

2014

# The Five Hundred Fourteenth Report of the Curricular Affairs Committee: Minor in Cyber Security.

University of Rhode Island Faculty Senate

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Serial Number #13-14—24B

TO: President David Dooley  
FROM: David Byrd, Chairperson of the Faculty Senate

1. The attached BILL titled, The Five Hundred and Fourteenth Report of the Curricular Affairs Committee: Minor in Cyber Security, is forwarded for your consideration.
2. This BILL was adopted by vote of the Faculty Senate on April 17, 2014.
3. After considering this bill, will you please indicate your approval or disapproval. Return the original, completing the appropriate endorsement below.
4. In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective May 8, 2014 three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; or (3) the University Faculty petitions for a referendum.



April 17, 2014

David Byrd  
Chairperson of the Faculty Senate

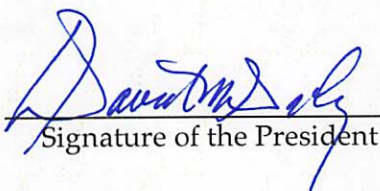
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ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

- a. Approved .
- b. Approved subject to Notice to the Board of Education \_\_\_\_.
- c. Approved subject to final approval by Board of Education \_\_\_\_ **APPROVED 8/4/14**
- d. Disapproved \_\_\_\_.



Signature of the President

5.29.14  
(date)

**Notice of Change for a Minor in Cyber Security**  
**Date: 11/1/2012**

**A. PROGRAM INFORMATION**

1. **Name of institution**  
University of Rhode Island
2. **Name of department, division, school or college**  
Department: Computer Science and Statistics  
College: Arts and Sciences
3. **Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.**  
Initiation date: Fall 2014 or when fully approved  
First degree date: potentially Spring 2016
4. **Intended location of the program**  
URI Kingston Campus
5. **Summary description of proposed program (not to exceed 2 pages)**
  - a. **Overview:** This program is designed to provide students with the fundamental technical, legal, and procedural concepts required in *Cyber Security*. Cyber Security is the discipline involved with preventing, detecting and responding to attacks on computer systems and networks. The field requires an in-depth understanding of computer systems and computer networks as well as social/legal issues, and accepted procedures.
  - b. **Workforce or professional development need:** The threats posed by cyber terrorism and cyber crime have been documented in the Center for Strategic and International Studies reports *Securing Cyberspace for the 44<sup>th</sup> Presidency*<sup>1</sup> and *Cybersecurity Two Years Later*<sup>2</sup>. Highlighted is the gross shortage of qualified cyber security professionals in the workforce including private sector, law enforcement, emergency management, and the military.

It is anticipated that the minor in Cyber Security will serve the needs of undergraduate students in various majors interested in obtaining a Network Security or Information Security position with government agencies, military organizations and in corporate

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<sup>1</sup> *Securing Cyberspace for the 44th Presidency - A Report of the CSIS Commission on Cybersecurity for the 44th Presidency*, Cochairs: Representative James R. Langevin, Representative Michael T. McCaul, Scott Charney Lt. General Harry Raduege, USAF (Ret), Project Director: James A. Lewis, Center for Strategic and International Studies, Washington, DC, December 2008.

<sup>2</sup> *Cybersecurity Two Years Later - A Report of the CSIS Commission on Cybersecurity for the 44th Presidency*, Cochairs: Representative James R. Langevin, Representative Michael T. McCaul, Scott Charney Lt. General Harry Raduege, USAF (Ret), Project Director: James A. Lewis, Center for Strategic and International Studies Washington, DC, January 2011.

settings. The minor is designed to augment a student's major field of study with the pragmatics of Cyber Security and Information Assurance.

- c. **Existing curriculum:** As outlined below, all courses in the minor will be drawn from currently existing courses offered by the URI Computer Science and Statistics Department, by other related departments, or from courses proposed concurrently with this proposal.
- d. **Major requirements:** Students from any major may minor in Cyber Security.
- e. **Completion requirements:** To complete a minor in Cyber Security a student must take the following courses:
  - CSF 430 (Introduction to Information Assurance)\*
  - CSF 432 (Network and Systems Security)\*\*
  - CSF 434 (Topics in Network and Systems Security)\*\*
  - Plus two more courses from among the following:
    - o CSF 410 (Digital Forensics)\*
    - o CSC 417 (Computer Communications)
    - o CSC 418 (Information and Network Security)
    - o HPR 108 (Honors Seminar in Mathematics – Cryptography)
    - o CSC 541 (Advanced Topics in Algorithms – Cryptography)
    - o CSF 524 (Advanced Incident Response)\*
    - o CSF 536 (Advanced Intrusion Detection and Defense)\*
    - o CSF 538 (Penetration Testing)\*\*
    - o Other faculty approved course

\* Existing course renumbered with new course code.

\*\* New course proposed concurrently with this Notice of Change

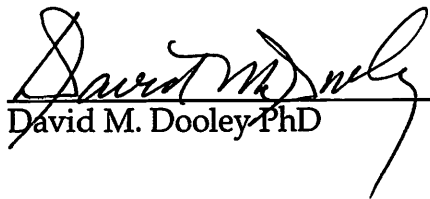
- f. **Faculty:** Several of the courses in this minor are new (proposed concurrently with this Notice of Change). The current teaching assignments for these classes are expected to be:
  - CSF 430 – Dr. DiPippo – in load
  - CSF 432 – Dr. Henry – in load
  - CSF 434 – Dr. Henry – in load

Thus, the additional faculty resources required for this program are the equivalent of three per courses each year to replace the courses normally taught by Drs. DiPippo and Henry. These resources could also be addressed with  $\frac{3}{4}$  of a full-time faculty member's teaching load.

- g. **Delivery format:** Several of the courses required for this program will be offered online, while others will be offered in a traditional in-person format.
- h. **Monitoring of student progress:** Students interested in the minor will meet with the Academic Director of the Cyber Security Program (Professor Lisa DiPippo) and complete a program of study. The Director will evaluate the student's progress toward the completion of that program of study each semester and advise the student accordingly.

- i. **Administration of program:** The Academic Director of the Cyber Security Program will administer the minor in Cyber Security as a part of her existing duties with help from the administrative staff in the Department of Computer Science.
- j. **Estimate of student enrollment:** We anticipate that in each cycle of the minor in Cyber Security we will have from 15 to 25 students. This estimate is based on initial interest in the Cyber Security courses that we began to offer in Spring 2012, and on inquiries from existing students who heard that we are planning to offer a minor in Cyber Security. Although the minor does not officially exist, and we have done very little advertising for the minor as of yet, up to 18 existing students have expressed serious interest in the program when it is approved. Further, at a recent Majors Fair and at two recent Open Houses for potential students, there was a strong interest from students in the potential for a minor in Cyber Security.

**6. Signature of the President**


  
David M. Dooley PhD

13-14-243

David M. Dooley, Ph.D.  
President

## MEMORANDUM

TO: Clark Greene  
Acting Commissioner

FROM: David M. Dooley   
President

DATE: May 28, 2014

SUBJECT: University of Rhode Island Abbreviated Proposals for Post Masters  
Certificate Programs in Nursing and the Minor in Cyber Security

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Enclosed are the Abbreviated Proposals for the Post Masters Certificate Programs in Nursing and the Minor in Cyber Security. Both proposals were approved by the Graduate Council on March 20, 2014. The Faculty Senate also approved the proposals on April 17, 2014 and I approved it on May 28, 2013.

I look forward to a positive review and of the above item. Donald DeHayes, Provost and Vice President for Academic Affairs, will serve as the University's contact. Please feel free to contact him directly if you have any questions.

dr  
enclosures

c: Deborah Grossman-Garber, Associate Commissioner, OHE  
Donald H. DeHayes, Provost and Vice President for Academic Affairs  
Laura Beauvais, Vice Provost for Faculty Affairs  
Dean Libutti, Vice Provost for Enrollment Management  
Nancy Neff, Faculty Senate Coordinator