

## Master of Science (MS) degree in Cybersecurity and Cyber Systems

**Admission.** Applicants with a bachelors degree in Computer Science, Engineering, Physics, Mathematics, Management Information Systems or equivalent degrees will be admitted directly as long as their GPA satisfies Graduate School requirements. The MS degree requires 30 credit hours. Students can select among the concentrations in cybersecurity or in cyber systems. For applicants lacking the required specific background, we offer conditional admission status until completing prerequisite courses.

Admission to the MS program is based on the following factors: grade point average of 2.75 or higher on a scale of 4.0 on approximately the last 60 semester hours of undergraduate coursework, class ranking, and faculty recommendation letters. Although GRE scores are not required for admission, they are important to qualify for the High Achievers Tuition Rate. See also <http://tuition.siu.edu/highachievers2.html> The minimum TOEFL score requirement for international applicants is 550 (paper based) or 80 (computer based).

The program requires a nonrefundable \$65 application fee that must be submitted with the application for admissions to the MS program in Cybersecurity and Cyber Systems. Students must apply online and pay this fee by credit card. Please address any correspondence to “Master of Science Program in Cybersecurity and Cyber Systems,” 1230 Lincoln Drive, Southern Illinois University Carbondale, Carbondale, Illinois 62901, MC 6603 or MC 4511. Inquiries can be addressed to [cyberms@siu.edu](mailto:cyberms@siu.edu). For telephone inquiries please call (618) 536-2364 or (618) 536-2327, and refer to the Master of Cybersecurity and Cyber Systems Program. The facsimile numbers are (618) 453-7972 and (618) 453-6044.

**Retention.** Any student whose cumulative grade point average falls below 3.0 on courses that count towards the degree will be placed on departmental academic probation. Any graduate student on academic probation whose grade point average remains below 3.0 on courses that count towards the degree for two consecutive semesters in which she or he is enrolled will be permanently suspended from the program, unless the department grants an exception.

**Curriculum.** The degree requires 3 courses from 3 key areas that will ascertain understanding of fundamentals and help build a solid foundation for the remainder of the program. These courses are listed below.

1. Fundamentals in computer security. This requirement will be completed by either CS 410 or ECE 434. Only one of these courses will count towards the degree.
2. Fundamentals in systems programming. This requirement will be completed by either CS 407 or ECE 536. Only one of these courses will count towards the degree.
3. Fundamentals in network systems. This requirement will be completed by either CS 440 or ECE 553. Only one of these courses will count towards the degree.

A student should then seek a concentration either in cybersecurity or in cyber systems by selecting at least 5 elective courses in cybersecurity or in cyber systems. The lists of these courses are given below. A maximum of six credit hours from academic units outside the Department of Electrical and Computer Engineering or the Department of Computer Science could be applied towards the degree.

In cybersecurity concentration, students must complete 4 courses in cybersecurity and 1 course in cyber systems. In cyber systems concentration, students must complete 4 courses in cyber systems and 1 course in cybersecurity. A fundamental area may be satisfied by a course that was taken prior to admission or a documented record of accomplishment in the subject matter content. In this case, the student must select an additional elective course either in cybersecurity or in cyber systems for each satisfied fundamental area. Students must take at least two CS/ECE five hundred level courses not cross listed to a four hundred level course. Students must take at least three ECE and at least three CS courses. Only three credit hours of ECE 592 or CS 598 can count towards the degree.

**MS Thesis option:** 6 credit hours of thesis in ECE or CS (ECE 599 or CS 599) may substitute for 6 credit hours in a concentration area.

**List of cybersecurity courses for the MS degree:** CS 408, CS 409, CS 413, CS 415, ECE 418, ECE 517, ECE 518, ECE 519, CS 525, CS 531.

**List of cyber system courses for the MS degree:** ECE 417, ECE 419, CS 425, ECE 431, CS 441, ECE 475, ECE 512, ECE 528, CS 540, ECE 541.