CGS Agenda Item:	09-14
Proposal Effective Date:	Spring 2010

PROPOSED REVISION OF M.S. CHEMISTRY PROGRAM
Chemistry

Program Mission: ~~This program provides advanced study of the major areas of chemistry, including analytical, inorganic, physical, organic, computational, and biochemical. Students gain original research experience by undertaking a thesis project. Graduates are qualified for responsible positions in industry, government and education or to enter doctoral study.~~

The Master of Science in Chemistry program at EIU is designed to provide solid training to permit graduates to obtain responsible positions in industry, governmental agencies and educational institutions while also providing strong preparation for post-graduate study in PhD and other professional programs. It uses a research intensive, 30 hour thesis model approved by the Graduate School.

The program's formal coursework centers on 15 semester hours that are designed to give students a broad background in modern chemistry. Six additional semester hours of elective courses, six semester hours of research, and three semester hours of thesis complete all credit requirements for the degree.

Admission Requirements: To be eligible for degree candidacy, applicants must meet all of the requirements for admission to the Graduate School (see "Admission to Graduate Degree and Certificate Programs"). In addition, applicant must provide a documented score on the General Test of the Graduate Record Exam.

Study Plan Approval: The study plan must be approved by the departmental graduate coordinator prior to completion of 12 semester hours of graduate credit which count toward the graduate degree.

Degree Requirements

Degree requirements include those outlined for the Master's Degree by the Graduate School (see "Requirements for the Master's Degree"). All students must take a core of courses which total 24 semester hours. Students must also take elective courses which total 6 semester hours. With permission of the graduate coordinator, one or more elective courses may be taken in departments outside Chemistry.

~~Courses in Chemistry Chosen From:~~

The following core courses are required of all students: (total credits: 24)

CHM 5000 Graduate Seminar I Credits: 0
CHM 5001 Graduate Seminar II Credits: 1
CHM 5002 Introduction to Graduate Chemical Research Credits: 1
CHM 5003 Critical Reading of Chemical Literature Credits: 1
CHM 5180 Bioanalytical Problem Solving Credits: 3
CHM 5210 Bonding and Reactivity Credits: 3
CHM 5360 Supramolecular Chemistry and Nanotechnology Credits: 3
CHM 5420 Modern Organic Chemistry Credits: 3
CHM 5890 Graduate Research Credits: 6
CHM 5950 Thesis Credits: 3

Students must take a total of 6 credits of elective courses chosen from the following list of Chemistry courses or, with permission of

the graduate coordinator, courses chosen from other disciplines.

Courses in Chemistry Chosen From:

~~12-21 s.h.~~

- CHM 4750 - Environmental Chemistry. Credits: 3
- CHM 4770 - Molecular Spectroscopy. Credits: 3
- CHM 4790 - Medicinal Chemistry. Credits: 3
- CHM 4800 - Selected Topics in Chemistry. Credits: 1 to 3
- CHM 4860 - Biochemistry III. Credits: 3
- CHM 4900 - Inorganic Chemistry II. Credits: 3
- CHM 4915 - Advanced Laboratory Credits: 3
- ~~CHM 5100 - Advanced Analytical Chemistry. Credits: 3~~
- ~~CHM 5120 - Theoretical Inorganic Chemistry I. Credits: 3~~
- CHM 5200 - Chemical Thermodynamics. Credits: 3
- CHM 5250 - Special Topics. Credits: 3
- CHM 5300 - Molecular Spectroscopy. Credits: 3
- CHM 5350 - Organometallic Chemistry. Credits: 3
- ~~CHM 5400 - Physical Organic Chemistry. Credits: 3~~
- CHM 5410 - Organic Mechanisms and Synthesis. Credits: 3
- CHM 5460 - Advanced Biochemistry. Credits: 3

~~**Courses in Physics, Mathematics, Botany or Zoology**~~

~~(as approved by student's committee). Credits: 6~~

- ~~CHM 5000 - Graduate Seminar I. Credits: 0~~
- ~~CHM 5001 - Graduate Seminar II. Credits: 1~~
- ~~CHM 5002 - Introduction to Graduate Chemical Research. Credits: 1~~
- ~~CHM 5890 - Graduate Research. Credits: 1 to 6~~

Graduate Assistantships

Information on graduate assistantships may be obtained by contacting the Coordinator of Graduate Studies or Chair, Chemistry, 3154 Physical Science Building, EIU.

Rationale: This change in our curriculum will give our students an updated, consistent and comprehensive background in modern chemistry. (In the past, our students have not been offered a consistent set of core courses.) We have designed a set of core courses that span the chemistry subdisciplines and that emphasize basic knowledge and modern applications in addition to training in "soft skills" such as teamwork, leadership as well as oral and verbal communication skills.

Date approved by the department or school: April 2, 2009

Date approved by the college curriculum committee: April 10, 2009

Date approved by CGS: _____