

# PROGRAM OF STUDY ENGINEERING SCIENCE COOPERATIVE PHD

Name of Student  ID#

Area of Concentration

The advisor of the above named student recommends the following program of study which has been worked out with the student:

### Core Courses - 6 hours Math, 3 hours Engineering or Science, 2 Seminars

Course Number	Course Name	Credit Hours	Semester	Grade
Math <input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 520px; height: 25px;" type="text"/>	3	<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>
Math <input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 520px; height: 25px;" type="text"/>	3	<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>
<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 520px; height: 25px;" type="text"/>	3	<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>
ENGR 580	Engineering Science Ph.D. seminar	1	<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>
ENGR 580	Engineering Science Ph.D. seminar	1	<input style="width: 50px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>

### Concentration Courses - 15 hours

Course Number	Course Name	Credit Hours	Semester	Grade
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Candidacy Exam (candidacy exam must be taken within 4 years after admission) Admitted to Candidacy Date:

### Dissertation Hours - 24 hours

SIUC ENGR 600	Doctoral Dissertation	12	
SIUE ENGR 699	Doctoral Dissertation	12	

Time period of 5 years allowed between Admission to Candidacy and finishing dissertation

SIUE

SIUC

Advisor Names

Advisor Signatures

Student Signature  Date

## **From Graduate Catalog:**

### **Curriculum**

A minimum of 26 semester hours of course work, including 2 hours of seminar, and 24 semester hours of dissertation research is required. The course work must be completed in 2 areas: area of concentration and program core. A student must complete a minimum of 15 hours of course work relevant to an area of concentration. The course work in the area of concentration is intended to provide depth in the student's area of research. The program core consists of 11 hours of course work. A dissertation must be completed in the student's area of research interest with the approval of the dissertation committee.

### **Program Core**

The program core consists of 11 hours of course work: 6 hours in math, 3 hours in engineering or science and 2 hours of seminar. The SIUC math courses to choose from are: all 400 and 500, except MATH 400, 411, 412, 458, 480, 483, 511, 512, 513, and 516. Approved SIUE math courses include: MATH 420, 421, 423, 435, 437, 450, 451, 462, 464, 465, 466, 501, 502, 545, 552, 555, 563 and 565. The engineering courses to choose from are: ENGR 530—Engineering Data Acquisition: Theory and Practice, ENGR 540—Design of Engineering Experiments, ENGR 545—Advanced Numerical Methods in Engineering, ENGR 521—Probability and Stochastic Processes for Engineers. The science course could be any 400 or 500 level course in Computer Science, Physics, Chemistry or Geology, as approved by the student's advisor. The seminar course, ENGR 580, must be taken in two separate semesters, each time as one-hour course. It is recommended that the seminar classes be taken after the initiation of doctoral research or after candidacy is granted.

### **Guide for Core and Concentration Courses**

- Only two 400-level courses (typically 6 hours) can be counted towards the minimum required 26 semester hours of course work.
- Special Investigation course can be taken under ENGR 590—Special Investigations in Engineering Science, and only 3 hours can be counted towards the minimum required 26 semester hours of course work.
- Transfer credit will normally be given for some of the graduate level courses suitable to the program upon review by the college Ph.D. Committee. Proficiency examinations may be authorized by the committee for areas in which questions of transfer credit arise. No credit will be given for industrial experience. A maximum of six hours of course work can be transferred in all cases due to residency requirement, which states that every student must complete at least 24 semester hours of approved course work at SIUC prior to taking the candidacy examination. Of the 24 hours of dissertation research (ENGR 600) only 6 hours can be completed before candidacy.
- A student transferring credits from a master's program must have earned those credits over and above the required course work to obtain the M.S. degree in his/her institution. Credit cannot be transferred from master degrees obtained from international institutions.

### **Candidacy**

A Ph.D. student must satisfy all Graduate School requirements to become a candidate. Acceptance to Ph.D. candidacy is contingent upon the completion of all courses, excluding the seminar, with A or B grades and successful completion of a written and an oral examination in the student's area of concentration. The examination in the area of concentration is organized and administered by the student's academic advisor. The candidacy examination committee consists of at least three faculty chosen by the advisor in consultation with the student. The committee has to be approved by the program director before it conducts the examination. Normally, the examination can be conducted at any time during the year when classes are in session. In the written examination, the student is tested in at least two major topics of the area of concentration with an appropriate number of questions prepared by the members of the student's candidacy committee. Each student has to score at least 70% in each major topic test in order to successfully complete the written part of the candidacy examination. If a student fails to pass any topic test of the written examination, a second chance is given for the failed topic test. If a student does not successfully complete the written examination after two attempts, he/she will not be accepted to candidacy in the engineering science Ph.D. program. A student is qualified to take the oral examination only after successfully completing the written examination. The oral examination is conducted within two weeks of the successful completion of the written examination. In the oral examination, the student is tested again in the area of concentration by the candidacy committee members. If a student fails to pass the oral examination in the first attempt, a second chance is given. If a student does not successfully complete the oral examination after two attempts, he/she will not be accepted to candidacy in the engineering science Ph.D. program. After the completion of the concentration examination, copies of the graded tests, along with signoff sheets for both the written and oral examinations are submitted to the director of the Ph.D. program.

### **Dissertation**

A dissertation must be written under the direction or codirection of an engineering faculty member and approved by a dissertation committee consisting of a minimum of five members, one of whom must be from outside the College of Engineering. For students with a computer science background, the committee will be made up of at least six members, three cross-appointed Computer Science faculty members and three Engineering faculty members, with a chair from Computer Science and a co-chair from Engineering. The dissertation adviser must be chosen by the end of the student's first academic year. The dissertation committee should be formed after successful completion of the candidacy examination. The members of this committee need not be the same as the members of the candidacy examination committee. A dissertation research proposal must be approved by the dissertation committee. Candidates will be required to present an acceptable dissertation describing original research performed with minimal supervision. Dissertation approval is based on a successful oral defense of the dissertation research and approval of the dissertation. This requires approval of at least 80 percent of the dissertation committee.

### **Graduation**

1. All requirements of the Graduate School must be met.
2. A minimum of 26 hours of doctoral level course work must be completed with a minimum grade point average of 3.25.
3. An acceptable dissertation must be completed within five years after admission to candidacy or the student will be required to repeat the candidacy examinations.