

UNIVERSITY OF RHODE ISLAND
The Graduate School

Curricular Report from the Graduate Council to the Faculty Senate
Report No. 2005-2006-8A

At Meeting No. 411 on 21 April 2006 the Graduate Council approved the following proposal for the Graduate Certificate Program in Digital Forensics that is now submitted to the Faculty Senate.

SECTION I

BACKGROUND INFORMATION

ABSTRACT

The Graduate Council approved a proposal from the Department of Computer Science and Statistics for a Post-baccalaureate Certificate program in Digital Forensics. The proposal indicates that the program “is designed to provide students with the fundamental technical, legal, and procedural concepts required in Digital Forensics.” The program will be made up entirely of existing courses offered by the URI Computer Science and Statistics Department and the URI Electrical Engineering Department.

BACKGROUND

The following is taken from the proposal.

It is anticipated that the Graduate Certificate Program in Digital Forensics will serve the needs of mature students currently employed or aspiring to a Digital Forensics investigator position with government agencies (e.g. IRS, FBI, Secret Service), with local law enforcement, in private Digital Forensics companies, or on corporate Information Technology staffs. The Graduate Certificate program is designed to provide these individuals with the pragmatics of Digital Forensics and some fundamental background in computer science. It will be one of the first such programs in the country.

The proposal was reviewed under the process established by the Faculty Senate in which the Graduate Council serves as the Coordinating and Review Committee. Announcements of the receipt of the proposal were sent to the Provost and the Council of Deans, the Budget Office, and Department Chairs and Directors. Recommendations were sought from each of these. The Budget Office reviewed the proposal with the understanding that no additional budgetary resources would be required for its implementation. The Council of Deans unanimously endorsed the program. Comments remain on file in the Graduate School.

SECTION II

RECOMMENDATION

The Graduate Council approved the proposal for the Graduate Certificate Program in Digital Forensics at its meeting number 411 on 21 April 2006, and recommends approval by the Faculty Senate as a program that will require no new resources.

Proposal for the Graduate Certificate in Digital Forensics

A. General Information

1. Name of department:

Computer Science and Statistics

2. Title of proposed program:

Graduate Certificate in Digital Forensics

3. Intended date of implementation:

September 2006

4. Anticipated date of granting first certificate:

May 2007

5. Intended location of program:

Kingston

Approvals:

	Date
Computer Science and Statistics Department	May 13, 2005
College or Arts and Sciences Curriculum Committee	January 17, 2006
College of Arts and Sciences	January 31, 2006
Graduate Council	April 21, 2006
Faculty Senate	
President	

6. Description of the program

A) Rationale: This program is designed to provide students with the fundamental technical, legal, and procedural concepts required in *Digital Forensics*. Digital Forensics is the application of forensics science techniques to the acquisition and analysis of digital evidence. The field requires an in-depth understanding of computer science and computer systems as well as social/legal issues, and accepted procedures.

B) Workforce or professional development need: It is anticipated that the Graduate Certificate Program in Digital Forensics will serve the needs of mature students currently employed or aspiring to a Digital Forensics investigator position with government agencies (e.g. IRS, FBI, Secret Service), with local law enforcement, in private Digital Forensics companies, or on corporate Information Technology staffs. The Graduate Certificate program is designed to provide these individuals with the pragmatics of Digital Forensics and some fundamental background in computer science. It will be one of the first such programs in the country.

C) Existing graduate curriculum: As outlined below, all courses in the Graduate Certificate Program will be drawn from currently existing courses offered by the URI Computer Science and Statistics Department and the URI Electrical Engineering Department as part of their respective Master's degree programs.

D) Other potential benefits: Mature students are often reluctant to make the commitment required by a full-fledged Master's degree program such as the one currently offered by the URI Computer Science Department or the URI Electrical Engineering Department. At the same time, the completion of non-degree coursework provides students with little recognition and, consequently, fewer incentives to pursue post-graduate education. It is anticipated that the Graduate Certificate will encourage these students to pursue further professional development. Furthermore, it is expected that some students will apply to a URI Master's degree program subsequent to their completion of Graduate Certificate Program.

Since the inception of the URI undergraduate program in Digital Forensics, which has received a great deal of local and national attention, we have had many inquiries about professional development programs, such as the Graduate Certificate Program proposed here. We will soon pursue an online version of this degree program, which would be the only one of its kind, to serve the national need.

E) Admissions requirements: To apply to the Graduate Certificate Program, students must apply to a URI graduate program using the same application procedure as they would for a Master's degree application (transcripts, GREs, essay, letters of recommendation, etc), but instead they check a box indicating the Graduate Certificate Program. In lieu of the stated background for the full Master's thesis that traditional applicants must demonstrate, Graduate Certificate applicants must demonstrate either in previous course work, or professional experience, only the necessary pre-requisites to the courses they are taking for the Certificate.

F) Completion requirements:

15 credits of URI course work in approved courses relating to Digital Forensics
Demonstration of course work (any course work including but not limited to:
undergraduate, graduate, or non-matriculated) equivalent to:

CSC412 (Operating Systems and Networks)

CSC585 (Topics in Computer Forensics)

CSC586 (Topics in Network Forensics)

One of:

CSC 591 or ELE 591 (Research Practicum)
ELE 408 (Computer Organization Laboratory)
ELE 437 (Computer Communications)
ELE 438 (Network Security)
ELE 583 (Computer Vision)
ELE 584 (Pattern Recognition)
ELE 585 (Digital Image Processing)

The certificate must be completed within a 3-year period with a GPA of at least 3.0. No grades below "B" will be counted toward the 15-credit Certificate minimum. All rules respecting scholastic standing as promulgated by the Graduate school and described in the University Catalog are applicable to the Certificate program.

G) Faculty: Full-time and adjunct faculty currently associated with and teaching in the Digital Forensics program at URI will administer this program.

H) Delivery format: Initially traditional, although online versions of the courses may be developed in the future.

I) Monitoring of student progress: Students will complete a program of study in consultation with the Digital Forensics Program Director (currently Professor Victor Fay-Wolfe). The Director will evaluate the student's progress toward the completion of that program of study each semester and advise the student accordingly.

J) Administration of program: the Director of the Digital Forensics Program will administer The Graduate Certificate Program as a part of existing duties. Applications will be processed by the URI department to which the applicant applies as part of that department's existing processing of graduate applications.

K) Assessment and Evaluation of Program Outcomes: Program outcomes will be evaluated on the basis of application and graduation rates and on the extent to which Certificate recipients apply for the Master of Science degree program. In addition, the Department of Computer Science will survey existing students and alumni of the program, and Digital Forensics partner organizations (e.g. the Rhode State Police, the IRS, etc) to assess strengths, weaknesses, and overall success of the program.

L) Time Frame of Program Initiation: Fall 2006.

M) Additional Considerations -- *Transfer to the M.S. Degree Program:* Since admission requirements are similar to those for the M.S. Degree Program, students who successfully earn a Graduate Certificate will automatically be admitted to the M.S. program with credit transferring, but may have additional undergraduate deficiency courses imposed.