2021-2022

Digital and Cyber Forensic Science PHD

Communication

Goal Description:

The ability to communicate effectively with a range of audiences.

Providing Department: Digital and Cyber Forensic Science PHD

Progress: Ongoing

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Communication

Learning Objective Description:

Students will demonstrate the ability to communicate at a professional level in written and oral form

RELATED ITEM LEVEL 2

Comprehensive Examinations

Indicator Description:

At the end of the second year of study, each student is required to take and pass the written comprehensive examination (WCE) in order to advance to candidacy. A passing grade is defined as scoring 70 or above out of 100, and a high pass grade is defined as scoring 85 or above out of 100. Doctoral faculty who teach the core courses in the doctoral program are responsible for designing exam questions. Each student is given two hours on each of the 6 core subjects.

Faculty who prepare the examination questions are responsible for grading and reporting.

Criterion Description:

Doctoral faculty who prepare exam questions are responsible for grading and reporting the grades to the program advisor. Each exam score should be numeric number between 0 and 100, so that a fail (69 or below), pass (70-84), or high pass (85-100) can be determined.

Findings Description:

The doctoral committee decided to employ three comprehensive exams in OS Forensics, DF Tools, and Network forensics. 7 students took the network forensics exam and earned a "high Pass". 8 students took the OS Forensics exam with one student failing the exam and the rest were either pass or high pass. Finally, 8 students took the DF Tools exam and all passed the exam with either pass or high pass grades.

RELATED ITEM LEVEL 3

Comprehensive Examinations

Action Description:

The doctoral committee has made a couple of changes to the examination format. In lieu of multi-day exams, the committee has favored exams to be conducted in a hybrid fashion involving hands-on, oral, and written exams - all to be completed on the same day.

RELATED ITEM LEVEL 2

Dissertation

Indicator Description:

Each student, once candidacy has been attained, will develop a research agenda leading to the identification, analysis, and solution of a significant problem in Digital and Cyber Forensic Science.

The resulting documentation (dissertation) will identify:

- The significance and need for the study
- A review of current literature supporting the basis for the study and explicating the need for the study
- A methodology to address the problem
- Description and analysis of the results of the research
- Identification of the implications of the results, and future areas of research resulting from the study.

Criterion Description:

This indicator is achieved by the student giving a proposal presentation to the committee.

Findings Description:

Two students, Ashar Neyaz and Sundar Krishnan, are getting ready to defend their dissertation Summer 2022, before the July 6th deadline. They have

both secured faculty positions and are on track to graduate successfully, and submit their dissertations to the graduate school, according to their committee members.

RELATED ITEM LEVEL 3

Dissertation

Action Description:

The doctoral committee is concerned about the dissertation progress of a couple of students. The feedback the students have received after the portfolio review in April should hopefully alleviate this issue and urge these students to get back on track.

RELATED ITEM LEVEL 2

Portfolio

Indicator Description:

As a student progresses through the first two years of mandatory coursework, a portfolio of achievements should be developed. This will include:

- term projects
- team projects
- research projects

- academic papers
- other materials (patents, artifacts, etc)
- teaching evaluations

the portfolio serves as a record of achievements indicating the student has been appropriately immersed in the research function, and has the ability to report the results of scholarly inquiry in a professional manner.

Criterion Description:

The students put together a portfolio using any number of online tools and/or a simple webpage that showcases their accomplishments as outlined in the indicator description for the committee to peruse.

Findings Description:

All the doctoral students put together a comprehensive portfolio in March 2022. The doctoral faculty met and discussed students' performance. The students were given feedback by their dissertation chair.

RELATED ITEM LEVEL 3

Portfolio

Action Description:

The portfolio review that was conducted in March 2022 was the first of its kind for our department. A few key issues that were pointed out by the doctoral faculty were:

- 1. To standardize the format for the portfolio review and the process.
- 2. Committee chair to deliver feedback to their students in a timely manner.

Environmental Impact

Goal Description:

The ability to recognize the local and global impact of digital forensics and cybersecurity on individuals, organizations and society.

Providing Department: Digital and Cyber Forensic Science PHD

Progress: Ongoing

Problem Solving

Goal Description:

The ability to analyze problems, identify potential solutions and design and implement systems, tools and mechanisms to address those problems.

Providing Department: Digital and Cyber Forensic Science PHD

Progress: Ongoing

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Problem Solving

Learning Objective Description:

Students will demonstrate their capability in identifying and solving relevant problems in Digital and Cyber Forensic Science.

RELATED ITEM LEVEL 2

Comprehensive Examinations

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Technical Competence

Goal Description:

Graduates with a PhD in Digital and Cyber Forensic Science will have a strong technical foundation, that is, to develop and demonstrate knowledge of theoretical materials, and computational and technical skills in the areas of digital forensics and cybersecurity sufficient to provide skilled leadership in both research and academic environments.

Providing Department: Digital and Cyber Forensic Science PHD

Progress: Ongoing

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Technical Competence Learning Objective Description:

Students will develop and demonstrate knowledge of theoretical materials, technical skills and project management relevant to Digital and Cyber Forensic Science.

RELATED ITEM LEVEL 2

Comprehensive Examinations

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Update to Previous Cycle's Plan for Continuous Improvement Item Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Closing Summary

The program handbook is currently being developed. The Department doctoral committee will be meeting this academic year to discuss the indicators that ought to be used for the continuous improvement of the program in terms of PCI.

Update of Progress to the Previous Cycle's PCI:

The program handbook and the internship handbook were developed. The committee has met a few times to amend the documents and identify important indicators to be used for the continuous improvement of the program in terms of PCI.

New Plan for Continuous Improvement Item

Closing Summary:

- The doctoral committee has made a couple of changes to the examination format. In lieu of multi-day exams, the committee has favored exams to be conducted in a hybrid fashion involving hands-on, oral, and written exams all to be completed on the same day.
- The doctoral committee is concerned about the dissertation progress of a couple of students. The feedback the students have received after the portfolio review in April should hopefully alleviate this issue and urge these students to get back on track.
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