

To: Council on Graduate Studies

From: Dr. Rigoberto Chinchilla and Dr. Austin Cheney, School of Technology

Date: March 31, 2017

CGS Agenda Item: 17-38 Effective Fall 2017

Proposal: To provide the M.S. Cybersecurity in a face-to-face format in addition to online delivery. The Online program has been previously approved by the Council on Graduate Studies.

Rationale: The M.S. in Cybersecurity has identified a growing market of prospective graduate students who seek admission to a face-to-face delivered graduate program in this high-demand professional field of study.

1) Program Mission:

*The M.S. in Cybersecurity will prepare students, **in an online and/or face-to-face delivered program**, to become leaders and technical managers in cybersecurity, with a solid understanding of security technology and organizational management principles and practices, preparing them to make knowledgeable and responsible decisions.*

2) Accreditation: *if applicable*

The cybersecurity field does not have a licensure requirement; however, a number of certifications are highly recommended for those pursuing a career in cybersecurity. Some key certifications are a prerequisite for obtaining certain government positions in cybersecurity; key among those are the CompTIA Security+ and Certified Information Systems Security Professional (CISSP) designations

3) 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") *(standard language included in all, programs should add all other admission requirements specific to the program.)*

The M.S. in Cybersecurity program requires completion of a baccalaureate degree in a related field (i.e. Technology, Computer Science, Management of Information Systems, Electrical and Computer Engineering, Cybersecurity, Electronics Engineering, Systems Engineering, and similar fields), in addition to the general admission requirements of the Eastern Illinois University Graduate School.

4) Degree Audit: The graduate plan of study is the EIU Degree Audit, which is generated automatically in the Degree Audit Reporting System (DARS) at the time of degree or certificate candidacy.

Modifications of the standard EIU Degree Audit are submitted by the graduate coordinator to the certification officer in the Graduate School at the time modifications are approved. The Degree Audit serves as an unofficial summary of requirements for the program. Degree and certificate candidates are advised to review the comprehensive summary of the Degree Audit process specified on the “Requirements for All Degree and Certificate Candidates” section of the Graduate Catalog. Individual programs may require candidates to submit plans of study in addition to the Degree Audit, candidates should consult with the program coordinator. *(this is standard language included in all)*

- 5) Degree Requirements: Degree requirements include those outlined for the master’s degree by the Graduate School (see [“Requirements for the Master’s Degree”](#)). *(standard language included in all, program should list the number of required hours to complete the degree and required/core courses specific to the program.)*

The M.S. in Cybersecurity requires successful completion of 32 semester hours of coursework. Because of its focus on practitioners, a culminating residential capstone experience, rather than completion of a thesis, is also required.

- a) Required Courses: *include number of hours*

Course	Credits
1: TEC 5313 - Networking and Advanced Data Communications	3
2: TEC 5323 - Advanced Database Technology	3
3: TEC 5353 - Cybersecurity	3
4: MIS 4850 - Systems Security	3
5: TEC 5363 - Database Security and Reliability	3
6: AET 4823 - Facilities Security	3
7: CYB 5550 - Cybersecurity Professional Seminar	3
8: MBA 5670 - Management of IT	3
9: TEC 5413 - Biometric Security	3
10: MIS 4860 - Ethical Hacking and Network Defense	3
11: CYB 5900 - Cybersecurity Capstone	2
Total Required Hours	32

- 6) Concentrations and Options *if applicable (N.A)*
- a) Courses and hours specific to concentrations and/or options **(N.A.)**

- 7) Electives: (include hours required) **(N.A.)**
- 8) Thesis, Capstone, Internship (if applicable)

The capstone experience will separate students into teams that use the knowledge acquired throughout the program to develop security for a computer network. Each group will then be tasked with breaking into another team's defense system. Post-exercise, evaluation will include discussion, team presentations, and written reports applying program concepts to evaluate the experience, describe lessons learned, produce an IT risk assessment and security audit, and develop organizational security policies and plans.

- 9) Graduate Assistantships (include any specific requirements to qualify for assistantships in this program, as well as contact info ie: graduate coordinator).

In addition to being admitted to the M.S. in Cybersecurity at EIU, a Graduate Assistantship for this program requires at least one of the following requisites:

- a) A professional certification: Cisco CCNA and/or CISCO CISSP and/or, COMPTIA Security +***
- b) Two years of documented working experience in the field of Cybersecurity.***
- c) A Bachelor's Degree in Cybersecurity from a recognized Institution.***

Contact Information:

Dr. Rigoberto Chinchilla, M.S. In Cybersecurity Coordinator
rchinchilla@eiu.edu Tel 217-581-8534 or 217-581-3226