

The M.S. Program
in
Chemistry and Biochemistry
at
The University of Oklahoma

June 2006

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I. PLACEMENT EXAMINATIONS AND ENGLISH LANGUAGE REQUIREMENTS

The purpose of the placement examinations is to establish the proficiency level of new students in the areas of Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry. Because the results of these examinations will provide the basis upon which the Departmental Graduate Committee will advise the student with regard to initial graduate coursework, each student is required to take all five placement examinations upon matriculation. The only exception is that students may choose not to take an exam in any area in which he/she has not had a formal course above the freshman level.

Entering graduate students who show no Physical Chemistry on their transcript must take and pass either CHEM 3453, CHEM 3423, or the Physical Chemistry placement exam. Entering graduate students who have not taken one year of Organic Chemistry must take and pass CHEM 3053 and/or CHEM 3153, or take and pass the Organic placement exam.

It is important that the student recognize the importance of these examinations and therefore prepare for them, so that the Graduate Committee has an accurate assessment of the strength of the student's background in various areas and hence can advise the student properly. A thorough preparation for these exams has the additional advantage of serving as a review of past coursework and therefore as a means to maximize one's ability to begin his/her graduate career on a positive note.

Placement examinations are given during the University's enrollment period in the Fall and Spring. These examinations cover well-defined material that is presented in the undergraduate courses in the different areas. A list of textbooks that are suitable to use for review will be provided to you prior to matriculation.

According to the Graduate College Bulletin, any graduate student for whom English is not the native language must be certified as proficient in English before he or she may assume teaching duties that require contact with students. Certification tests in oral and written English are administered by the English Assessment Program.

All students for whom English is not the native language are required by the Department of Chemistry and Biochemistry to demonstrate a suitable level of English proficiency. This means that, prior to graduation, a student must reach the minimum level of "Certified to Support" in the written and oral English tests administered by the English Assessment Program. This should be satisfied by the end of the third semester. Satisfying this requirement is a prerequisite for taking the oral defense of the thesis (M.S., Thesis Option) or the comprehensive examination (M.S., Non-Thesis Option).

II. MASTER OF SCIENCE (Thesis Option)

The M.S. (Thesis Option) is the degree selected by students interested in developing research capability in a particular area of chemistry. Currently, these areas are analytical, biological, inorganic, physical and organic chemistry. Students may take a more interdisciplinary approach for their thesis work if desired.

A. Coursework Requirements

1. All M.S. (Thesis Option) students must take a minimum total of 30 hours of graduate coursework.
2. At least 15 hours must be taken in lecture courses at the 5-6000 level selected from at least two of the five divisions of Chemistry & Biochemistry.
3. For items 1 and 2 above, a maximum of two courses may be taken in department(s) outside of the Department of Chemistry & Biochemistry as substitution(s). However, all such outside courses must be approved in writing by the departmental Graduate Committee.
4. Up to six hours of the 30 total may be taken as Thesis Research (CHEM 5980).
5. In addition to the courses mentioned in items 2-4 above, the remainder of the 30 hour total requirement (item 1) would be fulfilled by any combination of CHEM 5990, CHEM 5960, Divisional Seminars (CHEM 6210, 6721, 6411, 6431, and 6850), and any other courses carrying graduate credit.
6. All graduate students must also enroll and participate in the Departmental Colloquium (CHEM 6970) for zero credit hours throughout the entire period of their graduate studies (excluding summer semesters).

B. Thesis Research

1. Choice of Major Professor

To ensure that new students are fully informed about the research opportunities available in the Department, all graduate students entering in the Fall semester are required to attend a series of talks at the beginning of the semester in which each faculty member describes research projects that are under investigation in his or her lab. Attendance at these brief talks is mandatory, and attendance will be taken.

Following these general overview talks, each graduate student should make an appointment with at least three prospective Major Professors to discuss in more detail the nature of their research and the specific dissertation projects that are available. Students are encouraged to have these individual meetings as soon as possible, since they must be completed before the end of the first semester in Graduate School. At the conclusion of each meeting, the student should obtain the professor's signature on the form shown in Appendix A. After obtaining a minimum of three signatures, the student must indicate the area of specialization and three preferences for a Major Professor. It should be noted that the preferred professors do not have to be members of the chosen division. Thus, for example, a student may elect to pursue an M. S. in the Physical Chemistry division with a Major Professor in Biochemistry. The list will be reviewed by the Graduate Committee, which will forward its recommendation to Committee A (the executive committee of the department). Subject to the consent of the faculty member, Committee A will make the final decision of matching the student with a Major Professor. This process must be completed by the end of the first semester of enrollment. Until this process is finished, a student is not formally registered with a research advisor.

Students entering in the Spring semester are required to follow the procedures given above except those pertaining to the faculty talks.

2. Thesis Research and Oral Defense of Thesis

Research on the thesis topic should commence as soon as the student has selected a research advisor.

When the thesis is completed the student will present a 30-45 minute oral presentation of the major portions of the M.S. thesis research. This presentation will be followed by an oral examination on the thesis by the thesis committee (the student's Major Professor and two other members approved by the Graduate Dean), interested faculty and professional guests.

III. MASTER OF SCIENCE (Non-Thesis Option)

The M.S. (Non-Thesis Option) is the coursework degree generally selected by those students interested in obtaining an advanced degree in Chemistry and Biochemistry without research specialization. The actual course requirements are flexible and will be determined by the Departmental Graduate Committee after discussions with each student. This allows each program to be personalized, thereby satisfying the interest and needs for the student's future career aspirations. Furthermore, depending on future career plans or interests, courses outside the department may become a significant proportion of the student's coursework.

A. Coursework Requirements.

1. All M.S. (Non-Thesis Option) students must take a minimum total of 32 hours of graduate coursework.
2. At least one three hour lecture course must be taken at the 5-6000 level from each of three of the five divisions of Chemistry & Biochemistry.
3. A minimum of 21 hours, primarily at the 5-6000 level, must be taken in lecture courses from three of the five divisions of Chemistry & Biochemistry. No more than 6 hours may be taken in courses carrying graduate credit below the 5-6000 level.
4. For items 1-3 above, a maximum of two courses may be taken in department(s) outside of the Department of Chemistry & Biochemistry as substitution(s). However, all such outside courses must be approved in writing by the departmental Graduate Committee.
5. Inclusion of special problems and/or laboratory courses in the degree program is encouraged. Up to 9 credit hours of Independent Study (CHEM 5990), e.g., may be applied to the 32 total hours mentioned in item 1 above.
6. In addition to the courses mentioned in items 2-4 above, the remainder of the 32 hour total requirement (item 1) would be fulfilled by any combination of CHEM 5990, CHEM 5960, Divisional Seminars (CHEM 6210, 6721, 6411, 6431, and 6850), and any other courses carrying graduate credit.
7. All graduate students must enroll and participate in the Departmental Colloquium (CHEM 6970) for zero credit hours throughout the entire period of their graduate studies (excluding summer semesters).

IV. YEARLY REVIEW OF GRADUATE STUDENTS

The performance of all graduate students will be reviewed annually by the faculty for the purpose of determining the status of each student in the graduate program. The faculty would normally act on the recommendations forwarded by the Graduate Committee as outlined below.

A. At the end of the first year of graduate school, recommendations regarding the status of students in our program will be made by the Graduate Committee on the basis of course performance and recommendations of the respective divisions. See Appendix B for information that should be submitted to the Graduate Committee.

B. In subsequent years the Graduate Committee will make recommendations to the faculty regarding individual graduate students based on grade record, research program, evaluation by the individual's major professor, the advice of members of the student's division, and personal consultation with the student if necessary. See Appendix B for information that should be submitted to the Graduate Committee.

Appendix A

Prospective Major Professors for Graduate Students

To assist graduate students in learning about the research in the Department and to assist them in choosing a Major Professor for their Ph.D. research, the Chemistry and Biochemistry Department requires that each graduate student meet and further discuss the research opportunities with at least three prospective Major Professors. Students who enter in the fall semester must first attend the series of faculty research talks given early in the semester. In addition, each student must also visit with all the untenured professors in the division(s) in which s/he is interested [distributed on separate sheet], and obtain their signatures to document the visits.

The individual meetings should occur as soon as possible after the faculty research talks, and must be **completed and the signed form returned before the third Wednesday in October for the Fall and by the third Wednesday in March for the Spring.**

Analytical Division:

C L BLANK	2967	121 CHBA	_____
G DRYHURST	4811	208 CHB	_____
R W TAYLOR	3820	312 CHB	_____
R LWHITE	4806	331A PHSC	_____

Biochemistry Division:

P COOK	4581	219B PHSC	_____
P E KLEBBA	4969	130Q PHSC	_____
B A ROE	4912	311 CHB	_____
V RYBENKOV	1677	130B PHSC	_____
A H WEST	1529	219F PHSC	_____
H ZGURSKAYA	1678	130C PHSC	_____

Inorganic Division:

M T ASHBY	2924	326A PHSC	_____
R P HOUSER	3551	302A PHSC	_____
G RICHTER-ADDO	6401	110 CHB	_____

Organic Division:

R F CHICHEWICZ	6969	217 CHBA	_____
D T GLATZHOFFER	3834	302B PHSC	_____
R L HALTERMAN	4836	436 PHSC	_____
D J NELSON	2288	308 PHSC	_____
K M NICHOLAS	3696	219 CHBA	_____
V A SOLOSHONOK	8279	315 PHSC	_____

Physical Division:

R E FRECH	3831	330D PHSC	_____
C V RICE	5831	B11 CHBA	_____
R A WHEELER	3502	112 CHB	_____
W T YIP	2054	413 PHSC	_____

Chemical Education:

M R ABRAHAM	4981	109 CHB	_____
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Non/Multi-Divisional:

C B MAO	4385	311 CHB	_____
S SCHROEDER	3092	111 CHB	_____

After visiting with the above Professors, I wish to submit the following preferences, with the scales of preference indicated (from 1 to 5, 1 being the highest):

Student's name: _____ Signature: _____

Division chosen: _____ Date: _____

1st Preference: Professor _____ Preference scale = _____

2nd Preference: Professor _____ Preference scale = _____

3rd Preference: Professor _____ Preference scale = _____

Your choice will be reviewed by the Graduate Committee prior to final selection of a Major Professor in accord with current Departmental policy. If you wish to comment upon your reason(s) for selecting a particular professor(s) you may do so in writing on a single additional page attached to this form.

Appendix B

DEPARTMENT OF CHEMISTRY ANNUAL GRADUATE STUDENT EVALUATION REPORT

Name _____

Date _____

INFORMATION REQUIRED OF ALL STUDENTS

- A. UPDATE THE GRADUATE STUDENT DATA FORMS AND RETURN WITH THIS REPORT. **Correct any errors and fill in any blank lines using a red pen or red pencil.**
- B. Courses Remaining: List the additional lecture courses you must take with the dates you plan to take them. Include current enrollment. (Omit research, independent study, divisional seminars and departmental colloquium.) Attach additional pages if required.

_____	_____	_____	_____	_____	_____
Course Number	Date	Course Number	Date	Course Number	Date
_____	_____	_____	_____	_____	_____
Course Number	Date	Course Number	Date	Course Number	Date
_____	_____	_____	_____	_____	_____
Course Number	Date	Course Number	Date	Course Number	Date

CANDIDATES FOR THE M.S.

A. Thesis Degree:

1. ATTACH A ONE TO TWO PAGE SYNOPSIS OF RESEARCH PROGRESS ENDORSED BY YOUR MAJOR PROFESSOR.
2. ATTACH A WRITTEN EVALUATION OF YOUR PROGRESS BY YOUR MAJOR PROFESSOR. This should include comments on coursework and research progress and projected timetable for completion of degree requirements. Your major professor must meet with you in order to review all the information above and subsequently forward all to the Graduate Committee for review.

B. Non-thesis Degree:

- Projected Date to take Comprehensive Examination: _____