# Cybersecurity MS, Information Systems Emphasis

Students must meet all general University of Missouri-St. Louis Graduate School admission and degree requirements.

Students must choose one of the following emphasis areas at the time of application for admission:

1. Information Systems Emphasis or
2. Computer Science Emphasis

Degree requirements vary depending on the chosen emphasis area.

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL catalog. Students are considered for admission to the graduate program in Cybersecurity only after they have formally applied for admission through the Graduate School. Applications may be completed on-line. Additional emphasis specific requirements are listed below.

## Admission Requirements

In addition to Graduate School admission requirements, the following requirements apply.

Applicants must have an undergraduate degree with a minimum cumulative GPA of 3.0. Students whose GPAs are between 2.75 and 2.9 may be admitted under a restricted status within the terms specified by the Graduate School.

Prior to entry, students must demonstrate competence in the following areas (through prior course work or professional experience) or take coursework at UMSL to fulfill the entry requirements.

- Business Statistics (similar to undergraduate course SCMA 3300). Students without a background in statistics could take SCMA 5300 as a graduate student to fulfill this requirement.
- At least one semester of computer programming coursework or application development work experience (similar to undergraduate courses INFSYS 3806 or INFSYS 3844). Students without programming

background can take either INFSYS 6805 or INFSYS 6806 as a graduate student to fulfill this requirement.

*Entrance examinations*

- The Graduate Management Admission Test (GMAT) is not required for admission. However, it may be used by students when their overall GPA is below 3.0 to strengthen their application.

- International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission

# Coursework

Candidates for the M.S. in Cybersecurity with Information Systems Emphasis must complete 30 credit hours of graduate coursework subject to Graduate School requirements.

**Required Courses**

| | | |
|---|---|---|
| INFSYS 6820 | Systems and IT Infrastructure | 3 |
| INFSYS 6828 | Principles of Information Security | 3 |
| INFSYS 6836 | Management of Data Networks and Security | 3 |
| INFSYS 6846 | Applied Cryptography for Business Applications | 3 |
| INFSYS 6847 | Project Management | 3 |
| INFSYS 6858 | Advanced Cybersecurity Concepts | 3 |
| INFSYS 6868 | Software Assurance | 3 |
| INFSYS 6878 | Management of Information Security | 3 |
| INFSYS 6888 | Capstone in Information Security | 3 |
| **Electives (select 2 two from following)** | | **6** |
| CMP SCI 5732 | Cryptography for Computer Security | |
| CMP SCI 5750 | Cloud Computing | |

| | |
|---|---|
| INFSYS 5890 | Graduate Internship in Information Systems |
| INFSYS 5899 | Individual Research in Information Systems [1] |
| INFSYS 6818 | Management of Software Testing |
| INFSYS 6847 | Project Management |
| INFSYS 6860 | Advanced Data Integration |
| INFSYS 6862 | Artificial Intelligence Applications for Business and Cybersecurity |
| INFSYS 6891 | Seminar in Information Systems [1] |
| MGMT 5600 | Managing and Leading in Organizations |
| Other electives upon approval of Information Systems department chair | |

**Total Hours**                                                                                    **30**

[1] Topic must be approved by Information Systems department chair

If other departments are affected by this proposal, please secure "sign-offs" and indicate for each department the following:

| Department | Contact Person | Phone # | Objections |
|---|---|---|---|
| Computer Science | Cezary Janikow | 516-6352 | No |

Justification for request:
INFSYS 6864 provides a critical knowledge unit for the program and is thus being added to the required courses.