

HONORS PROGRAM IN CHEMISTRY

The Honors Program in Chemistry at Wright State University is designed to provide recognition to the intellectually gifted student who pursues a program of advanced study and independent work. Original work is encouraged and expected. The honors student will be expected to interact closely with faculty and graduate students. The student's scholarly achievements will help to create a dynamic intellectual atmosphere to be shared especially with undergraduate colleagues. The Chair of the Undergraduate Studies Committee will provide advice and explain procedures.

Who qualifies?

Any Chemistry major with:

- 1) Junior standing
- 2) A **3.25** overall grade point average (GPA) and a **3.6** GPA or better in the three most recent chemistry lecture courses as determined by the original transcript. For transfer students, two WSU chemistry lecture courses must be completed and will be used in conjunction with the most recently completed transfer course for GPA calculation.

When, where, how to apply?

Applicants must:

- 1) Apply for admission by the end of the sophomore year but no later than the end of the junior year.
- 2) Provide the following information: a letter of intent (one page), a project description with a time line, and a support letter from the Honors faculty advisor(s).
- 3) Be in good academic and disciplinary standing with the University.

The Undergraduate Studies Committee will review this information and the student's transcript. Approval of the request by a simple majority of the Undergraduate Studies Committee admits the student to the program. Advice of the full Chemistry Faculty will be sought as needed.

The Program

Honors students must:

- 1) Maintain GPA requirements¹ as stated above.
- 2) Maintain good academic and disciplinary standing with the university.
- 3) Pass with a minimum of a B grade two 4000 level elective lecture chemistry courses.
- 4) Complete at least 9 credit hours of "A" research work, of which at least 6 credit hours will be CHM 4990. An additional 2 credit hours of "A" research work may be completed as collaborative research as specified in the letter of intent (e.g., BIO 4950, PHY 4990).
- 5) Present the research results
 - at a local or national ACS meeting or other specialized conference (as determined by the Undergraduate Studies Committee) in the form of a poster or oral presentation OR as an **accepted** manuscript.

AND

- as an oral presentation as part of the CHM 8000 seminar series.

¹ Students whose cumulative GPA falls below 3.25 or chemistry GPA below 3.6 (in the three most recent chemistry lecture courses) will be continued in the program on probation for no more than 1 semester. If, after 1 semester the GPA's are not at the 3.25 and 3.6 levels, respectively, the student will be dropped from the program.

The WSU Chemistry Honors Presentation Requirement

Undergraduate Research in Chemistry has been a growing part of the programs sponsored by the American Chemical Society (ACS). The ACS Committee on Professional Training also emphasizes research as an integral part of undergraduate Chemistry education. At Wright State, Chemistry undergraduates, including Honors Students, conduct their studies with highly research-active faculty and are generally expected to present the results. These presentations provide exposure for the student and publicity for the University and Department. In the world of chemistry, the ability to present laboratory research results is a professional attribute and practice makes perfect. Most undergraduate researchers in Chemistry at WSU present a poster (e.g., at the Dayton ACS Poster session) even if they are not part of the honors program. For example, Jeremy Lear of Wright State who is not part of the WSU Honors Program, won the overall 2nd place award (\$200) at the most recent University of Kentucky Undergraduate Research Symposium held on April 13, 2012 (summary attached).

> The committee asks the department to reconsider if a typical honors student would actually be able to present their research results at a local or national ACS meeting or other specialized conference.

Most undergraduate research students make research presentations. There are enough local or national ACS or other specialized conferences that there would be no problem for a typical student to present (see attached list and statistics).

> The committee would like to know if additional funding will be provided to assist students in meeting this research presentation requirement.

The department routinely provides funding for student travel (see attached travel document). COSM also provides some funding (see attached application form). Traveling any significant distance to present is not required – see opportunities on page 2 of this document.

> The committee wonders if presenting at the annual Undergraduate Research Opportunities Program Celebration of Research would qualify as an acceptable presentation.

Yes it would, that comes under “other specialized conference”

> And finally, the committee prefers the former (quarter), more flexible research expectation, which reads in part: "It is expected, although not required if the opportunity does not arise, that the students give presentation on their work at some suitable forum, such as an American Chemical Society Student Affiliate Regional Meeting-in-Miniature. In some cases this requirement may be met by a presentation to the departmental faculty and students."

That statement quoted represents an obsolete view (document from 1979) of the opportunities available for making presentations of research results. At that time, the Dayton ACS Section did not have a Poster Session. The Chemistry Department rarely provided funding for students to travel to scientific meetings to present research results – in fact, faculty travel was financially

restricted. That has changed significantly over the years. Nearly every University (including WSU) has an Undergraduate Research office whose purpose it is to promote research and help students find appropriate venues for presentation and in many cases fund the trips. The research carried out by undergraduates at Wright State and other institutions is at an advanced level from the initiation of the project. In many cases it rivals MS level research in terms of efficiency and innovation. Communication of research results is a crucial part of the research endeavor.

The breadth and depth of opportunities is sufficient to allow Chemistry Honors students to present. Currently, the majority of chemistry undergraduate student researchers are presenters at one or more of the venues available and most are not part of the Honors Program

Venues currently available to WSU students for research presentations (poster and/or oral).

ACS National Meeting – San Diego, March, **2012**, Philadelphia, August, **2012** (two/year)

ACS Dayton Section Poster Session – Central State – April 3, **2012** (held for 10 + years)

ACS Regional Meeting, Dearborn MI June 5-9, **2012** (ACS Central Region, other regions also)

WSU Research Celebration, April **2012** (Yearly)

WSU Chemistry “Posters in the Hall” June, **2012** (Yearly)

Related Events occur as part of Ph.D recruiting efforts.

Current Events

Regional Chemistry Poster Competition for Undergraduates at UK - April 13, **2012** (see attachment)

Past Events

Michigan State, **2011** - <http://www2.chemistry.msu.edu/msur/>

Kentuckiana Undergraduate Research Symposium in Louisville, Ky

WSU Chemistry Undergraduate Research Presentations

ACS Dayton Section Poster Participants and Award Winners (Undergraduate)

2011 --, Participants

2010 --, Participants

2009 Award - Kelsey Miles, Participants

2008 Award - Jennifer Monihan, Participants

2007 --, Participants

2006 Award - Nora Hunter, Participants

2005 Award --, Participants

WSU Chemistry "Posters in the Hall" Participants

<http://www.wright.edu/cosm/departments/chemistry/activities/posters-in-the-hall.html>

2012 – June 2, 2012

2011 – 16 Posters, 10 UG

2010 - 23 Posters 5 UG

Miscellaneous Wright State Undergraduate Research Presentations 2010 - 2012

**Bridging Research Communities," Carnegie Mellon University, Pittsburgh, PA.,
October 22, 2011**

2 Poster Presentations

**The 42nd Meeting of the ACS Central Region, June 8 - 10 of 2011, Indianapolis,
Indiana**

1 Oral, 4 Poster Presentations

**University of Kentucky Undergraduate Research Symposium, April 15, 2011,
Lexington, Kentucky**

3 Poster Presentations

**Celebration of Research, Scholarship, and Creative Activities, Wright State University,
April 8, 2011**

6 Poster Presentations

**American Chemical Society, 241st ACS National Conference—March 27-31, 2011,
Anaheim, CA**

2 Poster Presentations

**Bridging Research Communities," Carnegie Mellon University, Pittsburgh, PA.,
October 16, 2010**

1 Poster Presentations

The 41nd Meeting of the ACS Central Region, June 16 - 18 of 2010, Dayton, Ohio

2 Oral , 6 Poster Presentations