

PH.D. IN DIGITAL AND CYBER FORENSIC SCIENCE

The Doctor of Philosophy in Digital and Cyber Forensic Science is designed to produce students of the digital forensics and cyber-security realms with the technical skills, critical thinking ability, problem-solving skills, and advanced, discipline-specific knowledge to allow them to advance into leadership positions in business and industry as well as academia. This is accomplished by demonstrating the ability to perform independent and collaborative original research, the successful completion of academic coursework, hands-on experience in the laboratory, and collaboration with digital forensics and cyber-security agencies, institutes, and partners. The program will provide students with the theoretical, conceptual, methodological, and computational skills needed to understand the role of digital and cyber forensic science in post technological societies. The program will allow students to explore the potential for forensically sound digital data capture and analysis and to develop new tools and methods for handling digital and cyber forensic evidence. In doing so, this program has, as its primary focus, research into the computational and scientific basis for forensic and cyber technologies.

The Ph.D. in Digital and Cyber Forensic Science is a full-time, on campus program. Admission to the program requires devoting a significant amount of time to the program. Students are admitted as part of an annual cohort and have a fixed program of study in the first two years of the program.

Applicants seeking admission to the doctoral program in forensic science must submit the following directly to the Office of Graduate Admissions:

- Graduate Admissions Application (<http://www.shsu.edu/admissions/apply-texas.html>)
- Application Fee (<http://www.shsu.edu/dept/graduate-studies/application-fee.html>)
- Bachelor's degree conferred by a regionally accredited institution in computer science, digital forensics, or a closely related field
- Official transcript(s) from degree granting institution(s)
- Official transcripts from all colleges/universities attended
- GPA of 3.5 or higher
- Program Application (<http://www.shsu.edu/dotAsset/45e56494-7765-436d-93ca-57bd6f0a56c1.pdf>)
- Personal statement (<http://www.shsu.edu/dotAsset/c5de020a-799c-4e31-a3f4-a7086c98d765.pdf>), not to exceed 1000 words
- Three letters of recommendation in addition to the Admission Recommendation Checklist (<http://www.shsu.edu/dotAsset/cdba7bf5-4863-4a5a-9698-9f4f5607eb9b.pdf>). A minimum of two letters must be from faculty who are sufficiently acquainted with the student to comment on potential for success in the doctoral program
- Current resume or vita
- Official GRE (<http://www.ets.org/gre>) scores. A minimum GRE score of 300 is required for acceptance into the program. The GRE score is calculated as Verbal * 0.5 + Quantitative * 1.5
- In some instances, a personal interview may be requested.

The program requires the completion of a minimum of eighty-five hours of graduate credit, as prescribed in the degree plan.

Students must register full-time and maintain a 3.0 grade point average in all courses. In order to advance to candidacy, students must have successfully completed forty-six graduate credit hours of coursework and internship, submit a portfolio for review, and pass Comprehensive Examinations. Once the doctoral program committee determines that the portfolio, proposal, and comprehensive examinations are satisfactory, the student may enroll in dissertation credits.

A minimum of fifteen hours of dissertation credits are required, and students must maintain continuous enrollment in DFSC 8370 Dissertation until they graduate. Students must complete and defend a doctoral dissertation, which is the product of original scholarly research and is of sufficient publishable quality to represent a meaningful contribution to knowledge in the field of digital and cyber forensic science.

The Ph.D. in Digital and Cyber Forensic Science requires the completion of 85 credit hours beyond the bachelor's degree. Students complete:

| Code | Title | Hours |
|---------------------|-----------------------|-----------|
| Requirements | | |
| | Core Coursework | 52 |
| | Dissertation Research | 15 |
| | Electives | 12 |
| | Internship | 6 |
| | Total Hours | 85 |

The curriculum is designed to deliver an essential core curriculum in digital and cyber forensic science, together with specialized electives and intensive research in the area of interest. Students are expected to fulfill the requirements during four to five years of full-time study.

| Code | Title | Hours |
|--|-----------------------|-------|
| Ph.D. in Digital and Cyber Forensic Science | | |
| DFSC 5316 | File System Forensics | 3 |

| | | |
|----------------------------|---|-----------|
| DFSC 6410 | Cyber Forensics Principles | 4 |
| DFSC 7106 | Seminar in Digital Forensics ¹ | 4 |
| DFSC 7300 | E-Discovery | 3 |
| DFSC 7320 | Ethics for Digital Forensics | 3 |
| DFSC 7330 | DF Laboratory Management | 3 |
| DFSC 7340 | DF Tools & Techniques | 3 |
| DFSC 7350 | Operating System Forensics | 3 |
| DFSC 7352 | Network Forensic Analysis | 3 |
| DFSC 7356 | Mobile Device Forensics | 3 |
| DFSC 7358 | Live System & Memory Forensics | 3 |
| DFSC 7360 | DF Research Methods | 3 |
| DFSC 7362 | Computational Forensics | 3 |
| DFSC 7364 | Scientific Communications | 3 |
| DFSC 7600 | Internship | 6 |
| FORS 5226 | Law And Forensic Sciences | 2 |
| FORS 6094 | Special Topics in Forensic Sci | 3 |
| STAT 7365 | Stat Mthd For Decision Making | 3 |
| Electives | | |
| Select 4 of the following: | | 12 |
| COSC 5310 | Cryptography & Steganography | |
| DFSC 6310 | Cyber Warfare & Terrorism | |
| DFSC 7341 | DF Infrastructure | |
| DFSC 7351 | Cloud Computing Forensics | |
| DFSC 7353 | RAID & Remote System Forensics | |
| DFSC 7355 | Intrusion Forensic Analysis | |
| DFSC 7357 | Malware Forensic Analysis | |
| DFSC 7359 | Social Network Forensics | |
| DFSC 7365 | Commercial Tool Verification | |
| DFSC 8370 | Dissertation ² | 15 |
| Total Hours | | 85 |

¹ DFSC 7106 must be taken for a total of four credit hours.

² Once enrolled in DFSC 8370, students must enroll in this course every semester until graduation.