

# Chemistry, Department of

## Chemistry-Related Careers Or Advanced Graduate Studies

**Goal Description:**

The success of any program is whether its graduates find related work or pursue further graduate education.

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

**After Degree Placement**

**Performance Objective Description:**

Upon completion of the BS or MS program graduates will either find a chemistry-related job upon graduation (such as working in a research or analytical lab) or will go for graduate or advanced graduate studies.

RELATED ITEM LEVEL 2

**Job Or Advanced Program Placement**

**KPI Description:**

The indicator will be the proportion of our graduating MS students who either find a chemistry-related job or go for advanced graduate studies.

**Results Description:**

Seven students completed their M.S. degrees this year. Five of these are going on to Ph.D. programs (at Oregon State University, the University of Iowa (two of them), the University of Maryland - Baltimore County and Wayne State University) and the other two are working in industry.

RELATED ITEM LEVEL 3

**Follow Former Students**

**Action Description:**

We will continue to follow our former students as they seek employment and admission to graduate programs. This is a continuous process.

RELATED ITEM LEVEL 2

**Job Or Graduate Program Place For BS Graduates**

**KPI Description:**

The indicator will be the proportion of our graduating BS students who either find a chemistry-related job or go for graduate studies.

**Results Description:**

This past academic year, 11 students graduated with chemistry majors and 23 students graduated with forensic chemistry majors. Of the 11, 5 are continuing their education, 3 are employed in chemically related jobs, 1 is employed in a non-chemically related job and 2 are actively looking for a job. Of the 23, 6 are continuing their education, 8 are employed in chemically related jobs, 1 is employed in a non-chemically related job, 5 are actively looking for a job and we don't have any information on 1 of them.

RELATED ITEM LEVEL 3

**Follow Former Students**

**Action Description:**

We will continue to follow our former students as they seek employment and admission to graduate programs. This is a continuous process.

## Encourage Graduate Student Presentations At Professional Meetings

**Goal Description:**

Mentoring graduate students in professional conference presentations is the goal.

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

**Graduate Students Will Demonstrate Skills In Conference Presentations Of Research**

**Performance Objective Description:**

During the master's program, graduate students will demonstrate the presentation skills to present their research findings at professional conferences.

RELATED ITEM LEVEL 2

**Student Presentations**

**KPI Description:**

The number of presentations by graduate students at professional meetings will indicate the success of the department in preparing students to orally present their research results. We expect that every graduate student who completes their M.S. degree will have one or more publication, and most will have more than one presentation.

**Results Description:**

The number of presentations with graduate co-authors was 9 (9 presentations involving 11 graduate students).

Attached Files

 [Pubs2016-17](#)

RELATED ITEM LEVEL 3

**Research Presentations**

**Action Description:**

We will evaluate and direct our graduate students' progress in communicating their research results both at scientific meetings and in the peer-reviewed literature during 2017-2018.

**Mentor Graduate Students In Research Publications**

**Goal Description:**

Faculty researchers will mentor graduate students in research publications.

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

**Graduate Students Will Demonstrate Skills In Publishing Research**

**Performance Objective Description:**

During the master's program, graduate students will demonstrate the research skills to publish their research findings.

RELATED ITEM LEVEL 2

**Research Publications**

**KPI Description:**

The number of research publications with graduate student authors or co-authors will indicate departmental success in preparing students to report research findings in written form. We expect that all graduate students who complete their M.S. degrees will have one or more publications, and most will have more than one presentation.

**Results Description:**

In this past academic year, there were 9 peer-reviewed publications with five graduate student co-authors. As always, it is appropriate to remind the reader that publication often lags behind student completion. It is also appropriate to mention that in certain fields, the work of many different students might result in one single paper. The number of presentations with graduate co-authors is much larger (9 presentations involving 11 graduate students).

Attached Files

 [Pubs2016-17](#)

RELATED ITEM LEVEL 3

**Research Communication**

**Action Description:**

We will evaluate and direct our graduate students' progress in communicating their research results both at scientific meetings and in the peer-reviewed literature during 2017-2018.

**Procure Appropriate Resources To Facilitate The Academic Mission Of The Department**

**Goal Description:**

The department will monitor the classroom, laboratory, research, and out-reach (service) needs of the unit. Budget requests will reflect these needs.

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

**Recruitment Of Graduate Assistants**

**Performance Objective Description:**

The department diligently recruits graduate assistants in an effort to reduce the number of undergraduates teaching laboratory sections.

RELATED ITEM LEVEL 2

**Number Of Graduate Assistants**

**KPI Description:**

In an effort to lower the number of undergraduate assistants in the lab, there is a need for an increase in graduate assistants.

**Results Description:**

In the Fall 2016 semester, there were 13 graduate assistants (Janaka Abeysinghe, Md Nure Alam, Brianna Bittner, Matthew Danker, Nilakshi Devi, Xinmei Dong, Dulamini Ekanayake, Ramesha Dilhani Gaspe Ralalage, Chathuranga Hewa Rahinduwage, Thao Nguyen, Nicholas Pandorf, Jacob Perry, Chathurika Rathnayaka Mudiyansele, Indika Warnakula). There were 12 graduate assistants (Janaka Abeysinghe, Md Nure Alam, Brianna Bittner, Matthew Danker, Nilakshi Devi, Dulamini Ekanayake, Ramesha Dilhani Gaspe Ralalage, Chathuranga Hewa Rahinduwage, Thao Nguyen, Jacob Perry, Chathurika Rathnayaka Mudiyansele, Waruni Senanayake, Indika

Warnakula) during the Spring 2016 semester. Xinmei Dong graduated at the end of the fall term, Nicholas Pandorf left the program, and a new student entered. Compared to last fall, we were down by 6 graduate students and compared to last spring, we were down by 7 graduate students. To achieve our goal, these numbers need to increase.

RELATED ITEM LEVEL 3

Make Better Offers to New Students

Action Description:

Seven of our graduate students completed their degrees this past year (1 in the fall semester, 3 in the spring semester and 3 during the summer) and one left the program. We have made a few offers of admission, but our applications are down drastically compared to previous years. Previously we speculated that since, in previous years, we were restricted in the number of positions we could offer and, consequently, we had to reject students who were well qualified, that resulted in a decreased number of applications from those schools. It is our opinion that this situation was exacerbated by the Presidential election and the travel bans attempted this past spring. We have heard that international graduate applications are down across the country. If possible, we need to admit all appropriately qualified students. With fewer students applying to U.S. graduate programs, it is even more important for us to increase the monetary value of our graduate assistantships. It appears that **every** offer that we made for the coming fall term was rejected. Some of the students are not coming to the U.S. at all, and those that are, have decided to attend programs that offer them more money.

Provide Appropriate Personnel Resources For The Unit

Goal Description:

The department will assess the personnel (staff and faculty) needs of the unit on an annual basis. Annual funding requests will reflect these needs and hiring decisions will be based on these needs. The department office will provide appropriate resources and encourage faculty and staff to participate in development opportunities.

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

Request Additional Faculty Lines

Performance Objective Description:

The department is still in need of additional faculty lines to meet the demands for upper level and core courses. A request will be submitted through the budgetary process for new lines.

RELATED ITEM LEVEL 2

New Faculty Line(s)

KPI Description:

While we requested new positions last year, none were forthcoming. The need still exists, so new faculty lines will be sought even in economically bleak times.

Results Description:

We were able to replace Paul Loeffler and Ozcan Gulacar with Kit Zall and Adrian Villalta-Cerdas, respectively (both of whom have completed their first year). However, Rick White took early retirement effective 7/1/2016 and Tom Chasteen took a leave of absence for the fall 2016 term and is retiring at the end of this summer (2017). This left us even shorter handed for this past year. We were able to hire a laboratory coordinator (Hemantha Siyambalagoda) for our non-science major labs (CHEM 1406 & CHEM 1407), and we were able to hire two replacements, but no new positions were allocated.

RELATED ITEM LEVEL 3

Continued Faculty Flux

Action Description:

We were able to replace Paul Loeffler and Ozcan Gulacar with Kit Zall and Adrian Villalta-Cerdas, respectively (who both have completed their first year). As mentioned in Results, Rick White took early retirement effective 7/1/2016 and Tom Chasteen is retiring at the end of this summer (2017). Mary Lynn DeShazo has also retired (she was on early retirement, but is no longer able to teach). We hired a laboratory coordinator (Hemantha Siyambalagoda) for our non-science major labs (CHEM 1406 & CHEM 1407), and we were able to hire Rick White's and Tom Chasteen's replacements who will start this fall. We have been told that we will have another laboratory coordinator position (most likely to cover general chemistry I and II (CHEM 1411 & 1412)) for the coming year. Ilona Petrikovics was awarded a Faculty Development Leave, and we were able to hire a one-year sabbatical leave replacement for the coming year. This will enable us to provide some earned course load reductions for the fall term.

However, our faculty lines are not keeping pace with enrollment increases and this is causing difficulties. We will, once again, seek new positions in the coming budget cycle. We might have to reserve spots in some of our classes for our majors since we might not be able to accommodate the full demand (something I have been trying to avoid).

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Not surprisingly, once again, the situations that we are faced with continue. The challenges continue to be challenges (and we have lost ground), and we try to address them in the best way that we can. Since we were restricted in the number of graduate assistant positions that we could offer, we need to be able to market the offers more favorably. Hopefully the graduate coordinator can work with the College of Science and Engineering

Technology Dean's Office to make this happen. We will search for two positions in the coming year--to replace Rick White and Tom Chasteen, and we will continue to make the case that additional faculty lines are needed. For the Fall 2016 term, nearly every single class was full to capacity just prior to the first payment deadline. More students wanted to add our courses. We will continue to encourage our graduate students to present their research results in appropriate venues. We will continue to follow our former students as they grow professionally and we will keep track of our newest graduates as they move on. We will offer CHEM 3438 again next summer and we will make sure that the appropriate advisors are aware of this offering. Lastly, in this next year we expect to offer additional laboratory sections for CHEM 2123, and we will gather the information to do this during the fall 2016 semester. We didn't do this for the fall 2016 semester because we are short handed (due to a retirement).

**Update of Progress to the Previous Cycle's PCI:**

We hired Tarek Trad to replace Tom Chasteen and Christopher Hobbs to replace Rick White.

We polled students enrolled in CHEM 2123 and students who were enrolled in CHEM 2323 and who were not enrolled in CHEM 2123 during the Fall 2016 semester to determine if it would be better to add a morning lab section or an evening lab section. There was no clear preference. We put both into the Fall 2017 schedule, and as term began, both were completely filled.

**Plan for Continuous Improvement**

**Closing Summary:**

Not surprisingly, once again, the situations that we are faced with continue. The challenges continue to be challenges (and we have lost ground), and we try to address them in the best way that we can.

Since we were restricted in the number of graduate assistant positions that we could offer, we need to be able to market the offers more favorably. Hopefully the graduate coordinator can work with the College of Science and Engineering Technology Dean's Office to make this happen. The situation is dire--while we made several offers, no (zero) new graduate students will be joining the program in the fall 2017 term.

We have replaced the faculty that have retired. We will continue to make the case that additional faculty lines are needed. For the Fall 2017 term, nearly every single class was full to capacity just prior to the first payment deadline. More students wanted to add our courses.

We will continue to encourage our graduate students to present their research results in appropriate venues.

We will continue to follow our former students as they grow professionally and we will keep track of our newest graduates as they move on.

We will offer CHEM 3438 again next summer and we will make sure that the appropriate advisors are aware of this offering.

We added two additional sections of CHEM 2123 to the Fall 2017 semester (and prior to the payment deadline, these sections were completely filled), and we expect to offer an additional laboratory section for CHEM 2125 for the Spring 2018 semester.