

# PhD Information Technology (INFT)

## Digital Forensics Concentration

The Information Technology (INFT) PhD is a signature degree of the College of Engineering and Computing. The program focuses on the science, engineering, and technology of information processing, an area of study ripe for innovation in a world driven more and more by data. It accommodates rigorous and cross-disciplinary PhD study that does not fit with PhD program requirements of a single CEC department. The PhD in INFT includes several concentrations to provide program focus.

The Digital Forensics concentration emphasizes preparatory coursework from the school's digital forensics curriculum and closely related areas. After coursework completion, students work with a dissertation advisor and committee to initiate and execute research in one or more aspects of the digital forensics domain. This research will advance the state of the art, practice, and science in the digital forensics domain, and research results will be published in leading journals and conferences dedicated to this field. Upon completion of their research, students defend their doctoral research to their committees and the public.

### Degree Requirements

Students must complete a minimum of 72 graduate credits. Of the 72 total credits required for degree completion, 48 credits must be coursework and 24 credits must be research.

- Coursework:
  - IT 700 & 701.
  - At least 18 credits of coursework must be 600 level or higher and completed with a grade of B- or better.
  - The overall GPA presented for graduation must be 3.5 or higher.
  - Students who enter the program with a conferred, concentration-relevant Master's degree:
    - May reduce their specialized coursework requirement by up to 30 credits with approval of their Concentration Director and the College of Engineering and Computing Office of Graduate Studies (CECGS). See Academic Policy 6.5 (Credit by Exam, Reduction or Transfer).
- Research:
  - Successful completion of 24 research credits inclusive of:
    - IT 990, 1 credit
    - IT 998, 1-11 credits
    - IT 999, a minimum of 12 credits
- Formal establishment of a Dissertation Director and dissertation committee.
- Comprehensive exam (oral) after completion of coursework.
- Development and acceptance of a research proposal.
- Advancement to Candidacy
- Execution of the research, culminating in a written dissertation and public final oral defense successfully defended and approved by the student's dissertation committee.

## Digital Forensics Coursework

Courses are selected from the following list:

DFOR 637	Cloud Forensics
DFOR 673	Registry Forensics - Windows
DFOR 674	Mac Forensics
DFOR 675	Linux Forensics
DFOR 710	Memory Forensics
DFOR 720	Digital Audio Video Forensics
DFOR 730	Forensic Deep Packet Inspection
DFOR 761	Malware Reverse Engineering
DFOR 769	Anti-Forensics
DFOR 772	Forensic Artifact Extraction
DFOR 773	Mobile Application Forensics and Analysis
DFOR 775	Kernel Forensics and Analysis
ECE 611	Advanced Computer Architecture
ECE 612	Real-Time Embedded Systems
ISA 673	Operating Systems Security
ISA 764	Security Experimentation
ISA 785	Research in Digital Forensics

Other CEC courses with the approval of a faculty advisor/dissertation director.