the assessment of this outcome?

Faculty will be invited to submit work of students in their research group and from graduate courses they teach on an annual basis.

#### Assessment Methods

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Survey  | <input type="checkbox"/> Satisfaction Survey  | <input type="checkbox"/> Internship  |
| <input checked="" type="checkbox"/> Rating of skills (e.g., rubrics)           | <input type="checkbox"/> Benchmarking   | <input type="checkbox"/> Interviews  |
| <input checked="" type="checkbox"/> Analysis of written artifacts              | <input type="checkbox"/> Measuring effectiveness relative to professional standards   | <input type="checkbox"/> Performance or jury   |
| <input type="checkbox"/> Comprehensive, certification, or professional exam(s) | <input checked="" type="checkbox"/> Review of thesis/dissertation/ creative component | <input type="checkbox"/> Visual collection (photos, videos, etc.)                          |
| <input type="checkbox"/> Oral presentation                                     | <input type="checkbox"/> Capstone project   | <input checked="" type="checkbox"/> Review of student research                             |
| <input type="checkbox"/> Course project  |   | <input type="checkbox"/> Other (please specify):<br><a href="#">Click here to specify.</a> |

#### Describe the how the assessment method will be implemented, administered, and/or conducted.

Faculty will be invited to submit work of students in their research group and from graduate courses they teach on an annual basis.

Does your department/program faculty have a goal set for this learning outcome?  Yes  No

*For example, "80% of students included in the assessment will receive a 4 on the rubric" or "80% of students included in the assessment will achieve a passing score on the certification exam." If yes, please describe the goal below.*

75% of students assessed will receive a 4 on the rubric.

#### Timeline for Planned Assessment

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*

- |   |                                 |  |
|---|---------------------------------|--|
| <input type="checkbox"/> Each Semester  | <input type="checkbox"/> Yearly | <input checked="" type="checkbox"/> Every other year |
| <input type="checkbox"/> Other (please specify): If the assessment of Learning Outcome 3 occurs on a cycle or rotation, click here to describe and provide the rationale. |                                 |  |

**C4) Student Learning Outcome #4: Laboratory Practice, Information resources, Safety Practices and Ethics** Each faculty supervising these activities will identify and assess their student's laboratory skills and use of instrumentation.

**Identify opportunities for students to learn this outcome during the academic program:**

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

As a guide each faculty member will provide a list or appropriate techniques and instrumentation used by their students, along with an assessment.

**How will students be selected to participate in the assessment of this outcome?**

Students within a particular faculty member's research group would be assessed annually.

**Assessment Methods**

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Survey                                     | <input type="checkbox"/> Satisfaction Survey   | <input type="checkbox"/> Internship                               |
| <input checked="" type="checkbox"/> Rating of skills (e.g., rubrics)           | <input type="checkbox"/> Benchmarking  | <input type="checkbox"/> Interviews                               |
| <input type="checkbox"/> Analysis of written artifacts                         | <input checked="" type="checkbox"/> Measuring effectiveness relative to professional standards | <input type="checkbox"/> Performance or jury                      |
| <input type="checkbox"/> Comprehensive, certification, or professional exam(s) | <input type="checkbox"/> Review of thesis/dissertation/ creative component                     | <input type="checkbox"/> Visual collection (photos, videos, etc.) |
| <input type="checkbox"/> Oral presentation                                     | <input type="checkbox"/> Capstone project  | <input checked="" type="checkbox"/> Review of student research    |
| <input type="checkbox"/> Course project  |  | <input type="checkbox"/> Other (please specify):                  |
- [Click here to specify.](#)

**Describe the how the assessment method will be implemented, administered, and/or conducted.**

Individual faculty would rank their research students based on their level of expertise based on projects students are working on. This aspect of a student's skills would be reported in the annual graduate student review survey.

**Does your department/program faculty have a goal set for this learning outcome?**  Yes  No

*For example, "80% of students included in the assessment will receive a 4 on the rubric" or "80% of students included in the assessment will achieve a passing score on the certification exam." If yes, please describe the goal below.*

75% of students assessed will receive a 4 on the rubric

**Timeline for Planned Assessment**

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Each Semester | <input checked="" type="checkbox"/> Yearly | <input type="checkbox"/> Every other year |
|--|--|---|
- Other (please specify): If the assessment of Learning Outcome 4 occurs on a cycle or rotation, click here to describe and provide the rationale.

### 1. C5) Student Learning Outcome #5: Teaching

Graduate teaching assistants will be reviewed at the end of each semester. Each teaching assistant will be reviewed by their supervising faculty member as to their ability in the following area: supervising laboratory and/or recitation sections; evaluate students; timely submission of student progress data; attending staff meeting, proctoring exams and overall attitude towards teaching.

#### Identify opportunities for students to learn this outcome during the academic program:

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

Those graduate students supported by a teaching assistantship would be interacting with undergraduate students enrolled in the department's undergraduate chemistry courses.

#### How will students be selected to participate in the assessment of this outcome?

Those graduate students with teaching assistantships.

#### Assessment Methods

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> Survey                                     | <input type="checkbox"/> Satisfaction Survey   | <input type="checkbox"/> Internship  |
| <input checked="" type="checkbox"/> Rating of skills (e.g., rubrics)           | <input type="checkbox"/> Benchmarking  | <input type="checkbox"/> Interviews  |
| <input type="checkbox"/> Analysis of written artifacts                         | <input checked="" type="checkbox"/> Measuring effectiveness relative to professional standards | <input type="checkbox"/> Performance or jury   |
| <input type="checkbox"/> Comprehensive, certification, or professional exam(s) | <input type="checkbox"/> Review of thesis/dissertation/ creative component                     | <input type="checkbox"/> Visual collection (photos, videos, etc.)                          |
| <input type="checkbox"/> Oral presentation                                     | <input type="checkbox"/> Capstone project  | <input type="checkbox"/> Review of student research  |
| <input type="checkbox"/> Course project  |  | <input type="checkbox"/> Other (please specify):<br><a href="#">Click here to specify.</a> |

#### Describe the how the assessment method will be implemented, administered, and/or conducted.

Those faculty supervising their teaching assistants would complete a teaching assistant survey for only the students assigned to them.

#### Does your department/program faculty have a goal set for this learning outcome? Yes No

*For example, "80% of students included in the assessment will receive a 4 on the rubric" or "80% of students included in the assessment will achieve a passing score on the certification exam." If yes, please describe the goal below.*

75% of students assessed will receive a 4 on the rubric

#### Timeline for Planned Assessment

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*

- |   |                                 |   |
|---|---------------------------------|---|
| <input checked="" type="checkbox"/> Each Semester   | <input type="checkbox"/> Yearly | <input type="checkbox"/> Every other year |
| <input type="checkbox"/> Other (please specify): If the assessment of Learning Outcome 4 occurs on a cycle or rotation, click here to describe and provide the rationale. |                                 |   |

Appendix I.

Rubric I. Assessment of comprehension of fundamental principles of chemistry.

Faculty Name\_\_\_\_\_

Student Name\_\_\_\_\_


	4	3	2	1	Score
<b>Participation</b>  (class attendance and contributions/questions during or outside of class)	Student does not miss class, asks insightful questions, and answers questions brought up by other students or instructor. Asks clarifying questions outside of class	Miss a few classes, sometimes asks good questions, or responds to questions that are asked by other students or instructor. Sometimes has questions outside of class	Miss a few classes, does not ask questions, or responds to questions that are asked by other students or instructor. May not have questions outside of class	No change following a conversation with the instructor about how to be more successful in class.	
<b>Problem Solving</b>	Student has a thorough understanding of concepts and relationships between concepts. Identifies all of the important elements of a problem. Organization of the response demonstrates clarity of understanding	Response is free of misconceptions that lead to wrong answers. Student grasps basic parts of problems as well as general framework. Understands to work most problems. Can make a diagram that shows some understanding of a model. Can demonstrate some conceptualization of a model.	Response may demonstrate misconceptions that lead to wrong answers. Student grasps basic parts of problems as well as general framework. Has difficulty making a diagram that shows some understanding of a model.	Student does not exhibit a clear understanding of problems. Displays little comprehension of the important elements of a problem. Fails to understand enough to start to work on a problem.	
<b>Subject knowledge</b>	Always demonstrates good understanding of topics, and understands weakness in models. Familiar with literature over specialized topics.	Usually demonstrates good understanding of topics, and understands weakness in models. Somewhat familiar with literature over specialized topics.	Many times does not demonstrate good understanding of topics, and may not be able to make connections between models and concepts. Unfamiliar with literature over specialized topics.	Demonstrates poor understanding of topics, and models. Unfamiliar with literature over specialized topics.	
<b>Critical Thinking</b>	Uses source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.  Thoroughly analyzes own and others' assumptions and	Uses source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.  Identifies own and others' assumptions and several relevant contexts when presenting a position.	Uses source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning. Questions some assumptions. Identifies several relevant contexts when presenting a position. May be	Uses source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question. Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts	



	carefully evaluates the relevance of contexts when presenting a position.		more aware of others' assumptions than one's own (or vice versa).	when presenting a position.	
--	---	--	---	-----------------------------	--

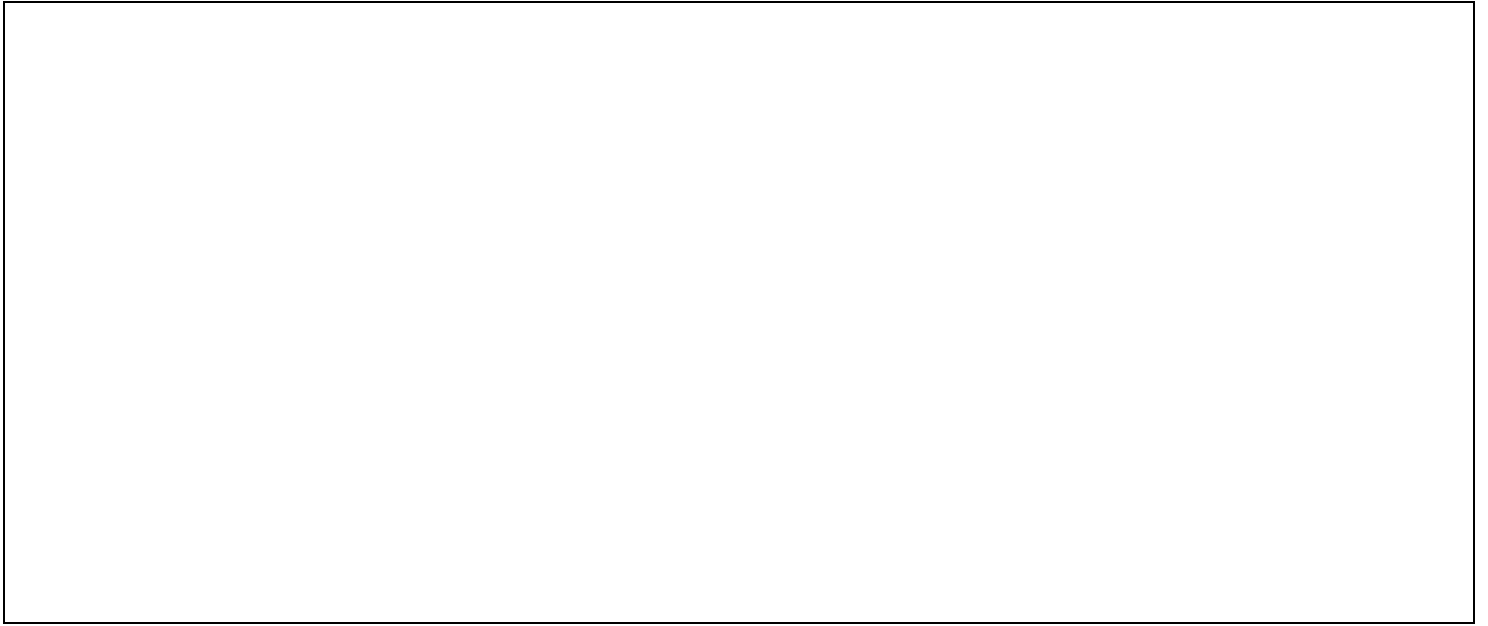
Appendix II. Seminar  
CHEM 5011/CHEM 6011

Positive comments about the talk:

A large, empty rectangular box with a thin black border, intended for writing positive comments about the talk.

Areas that need improvement:

A large, empty rectangular box with a thin black border, intended for writing areas that need improvement.



Grade (A, B, or (I-redo): \_\_\_\_\_

## Appendix II. (Continued)

Faculty

	4	3	2	1	Score
<b>Organization</b>  (introduction and conclusions and sequence of content)	Organizational pattern is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern is clearly and consistently observable within the presentation	Organizational pattern is intermittently observable within the presentation	Organizational pattern is not observable within the presentation	
<b>Delivery</b>  (posture, gestures, eye contact, and vocal expression)	Delivery technique make the presentation compelling, and speaker appears polished and confident	Delivery technique make the presentation interesting, and speaker appears polished and comfortable	Delivery technique make the presentation understandable, and speaker appears polished and tentative	Delivery technique detract from understanding the presentation, and speaker appears uncomfortable	
<b>Subject knowledge</b>  (explanations, examples, illustrations, data, references)	Appropriate reference to information or analysis that <b>significantly</b> supports the presentation or establishes the presenter's knowledge of the topic.	Appropriate reference to information or analysis that <b>generally</b> supports the presentation or establishes the presenter's knowledge of the topic.	Appropriate reference to information or analysis that <b>partially</b> supports the presentation or establishes the presenter's knowledge of the topic.	Insufficient supporting materials provided or analysis that <b>minimally</b> supports the presentation or establishes the presenter's knowledge of the topic.	
<b>Ability to Answer Questions</b>	Addresses questions precisely based on reference to evidence provided in the presentation. Speaker appears confident, and balances listening and responding.	Addresses most questions precisely based on reference to evidence provided in the presentation. Speaker appears comfortable, and can listen to the ideas of others and respond.	Most questions are addressed based on reference to evidence provided in the presentation. Speaker appears uncomfortable and unorganized, and the answers appear to be off topic.	Presenter has difficulty understanding questions and provides answers that appear to miss the point. Lacks self-awareness of the answers.	

Name \_\_\_\_\_

Speaker Name \_\_\_\_\_



Appendix II.

Candidacy Exam and Final Thesis Defense

Student \_\_\_\_\_

	4	3	2	1	Score
<b>Organization</b>  (introduction and conclusions and sequence of content)	Organizational pattern is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern is clearly and consistently observable within the presentation	Organizational pattern is intermittently observable within the presentation	Organizational pattern is not observable within the presentation	
<b>Delivery</b>  (posture, gestures, eye contact, and vocal expression)	Delivery technique make the presentation compelling, and speaker appears polished and confident	Delivery technique make the presentation interesting, and speaker appears polished and comfortable	Delivery technique make the presentation understandable, and speaker appears polished and tentative	Delivery technique detract from understanding the presentation, and speaker appears uncomfortable	
<b>Subject knowledge</b>  (explanations, examples, illustrations, data, references)	Appropriate reference to information or analysis that <b>significantly</b> supports the presentation or establishes the presenter's knowledge of the topic.	Appropriate reference to information or analysis that <b>generally</b> supports the presentation or establishes the presenter's knowledge of the topic.	Appropriate reference to information or analysis that <b>partially</b> supports the presentation or establishes the presenter's knowledge of the topic.	Insufficient supporting materials provided or analysis that <b>minimally</b> supports the presentation or establishes the presenter's knowledge of the topic.	
<b>Ability to Answer Questions</b>	Addresses questions precisely based on reference to evidence provided in the presentation. Speaker appears confident, and balances listening and responding.	Addresses most questions precisely based on reference to evidence provided in the presentation. Speaker appears comfortable, and can listen to the ideas of others and respond.	Most questions are addressed based on reference to evidence provided in the presentation. Speaker appears uncomfortable and unorganized, and the answers appear to be off topic.	Presenter has difficulty understanding questions and provides answers that appear to miss the point. Lacks self-awareness of the answers.	

Name \_\_\_\_\_

Advisor's Name \_\_\_\_\_

During the questioning period cite:

Specific examples where the student has provided excellent clarifying responses:

Specific examples where the student has appeared confused, incorrect responses, was unable to respond:

Appendix III

Chemistry Department's Writing Rubric

Quality Criteria	Does Not Meet (1 point)	Approaching (2 points)	Meeting (3 points)	Exceeding (4 points)
1. Organization	Unclear organization OR organizational plan is inappropriate to thesis. No transitions.	Some signs of logical organization in support of the thesis. Transitions are abrupt, illogical, and ineffective.	Organization supports thesis and purpose. Transitions are generally appropriate. However, sequence of ideas could be improved	Fully & imaginatively supports thesis & purpose. Sequence of ideas is effective. Transitions are smooth and effective
2. English and Grammar  (a) Sentences (b) Diction (c) Tone/Voice (d) Grammar (e) Spelling	Superficial and stereotypical language. Oral rather than written language patterns predominate  Mechanical & usage errors so severe that writer's ideas are difficult to understand  (paper contains 20 or more errors)	Sentences show little variety, simplistic. Diction is somewhat immature; relies on clichés. Tone may have some inconsistencies in tense and person  Repeated weaknesses in mechanics and usage. Pattern of flaws  (paper contains 10-20 errors)	Sentences show some variety & complexity. Uneven control. Diction is accurate, generally appropriate, less advanced. Tone is appropriate  Grammar and syntax are correct with very few errors in spelling or punctuation.  (paper contains 6-9 errors)	Sentences are varied, complex, & employed for effect. Diction is precise, appropriate, using advanced vocabulary. Tone is mature, consistent, suitable for topic and audience  Essentially error free. Evidence of superior control of diction (paper contains no more than 5 errors)



<p>3. Scientific Writing (Clarity of Presentation):</p> <p>(a) Ideas</p> <p>(b) Details</p>	<p>Offers simplistic, undeveloped, or cryptic support for ideas; Inappropriate or off-topic generalizations, faulty assumptions, errors of fact.</p>	<p>Offers some support that may that may be dubious, too broad or obvious. Details are too general, not interpreted, irrelevant to thesis, or inappropriately repetitive</p>	<p>Offers solid but less original reasoning. Assumptions are not always recognized or made explicit. Contains some appropriate details or examples</p>	<p>Substantial, logical, &amp; concrete development of ideas. Assumptions are made explicit. Details are germane, original, and convincingly interpreted</p>
<p>4. Use of Sources</p>	<p>Fails to use sources AND/OR overuse of quotations or paraphrase AND/OR uses source material without acknowledgement.</p>	<p>Uses relevant sources but substitutes them for the writer's own ideas. Quotations &amp; paraphrases may be too long and/or inconsistently referenced.</p>	<p>Uses sources to support, extend, and inform, the writer's own development of idea. Doesn't overuse quotes.</p>	<p>Uses sources to support, extend, and inform, but not substitute writer's own development of idea. Skillfully combines material from a variety of sources.</p>
<p>5. Comprehension of Topic</p> <p>(a) Clarity</p> <p>(b) Comprehension</p>	<p>Reader cannot determine thesis &amp; purpose OR thesis has no relation to the writing task.</p> <p>No comprehension of the topic</p>	<p>Thesis and purpose are somewhat vague OR only loosely related to the writing task,</p> <p>Little comprehension of the topic</p>	<p>Thesis and purpose are fairly clear and match the writing task. Thesis and purpose are somewhat original.</p>	<p>Thesis and purpose are clear; closely match the writing task, and provide fresh insight and demonstrate comprehension of the topic</p>

Appendix IV. Assessment of Research Progress

**Chemistry PhD Graduate Student Progress Report**      **Evaluation Period:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **CWID:** \_\_\_\_\_ **Advisor:** \_\_\_\_\_

**Date of Entry to the Program:** \_\_\_\_\_

**Current GPA** (graduate coursework only): \_\_\_\_\_

**Completion of Foundation Courses** (should be complete by 1/17)      **Yes**\_\_\_\_ **No** \_\_\_\_

**Completion of Chemistry 5011** (should be complete by 5/17)      **Yes**\_\_\_\_ **No** \_\_\_\_

**Completion of Qualifying Exam** (should be complete by 5/18)      **Yes**\_\_\_\_ **No** \_\_\_\_

**Check the applicable response for each statement below:**

Student is in good standing      **Yes**\_\_\_\_ **No** \_\_\_\_

Student is making acceptable research progress toward the PhD      **Yes**\_\_\_\_ **No** \_\_\_\_

(if not, please explain below)

Student should consider an MS (see below for explanation)      **Yes**\_\_\_\_ **No** \_\_\_\_

**Other Comments** (attach additional documents if necessary):

**Research Performance** (Advisor):      **N/A** \_\_\_\_\_ **Satisfactory**\_\_\_\_ **Unsatisfactory**\_\_\_\_\_

Comments:

**Teaching Performance:**      **N/A** \_\_\_\_\_ **Satisfactory**\_\_\_\_ **Unsatisfactory**\_\_\_\_\_

Comments:

**Explanation for not Completing a Requirement on Schedule:**

Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_

Received by Chemistry Office (Initial/Date): \_\_\_\_\_

## Teaching Assistant Evaluation

### Department of Chemistry

Employee's Name: \_\_\_\_\_ Supervisor's Name: \_\_\_\_\_

Semester/Year: \_\_\_\_\_

#### Section 1

Evaluate the TA on a scale of **1** to **4** (**4** being the **highest** and **1** being the **lowest**)

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>N/A</b>
1. Safety practices – does TA monitor safety attire; make sure safety goggles are worn in lab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Communication with the class – describes the objective and procedure of experiment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. General work ethic - does TA move around the lab to help students with setting up equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Attitude toward students – fair or shows favoritism... Understands how to ask questions to stimulate thinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Leadership – does TA conduct the lab work with authority or has difficulty controlling rowdy students...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Group meetings – does TA come prepared, on time, and follows directions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Ability to improve – does TA accept constructive criticism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Language – speaks /writes clearly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Grading – completes grading assignment and submits grades on a timely manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Knowledgeable about course matter. Shows enthusiasm for teaching subject matter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Attends office hours consistently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Section 2

OVERALL RATING (Please Choose One):

- Outstanding: Performs well above minimum expectations
- Good: Exceeds minimum expectations
- Needs Improvement: Needs improvement to meet minimum expectations
- Poor: Performs well below minimum expectations

#### Section 3

Please mark the appropriate boxes:

**Would you recommend this TA for a meritorious award?**    \_\_\_\_\_ **Yes**        \_\_\_\_\_ **No, not at this time**

**Would you like to have this TA for another Lab?**

**Yes**

**No**

*Section 4*

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Should this evaluation be shown to the TA

Yes

No