

GRADUATE
NEW/REVISED/DELETED GRADUATE PROGRAMS COVERSHEET
 (Degree Programs, Sequences, Graduate Certificates)
 Graduate Curriculum Committee
 2001-02

Deadlines for receipt by Graduate Curriculum Committee:

Revised Degree Program, Sequence, Graduate Certificates: November 16, 2001, for inclusion in 2002-03 catalog.

New Sequence, New Graduate Certificate: October 19, 2001, for inclusion in 2002-03 catalog.

New Degree Program: February 15, 2002, for inclusion in 2003-04 catalog.

DEPARTMENT/SCHOOL Applied Computer Science DATE August 24, 2001
 TITLE OF DEGREE, SEQUENCE, OR CERTIFICATE Information Systems Sequence

Proposed Action: (Refer to page 15 of *GCC Proposal Guidelines and Procedures*.)

New: (Check one.)

Degree Program* (goes beyond Graduate Curriculum Committee)

Sequence (goes beyond Graduate Curriculum Committee)

Graduate Certificate

Post-Baccalaureate Graduate Certificate (goes beyond Graduate Curriculum Committee)

Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)

Change in requirements for: (Check one.)

Degree Program Sequence Certificate

Other program revisions

Deletion of: (Check one.)

Degree Program (goes beyond Graduate Curriculum Committee)

Sequence (goes beyond Graduate Curriculum Committee)

Graduate Certificate

Post-Baccalaureate Graduate Certificate (goes beyond Graduate Curriculum Committee)

Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)

*Obtain the New Program Request (NEPR) format from the Office of the Provost.

Summary of proposed action. For all proposals, provide current title and current catalog copy. Provide new title and new catalog copy for new programs, and for revised programs if catalog copy/title is altered. For revised programs, provide a summary of the changes. (Refer to checklist on page 37 of *GCC Guidelines and Procedures*.)

SEE ATTACHED.

Routing and action summary:

1. _____ 4. _____
 Dept./School Curriculum Committee Chair Date Approved College Dean Date Approved

- | | | | |
|--|---------------------|--|---------------------|
| 2. _____
Department Chair/School Director | _____ Date Approved | 5. _____
Teacher Education Council Chair
(28 copies to Dean of College of Education) | _____ Date Approved |
| 3. _____
College Curriculum Committee Chair | _____ Date Approved | 6. _____
Graduate School | _____ Date Approved |

Submit 10 copies of proposal to Graduate Curriculum Committee.

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DEPARTMENT/SCHOOL Applied Computer Science DATE August 24, 2001
 TITLE OF DEGREE, SEQUENCE, OR CERTIFICATE Telecommunications Sequence

Proposed Action: (Refer to page 15 of *GCC Proposal Guidelines and Procedures*.)

New: (Check one.)

Degree Program* (goes beyond Graduate Curriculum Committee)

Sequence (goes beyond Graduate Curriculum Committee)

Graduate Certificate

Post-Baccalaureate Graduate Certificate (goes beyond Graduate Curriculum Committee)

Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)

Change in requirements for: (Check one.)

Degree Program

Sequence

Certificate

Other program revisions

Deletion of: (Check one.)

Degree Program (goes beyond Graduate Curriculum Committee)

Sequence (goes beyond Graduate Curriculum Committee)

Graduate Certificate

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Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)

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Revision to
Master's Degree in Applied Computer Science
Applied Computer Science Department
Illinois State University

Summary of the proposed action

- The Masters Degree will have two sequences – Information Systems, the current focus, and Telecommunications.
- Change to be implemented with first catalog after approval, expected to be the 2002-2003 catalog

Revision of Catalog Copy
Master's Degree in Applied Computer Science
 Applied Computer Science Department
 Illinois State University

Catalog Copy (changes in bold)

Current

Proposed

Master's Degree in Applied Computer Science

The Master of Science program in Applied Computer Science emphasizes the application of computers to real-world problem solving, focusing principally on software and people-related issues in the development of computer applications. It is appropriate for a range of students, including industry practitioners seeking career advancement, students wishing to expand on their undergraduate computing work, and individuals wishing to make a career change. Students may pursue either a course or thesis option. **(no change)**

Admission Requirements

All University and Graduate School requirements for admission to a degree program of the Graduate School apply. Additional department requirements are listed below. **(no change)**

Applicants must submit scores from the Graduate Record Examination (GRE) General Aptitude test. The GRE Verbal and Quantitative scores should each exceed 400, and the sum of these two scores is expected to exceed 1100. **(no change)**

Applicants must have a bachelor's degree from an accredited university or college and must have a grade point average (GPA) of at least 3.0 (B) on a 4.0 scale, calculated over the last 60 hours taken (either graduate or undergraduate). The undergraduate degree need not be in computing. International students must present a TOEFL score of at least 570 (computer-based 230). **(no change)**

Students may be admitted to the ACS program at any time during the academic year, but preference is given to student applications received by March 1 for fall (August) admission and by October 1 for spring **(no change)**

(January) admission.

Full-time students in the ACS program should expect to spend at least two years to complete the masters program once deficiency course work has been completed.

(no change)

All 400-level courses in the Applied Computer Science department have restricted enrollments and are not open to graduate-students-at-large. Opportunities for non-ACS majors, including GSALs and graduate students in other majors, to take undergraduate and 3xx.05-level computer courses are also limited, and permission to register must be obtained from the graduate advisor (OU 302). Such students may be required to furnish official transcripts which show the degree earned and the prerequisites for the course in which the student is seeking enrollment.

(no change)

Programs Offered

The department offers two sequence options to complete the Master of Science degree. The sequences include Information Systems and Telecommunications. Within each sequence the student may choose to complete either a 35 semester hour program thesis option or a 39 semester hour program course option.

Curriculum Requirements

This degree assumes an undergraduate knowledge base in computing, which students with undergraduate degrees in computing will normally have acquired. Students lacking sufficient background may be admitted but will have to complete fundamental courses before enrolling in the ACS core courses. These students should expect to complete some or all of the following courses as deficiencies:

(no change)

ACS 275 C++ As A Second Language
OR (ACS 168 Structured Problem-Solving
Using The Computer and ACS 169
Computer Application Development)

ACS 407 Telecommunications Fundamentals
OR (ACS 254 Hardware and Software
Concepts and ACS 375.05 Data
Communications)

ACS 408 Information Systems Fundamentals
 OR (ACS 261 Systems Development I
 and ACS 378.05 Database
 Processing)

The ACS Graduate Advisor will determine specific requirements.

To provide a broad common background, each student is required to complete the following Core Areas:

System Analysis, Modeling and Design

ACS 432 System Analysis and Design

Data Communications and Networking

ACS 475 Advanced Data

Communications and Networks

OR

ACS 377.05 Practical

Telecommunications Networking

Data Management

ACS 478 Advanced Database

Management

Project and Change Management

ACS 463 Controlling Software

Development

Project Implementation

ACS 495 Information Technology

Integration

There are two options available within this degree: the Thesis Option and the Course Option.

The Thesis Option requires a minimum of 35 semester hours as follows:

Core Area courses	15 hours
Research methodology	3 hours
ACS 499 (Master's Thesis)	5 hours
Approved ACS electives	12 hours
Total	35 hours

Core Area courses	15 hours
Research methodology	3 hours
ACS 499 (Master's Thesis)	5 hours
Approved ACS electives	3 hours

Choose one sequence:

Information Systems:

2 of

(440, 451, 460, 467, 468, 485) 6 hours

1 of

**(341.05, 352.05 or 353.05,
365.05, 367.05) 3 hours**

OR

Telecommunications:

3 additional courses from

**(374.05, 377.05, 451, 475,
476, 477, 485) 9 hours**

Students pursuing the thesis option must take a course in research methodology no later than the first semester of thesis enrollment (earlier is recommended). A list of approved research courses is available from the ACS Graduate Advisor. Students in the thesis option must complete a minimum of 21 hours of 400-level course work, not counting thesis hours.

The Course Option requires a minimum of 39 semester hours as follows:

Core Area courses	15 hours
Technical Communication	
IT 349, ENG 349 or MQM 416	3 hours
Approved ACS electives	21 hours
Total	39 hours

Total 35 hours

Core Area courses	15
hours	
Technical Communication	
IT 349, ENG 349 or MQM 416	3 hours
Approved ACS electives	21 hours
Choose one sequence:	
Information Systems:	
3 of	
(440, 451, 460, 467, 468, 485)	9 hours
1 of	
(341.05, 352.05 or 353.05,	
365.05, 367.05)	3 hours
OR	
Telecommunications:	
4 additional courses from	
(374.05, 377.05, 451, 475,	
476, 477, 485)	12 hours
Total	39 hours

Students in the course option must complete a minimum of 24 hours of 400-level course work, not counting project hours.

(no change)

Courses

To count a 300-level ACS course as part of a master's degree in Applied Computer Science, students must enroll in a graduate section of the course (e.g., 375.05).

(no change)

Revision to
Master's Degree in Applied Computer Science
Applied Computer Science Department
Illinois State University

Rationale for proposal

There are two main department goals being addressed by this proposal. The department wants to raise the level of graduates from our masters program by requiring more advanced work. The department also wants to offer a Telecommunications sequence to address the interest of a growing number of our graduate students. A number of telecommunications courses have already been developed and offered to meet student demand. Creating a Telecommunications sequence will provide a designation on the student transcript and indicate specialization to an employer. It is estimated that about 35% of the students in the ACS graduate program (currently about 82 students) would pursue the Telecommunications sequence.

The proposed establishment of two separate sequences in each option of the degree program is a result of student requests and the faculty's desire to provide a more structured degree plan. The selection of Information Systems and Telecommunications as the sequences to offer is a result of the requests from perspective and current students in the program and suggestions from the business advisory boards. The current program uses a menu approach to allow the graduate student to select the courses they desire outside of the core to constitute the plan-of-study. The sequence approach should provide for better course schedule planning and provide a more qualified graduate. The sequence approach will also make it easier for employers to identify the strengths of the graduate.

Impact of proposal

No impact on existing programs within the ACS department or elsewhere on campus is expected from the proposal. The number of ACS master's students choosing the thesis option and the number choosing the course option are expected to remain approximately the same.

There are also no additional funding needs or staffing anticipated as a result of this revision to the master's degree. Sufficient seats in graduate ACS classes are expected to be available to accommodate the proposed change.