

The Honors Program
University of Mary Washington
Department of Chemistry

I. Objectives

The Honors Program in chemistry is designed to provide a student with the opportunity to develop his or her academic abilities through completion of a chemical research project. A student participating in the program will work independently under the direction of a faculty advisor, and he or she will devote significant time to intensive, creative study of a research problem. The student will be expected to take maximum advantage of the research opportunity, and success in the program will be determined by evaluation of the product of the research with due consideration for the student's intellectual development and growth. A student who successfully completes the Honors Program will be recognized at Graduation with the awarding of Honors in Chemistry.

II. Program Summary

A student who qualifies (Sections III. A and III. B) for the Honors Program will pursue independent study (CHEM 491, four credits each semester) throughout his or her senior year. The subject of the research is selected by the student in consultation with his or her advisor (III. C), and it must be presented in the form of a research proposal (III. D) to the student's examination committee (III. C) for approval. The committee will review the proposal and, acting on behalf of the department, will decide whether the work is suitable for honors.

The honors project must involve extensive laboratory investigation, which may include rigorous computer programming and/or calculations, culminating in a thesis (IV. A), a public presentation to the community (IV. B), and an oral examination (IV. C)

by the student's examination committee. The student must demonstrate a thorough understanding of the background and results of the project and show evidence of intellectual growth as a result of participation in the Honors Program. If the quality of the work done by the student, as determined by the faculty advisor, merits a grade of "B+" or higher each semester and if at least three members of the student's examination committee find the thesis, the seminar, and the oral examination acceptable, the student will be awarded Honors in Chemistry at Graduation, provided all other requirements for graduation are met.

A suggested timetable for the honors student is given in Appendix A.

III. Admission to the Honors Program

A. GPA Requirement

In order to qualify for the Honors Program, a student must be a rising senior and have at least a 3.25 GPA in chemistry and a 3.25 GPA overall. A student who studies abroad during the junior year may participate in the Honors Program with a 3.00 GPA overall as long as the chemistry GPA is at least 3.25. If feasible, some evidence of the continuance of sound scholarship while abroad should be submitted to the department.

B. Other Requirements

In addition to the GPA requirements outlined above, a student applying for admission to the Honors Program should show evidence of a sense of responsibility, mature judgement, and creative ability.

C. Faculty Advisor

A student who is considering applying for admission to the Honors Program should begin discussions with a faculty advisor in the spring of his or her junior

year. The faculty advisor may be any full-time member of the chemistry faculty whose area of expertise best matches the interests of the student. The advisor will confer with the prospective honors student to plan a program of background reading in preparation for the student's work during the senior year. The advisor will be responsible for monitoring the student's progress throughout the honors project and for assigning the grades for CHEM 491, and he or she will serve as the chair of the examination committee (consisting of the advisor and three additional full-time members of the chemistry department), which will give final approval for the awarding of Honors in Chemistry.

D. Research Proposal

By the end of the first week of class in the fall term of the senior year, the student must submit to the faculty advisor a three-page research proposal with references. This document will outline the scope of the research problem and the nature of the experiments planned. No results are expected at this point, but a clear plan of research should be apparent. The advisor will assemble the student's examination committee, which will review the proposal and give its approval to commence the program. The committee will make its decision before the end of the third week of class.

E. Mid-year Evaluation

By the last day of classes in the fall semester, the student must submit a draft of the Introduction section of the thesis to the faculty advisor. Based on this draft and the advisor's evaluation of the student's progress in the research, the advisor will assign a grade for CHEM 491. If the assigned grade is less than B+ or if the advisor believes that the final results of the research are likely to be inadequate, the

student will be advised to discontinue the pursuit of Honors. At the discretion of the advisor, the student may continue the research as an independent study in the spring semester.

IV. Requirements

A. Thesis

The culmination of each honors project is a thesis presented as evidence of achievement in the work. The thesis should be an organized, comprehensive account of the background and results of the research written in accordance with accepted standards of literary style. A student continuing work on a project of a previous student should remember that each thesis is an individual effort and should be written in his or her own style and should not copy the previous thesis. The authority for all stylistic questions will be *The ACS Style Guide, 3rd Edition*, a copy of which will be made available by the department.

The student must prepare five draft copies of the thesis, one for the student and one for each member of the examination committee. After acceptance by the examination committee and final editing, one copy of the thesis is to be provided to Simpson Library, one to the department, and one to the advisor. Additional copies of the thesis are the prerogative of the student and advisor.

For more information regarding the format for the thesis, see Appendix B.

B. Public Presentation

A seminar presenting the honors work to the community will be scheduled for the last week of class or during the final exam period, depending on the schedules of the examination committee members and the student. This presentation is separate from any seminars the student is required to present for any other course.

C. Oral Examination

If the faculty advisor has assigned a grade of B+ or better to the student's work in CHEM 491 each semester, the honors candidate will undergo a final oral examination on the honors project conducted by the examination committee. Following the public presentation and before the end of the final examination period, the student will meet in closed session with the examination committee to answer questions about the work. A copy of the thesis must be made available to each committee member at least one week before the scheduled oral examination. If at least three of the committee members find the thesis, the seminar, and the oral examination acceptable, the student will be awarded Honors in Chemistry at Graduation, provided all other requirements for graduation are met.

Appendix A
Suggested Timetable for the Honors Student

March 21	Select a subject and advisor for the honors project
Spring registration	Register for 4 credits of CHEM 491 for the fall semester
Summer	Complete background reading and possibly preliminary investigation
Fall term, end of week one	Submit the research proposal and select the examination committee
Fall term, end of week three	Deadline for the examination committee to review and approve the research proposal
Fall registration	Register for 4 credits of CHEM 491 for the spring semester
Last day of fall semester	Submit a draft of the Introduction section of the thesis to the faculty advisor
April 1	Schedule the public presentation and the oral examination
April 10	Submit the first draft of the completed thesis to the faculty advisor (subsequent drafts as necessary must be completed prior to submission to the examination committee)
One week prior to the oral examination	Submit the thesis to the examination committee
Last week of class	Public presentation
Final exam week	Oral examination
Last day of exams	Submit corrected copies of the thesis to Simpson Library, to the department, and to the advisor

Appendix B Format of the Thesis

The format of the thesis may be determined by the student and his or her advisor, but certain matters of style as outlined in *The ACS Style Guide, 3rd Edition*, should be followed. It is important to keep in mind the purpose of the thesis and its intended audience. Chapter 1 in the *Style Guide* is a particularly useful resource and should be read before the student begins the thesis. The final document must adhere to the highest professional standards since it represents a permanent record of the work.

The manuscript must be double-spaced with 1-inch margins on the top, right, and bottom edges and a 1.5-inch margin on the left edge to leave room for binding. The text should be done in Times or a similar font in 12-pt type. The pages must be printed on one side only and page numbers placed in the lower right corner as a footer. Figures and tables should be numbered consecutively and should be placed in the manuscript as close as possible to the point of reference in the text unless they are so numerous that they would hinder the reader. In that case, or if they present only supporting data, they should appear in an appendix. *The ACS Style Guide* should be consulted for the correct format for references. Each copy of the thesis should be printed on high quality acid-free paper and bound in a stiff fiber board folder with a title label on the cover.

Copyright permission must be obtained from the publisher or copyright holder if a student intends to reproduce a published figure, including figures obtained from the Internet. It is imperative that the student request copyright permission early in the rare case it is denied so that another figure may be substituted. When requesting permission, the student should include in the request his or her name and contact information; the date(s) when copies will be made; the number of copies to be made; the purpose of use

(thesis for undergraduate honors project and/or presentation); the particular figure or piece of work to be copied; the author or editor of the book or journal; and the title of the article, journal, or book including the edition, the publisher's name, the copyright year, and ISBN or ISSN if available.

Acceptable references for the thesis are journals and other periodicals (including electronic journals), books, government documents, patents, and other permanent materials. Internet sites are not acceptable as thesis references since they frequently contain incorrect information, may change without warning or record, are often anonymous, and are generally not subject to peer review. If accurate when compared with other acceptable references, figures from Internet sites may be used in the thesis.

Each member of the examination committee must be provided with a copy of the thesis at least one week before the oral examination. Upon acceptance of the thesis and final editing, the student must submit an electronic copy of their thesis to the Simpson Library; this involves completion of an online Submission Form and License by the last day of Finals Week (if there are any problems meeting this deadline, contact the Digital Resources Librarian at Simpson Library). Students must also submit a final, edited and approved electronic copy of the thesis to their faculty advisor.

Order of Pages

Approval sheet (see sample)	not numbered
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List of Tables	iv
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References	

Selected Bibliography
Appendices
Vita (see sample)

not numbered

SAMPLE APPROVAL FORM

Title:

Name of Candidate: (full name, no initials)

Approved by Examination Committee:

A. B. Cee
Associate Professor Chemistry
Sponsor

D. E. Eff
Rank

G. H. Eye
Rank

J. K. Ell
Rank

Date Approved: _____

SAMPLE TITLE PAGE

Title

By
(name of candidate)

Thesis submitted to the faculty of the University of Mary Washington
in partial fulfillment of the requirements for graduation with
Honors in Chemistry
(year of graduation)

SAMPLE TABLE OF CONTENTS

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<i>etc.</i>	

SAMPLE VITA

Name of Candidate: full name, no initials

Permanent Address: street
city, state, zip

Date of Birth: month, date, year

Place of Birth: city, state

Secondary Education: name of school
city, state

Major Subject(s): Chemistry

UMW Year of Graduation:

Honors: list all honors, include dates if appropriate

Professional Positions: list with dates

Publications: full citation with title

Presentations: full citation with title