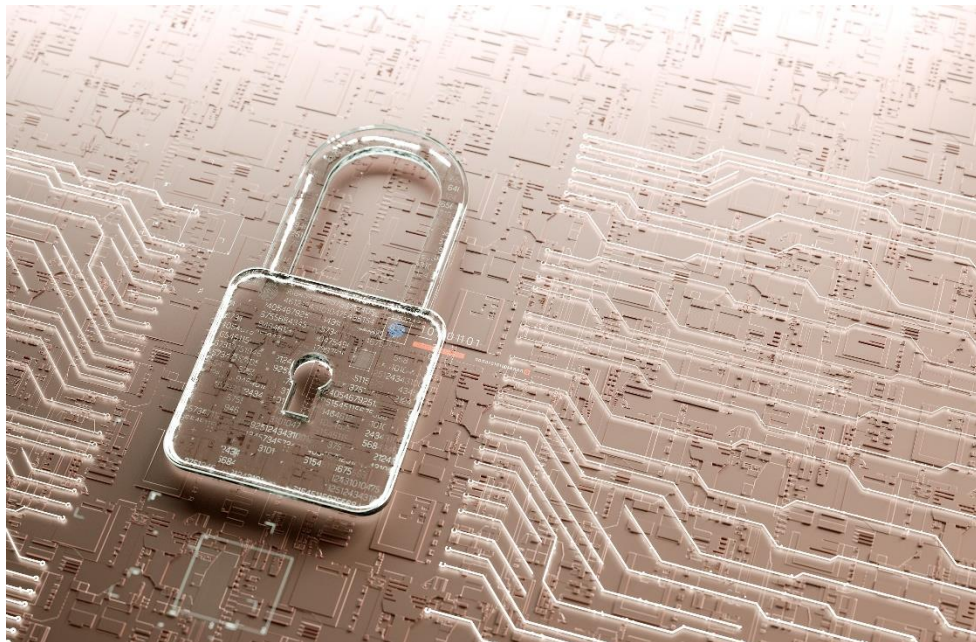# SAM HOUSTON STATE UNIVERSITY

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)
IN
DIGITAL AND CYBER FORENSIC SCIENCE

DOCTORAL PROGRAM HANDBOOK

DEPARTMENT OF COMPUTER SCIENCE
SAM HOUSTON STATE UNIVERSITY
Huntsville, Texas

Revised December 2021

Department of Computer Science

Letter to Doctoral Candidates

Dear Doctoral Students,

Welcome to the Doctor of Philosophy program in Digital and Cyber Forensic Science in the Department of Computer Science at Sam Houston State University. In late 2004, through the foresight and support of Senator Kay Bailey Hutchison and Representative James Turner, Sam Houston State University (SHSU) established the SHSU Center of Excellence in Digital Forensics, a center designed to provide training to local, state, and federal law enforcement personnel and other legal professionals in the correct handling, interpretation, and presentation of digital evidence. It has become increasingly clear since then that digital and cyber forensics is emerging as a new academic discipline that combines both Computational Sciences and Criminal Justice, in much the same way that Management Information Systems emerged in the late 1970's and Geographical Information Systems in the late 1990's, first as groups of tool users and tool developers with distinct computational needs, and later as a body of theoretical knowledge, conceptual bases and a common specialized language to analyze the threats that cybercriminals pose to our physical and cyber infrastructure.

The lack of manpower, training, and equipment are some of the biggest concerns facing digital and cyber forensics in the United States. According to studies by The National Institute of Justice (NIJ) and the Institute for Security Technology Studies (ISTS) at Dartmouth , the law enforcement community has identified a need for more computer crime investigators, expert witnesses, digital forensic scientists and technology/equipment to analyze digital evidence.

To the best of our knowledge, doctoral level study that includes Digital Forensics, is available at only a couple of institutions in the United States. As of this writing, none of these programs focuses exclusively on Digital and Cyber Forensics, but instead are degrees in Computing with a concentration in cyber security and digital forensics. Our program is therefore unique in this realm, with respect to the academic expertise, organizational structures, and physical infrastructure as it relates to digital and cyber forensic science. In addition to this, SHSU has an internationally recognized graduate Criminal Justice program, and the Department of Computer Science is the home for the only graduate Digital Forensics program in the state of Texas. Both these programs provide excellent training for law enforcement, for technical professionals at the state and federal level. Graduates of our program can expect to be recruited by the FBI, the Department of Homeland Security, the Secret Service, as well as numerous local and state law enforcement agencies and the private sector in addition to academic institutions.
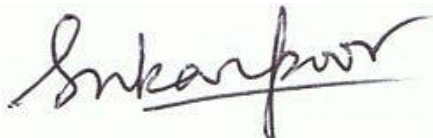
At this time, there are no national or regional accreditation organizations that would accredit a digital and cyber forensic science program at the doctoral level. The American Academy of Forensic Sciences' Forensic Science Education Programs Accreditation Commission (AAFS/FEPAC) have developed accreditation standards for undergraduate and master's level digital evidence programs. The National Security Agency (NSA), in partnership with the Department of Homeland Security designates Centers for Academic Excellence in Information Assurance, Cyber Defense, and Cyber Operations. While this does not rise to the level of accreditation, this serves as a measure of our program's quality and integrity. The National Security Agency (NSA) and the Department of Homeland Security (DHS) have designated Sam Houston State University as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE) through the academic year 2025 for the B.S. Degree in Computer Science, concentration in Information Assurance (IA).

The Department faculty hopes that this handbook, designed both as a program introduction and a guide to help you progress through the program, will be of assistance in the completion of your degree. Handbooks are updated at the beginning of the fall semester. So, it is important that you revisit the handbook each fall. At times, policies are changed at the university or college level that are to be implemented immediately. Should the change impact the content of this handbook, you will be notified within a reasonable timeframe. Please be advised that everyone (i.e., students, staff, faculty, and administration) is accountable for implementing the change as soon as the change has been announced.

Please become very familiar with the details in the handbook, which will affect you and your academic career. Feel free to ask your supervising faculty advisor about anything you do not understand. We are here to support and assist you.

Best wishes for your continued success.

Sincerely,
On behalf of the doctoral faculty,

Dr. Narasimha K. Shashidhar
Associate Professor
Program Director, Ph.D. in Digital and Cyber Forensic Science
Department of Computer Science
Sam Houston State University
Huntsville, TX 77341
Ph: (936) 294-1591
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Background of Sam Houston State University

A Great Name in Texas Education!

Named for Sam Houston, Texas' greatest hero, Sam Houston State University continually strives to honor its historical roots through academic excellence that includes exceptional teaching from faculty. For more than 140 years, SHSU has been preparing students for meaningful lives of achievement. Its motto, "The measure of a Life is its Service," resonates among its 21,500+ students and echoes across eight colleges and beyond its Huntsville roots.

While embracing its legacy, SHSU also strives to meet the needs of contemporary students, both traditional and online. With a variety of fully online undergraduate and graduate degrees and numerous certificates and certifications, all of which are taught by on campus professors, SHSU Online has the option students are looking for to reach their academic, personal, and professional goals.

Academic Offerings

With over 90 bachelor's degree programs, 55 master's degree programs and 11 doctoral programs, SHSU offers an exceptional college experience. SHSU continually strives to meet the needs of contemporary students, both traditional and online.

History

The institution was created by the Texas legislature in 1879 as Sam Houston Normal Institute to train teachers for the public schools of Texas. During the following four decades, instruction was offered in the natural sciences, agriculture, home economics, manual training, geography, sociology, and foreign languages. The university has continued to expand its offerings to keep pace with its dynamic environment by adding degree programs in such fields as Computer Science, and Digital Forensics. New graduate degrees, such as the Master of Library Science, the Master of Fine Arts, and the Doctor of Philosophy in Criminal Justice were added. These additions were accompanied by significant improvement in faculty credentials and growth in faculty research activities. In 2018, a new page was added to Sam Houston State University's history with the addition of the Doctor of Philosophy in Digital and Cyber Forensic Science. Currently Sam Houston State University, a member institution of the Texas State University System, is organized academically into eight colleges: Business Administration, Criminal Justice, Education, Fine Arts & Mass Communication, Health Sciences, Humanities & Social Sciences, Osteopathic Medicine, and Science & Engineering Technology. Students are offered an extensive range of bachelor's, master's, and doctoral degrees. The university is recognized regionally, nationally, and internationally for the quality of its faculty and programs.

College of Science and Engineering Technology

Mission Statement

The College of Science & Engineering Technology is committed to equipping students with the academic foundation necessary for them to be critical problem solvers in a rapidly changing world and to the generation of scientific knowledge through scholarly endeavors.

Vision Statement

The College of Science & Engineering Technology aspires to be a gateway of opportunity and a catalyst for personal and professional development. Embracing high standards, ethical practices and personalized student-faculty interaction, the College dedicates itself to excellence in teaching, engagement in quality research, and active community service. The College of Science & Engineering Technology will pursue its vision by:

- preparing students for continued intellectual growth throughout productive and personally rewarding careers;
- fostering the development and dissemination of knowledge through scientific inquiry;
- promoting continual professional growth and scholarly activity;
- exemplifying high ethical standards and teaching the importance of ethics in professional practice;
- increasing scientific literacy in the populace, and instilling a high regard for nature and humankind;
- understanding and respecting diversity among people, cultures, and ideas; and
- assuming the responsibilities of academic community engagement and membership in a global society.

Department of Computer Science

The Department of Computer Science (DCS) at SHSU started in 1971. At the undergraduate level, SHSU offers a traditional degree in computing science, a computing science degree with a concentration in Information Assurance and Information Systems, as well as separate degree programs in Software Engineering and Cybersecurity. The B.S. in Computing Science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET/CAC). Also, in 2020, the department received the Center of Academic Excellence in Education (CAE-CDE) designation from the NSA/DHS.

At the graduate level, SHSU offers M.S. degrees in Computing and Data Science, Digital Forensics (DF), and Information Assurance and Cybersecurity (IAC). The IAC and DF programs receive continued praise and recognition by several entities. At the doctoral level, SHSU is the only university in Texas and the nation to offer a Ph.D. in Digital and Cyber Forensic Science. Our doctoral program is one of eleven (11) doctoral programs offered by SHSU through eight schools and colleges. SHSU is classified as a Doctoral Research University by the Carnegie Commission on Higher Education.

The Department of Computer Science (CS) at SHSU is a research- and teaching-oriented department with curricula offerings at the Baccalaureate, Master's, and the Doctoral level. The department comprises of thirteen full-time faculty who work on a wide range of theories, systems, and applications of computing systems. The department faculty have been recognized nationally and internationally for their expertise through national grants and awards, publications, and presentations. They are committed to equipping students with the academic foundation necessary to be critical problem-solvers in a rapidly changing world, and to the generation of scientific knowledge through scholarly endeavors. While the department offers traditional, general Computer Science programs, it emphasizes Digital Forensics, Information Assurance, and Cybersecurity. To this end, multiple faculty members are certified forensic examiners and hold prestigious vendor-specific and vendor-agnostic certifications. To facilitate relevant, cutting-edge research on Digital Forensics and Cybersecurity at the undergraduate and graduate levels, the department established the Cyber Forensics Intelligence Center (CFIC).

The department provides an environment that encourages innovative thinking, academic rigor, and the pursuit of scholarships at both undergraduate and graduate levels. The undergraduate degree in Computing Science is accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET). The National Security Agency and the Department of Homeland Security have designated SHSU as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE) through the academic year 2025. The department is proud of its record of producing high quality professionals to business and industry, and to the State and Federal agencies. The Deputy Chief Information Security Officer for the State and the Director of the State's Cybersecurity division are among our alumni. Our alumni include professionals at Dell, Exxon, Google, Microsoft, Netflix, Rackspace, and Texas Instruments, to name but a few. In common with the university as a whole, a vast majority of our undergraduate students are drawn from the Houston/Dallas corridor, but with a healthy minority of students from every continent. Our graduate students are recruited nationally and internationally with majority being working professionals. The department is proud of its diversity and inclusivity.

The department is equipped with 5 dedicated classrooms that contain 44 Dell OptiPlex computers. It is supported by a dedicated virtual farm that provides the students with the capability to develop apps and perform security research. The department houses the CFIC which consists of a high-tech laboratory, an expansive conference room, and dedicated rooms for doctoral research. All of the 20 computers in the classroom labs have a suite of forensics and network security applications installed,

such as Access Data Forensic Tool Kits (FTK), BlackBag, NMAP, and Nessus. The lab also maintains a variety of tools, which include mobile devices, networking switches, and virtual reality equipment. Furthermore, to maintain a secure environment and encourage security and forensics-related research, the lab infrastructure runs on a dedicated network. These facilities are maintained by experienced personnel to assist students in research activities.
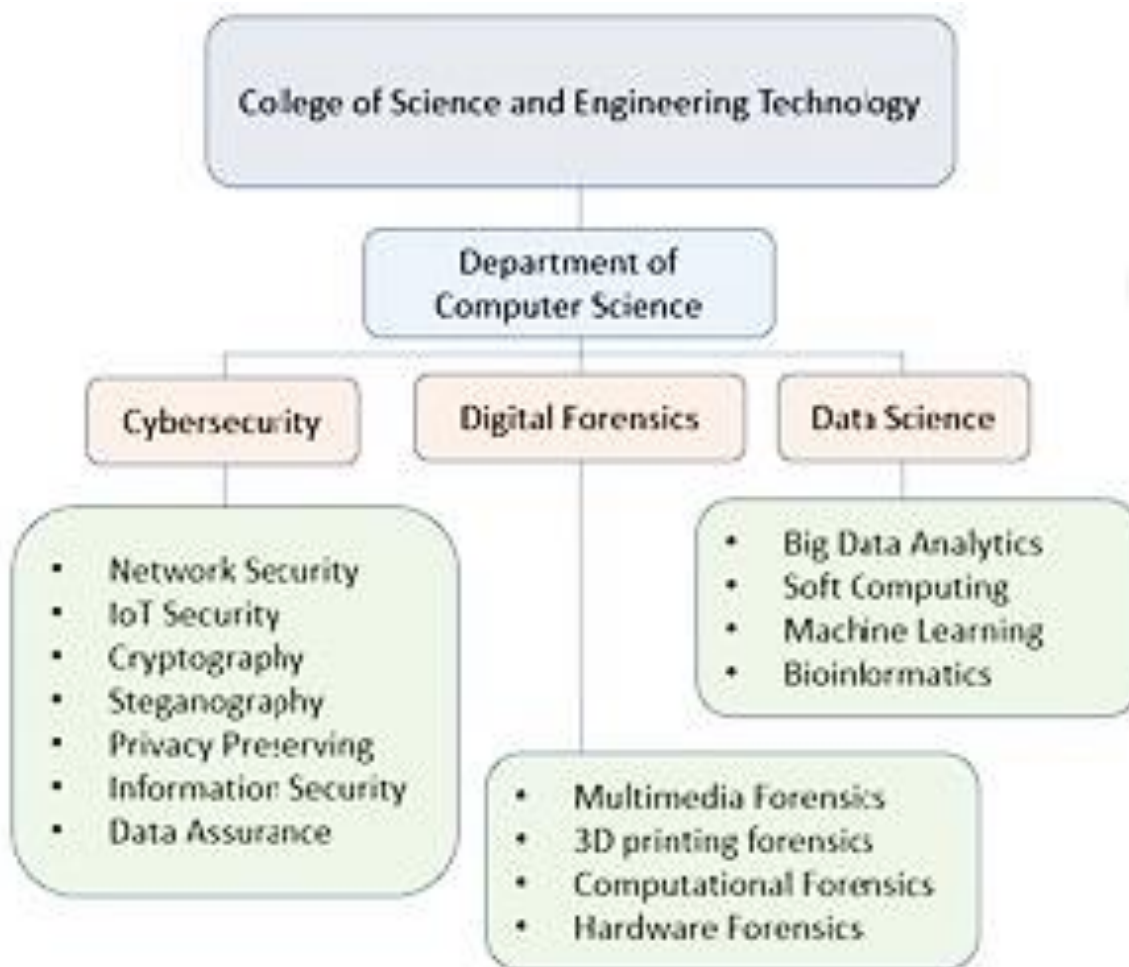
Figure 1. Potential Areas of Research Interests in the Department

Mission Statement and Overview of the Doctor of Philosophy in DCFS Degree

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.

Educational objectives

Sam Houston State University (SHSU) is a nexus of law enforcement and forensic science capability at all academic levels with existing graduate programs in Criminal Justice, Forensic Science, Digital Forensics, Information Assurance and Security, and Security Studies. In addition to the DCFS doctoral degree, SHSU also offers doctoral programs in Criminal Justice and Forensic Science. The Department of Computer Science is also home to Master of Science degrees in Digital Forensics and in Information Assurance and Security. Our doctoral program complements these other programs.

The number of degree programs in the United States related to Digital and Cyber Forensics is increasing, as is the need for qualified and credentialed professionals, researchers, scientists, and academicians. To date, there are only a handful of doctoral programs in the United States with a concentration or general focus in Digital and Cyber Forensic Science. In 2011, the American Association of Forensic Sciences' Forensic Science Education Programs Accreditation Commission, revised their accreditation standards for Forensic Science academic programs at the baccalaureate and master's level to include specific requirements or electives for digital evidence coursework including network forensics, multimedia forensics, mobile device forensics, malware analysis, and anti-forensics. Meeting these accreditation standards requires terminally degreed faculty members with specialized expertise in Digital and Cyber Forensic Science. To this end, our doctoral program is uniquely situated to produce students with these terminal degrees who will serve as the future faculty members of digital and cyber forensics science.

Our Doctor of Philosophy (Ph.D.) in Digital and Cyber Forensic Science program is a full-time, on campus doctoral program designed to prepare individuals in the digital forensics and cyber security fields to lead the nation in the development of digital forensics and cyber security tools, theories and techniques, in the application of novel research to address digital forensics and cyber security issues, and in post-secondary and graduate education to prepare the next generation of educators and academicians.

The Ph.D. program in Digital and Cyber Forensic Science at Sam Houston State University 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, i.e. where technology ubiquitously and transparently underpins society, to explore the possibilities 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 rather than the application of tools or protocols in a law enforcement context.

Our Doctor of Philosophy in Digital and Cyber Forensic Science has three Program Educational Objectives (PEO's):

1. Professional Capability: Show a commitment to working on solutions to problems with global, economic, environmental, and societal impacts.
2. Leadership/Teamwork: Be successful in a range of leadership and teamwork roles.
3. Lifelong Learning: Show a commitment to lifelong learning through the pursuit of new knowledge through a coherent and focused research agenda.

The PEO's are expected to manifest themselves in the course of the program and to continue to underpin the academic and professional careers of successful students as they embark on academic and research careers. The program also defines the following Student Learning Outcomes (SLO's). The successful candidate must demonstrate:

- Skills/Knowledge: The ability to apply knowledge of digital and cyber forensics techniques sufficient to provide skilled leadership in both research and academic environments
- Problem Solving: The ability to analyze a problem, and identify and define the forensic requirements appropriate to its solution
- Design/Implementation: The ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired Digital and Cyber Forensic Science needs
- Leadership/Teamwork: The ability to function effectively on teams to accomplish a common goal and as a team leader
- Law/Ethics: An understanding of professional, ethical, legal, security, and social issues and responsibilities
- Communication: The ability to communicate effectively with a range of audiences
- Impact Analysis: The ability to analyze the local and global impact of computing on individuals, organizations, and society
- Professional Development: Recognition of the need for and an ability to engage in continuing professional development

This program will prepare 21st century forensics and cyber security leaders to guide and direct the development of more robust security systems, improve forensic analysis techniques through a research-oriented, technical, conceptual, and active-learning focused program that addresses the security and forensic concerns at machine, network, national, and global levels, and to prepare the next generation of educators and academicians in Digital and Cyber Forensic Science.

A brief summary: While we explore the curriculum details of our program in greater depth in subsequent sections, here we present a brief summary. Our doctoral program is designed to be a full-time, on-campus program comprising 85 credit hours consisting of 70 hours of coursework and 15 hours of dissertation. Graduates of our program can expect to be recruited by the FBI, the Department of Homeland Security, the Secret Service, as well as numerous local and state law enforcement agencies and the private sector in addition to research and teaching faculty at academic institutions around the world. Although the degree requirements include a prescribed curriculum of required and elective courses, the doctoral degree is not awarded only on the basis of course work completion and the passing of comprehensive examinations. In addition, each doctoral student is expected to conduct a major research project resulting in the presentation and

defense of a dissertation. Applicants with extensive master's or doctoral degree coursework (beyond 48 semester hours) may not be required to take all 70 semester hours of the curriculum. This discussion happens on a case-by-case basis with the program director. The Curriculum Outline in this handbook provides a listing of the required and elective courses in the doctoral program. Our Ph.D. program is a cohort-based program. This implies that students admitted to a specific cohort group are required to take the prescribed core, practicum, internship, and research component courses at the same time. Individuals accepted into the program will be expected to follow the schedule of the cohort group to which they are assigned. In the event of emergencies which require an individual to drop out of the normal schedule, she or he may be required to join another cohort group with a different schedule. Admission to the program requires a commitment to devoting a significant amount of time for the period of the individual's program. Any student unable to devote the required time will be advised to seek alternate options and/or be advised to drop out of the program.

Department of Computer Science
Faculty and Staff

Department Doctoral Faculty Member Profiles and Research Areas

Dr. Bing Zhou

Department Chair,
Associate Professor

bxz003@shsu.edu
Office: 214A
(936)294-1590

Database Security, Database Forensics, Big Data Analytics, and Soft Computing

Dr. Karpoor Shashidhar

Associate Professor
Director of the Digital and Cyber Forensic Science doctoral program

nks001@shsu.edu
Office: 216B
(936)294-1591

Cryptography, Information Hiding, Steganography, Electronic Voting and Security, Peer-to-Peer/Sensor Networks, Digital Forensics and Computing Education.

Dr. David Burris

Professor and University Articulation Coordinator

david.burris@shsu.edu
Office: 212C
(936)294-1568

Software engineering, translator design, data structures, design of programming languages, operating systems, database, steganography, and user level cryptography
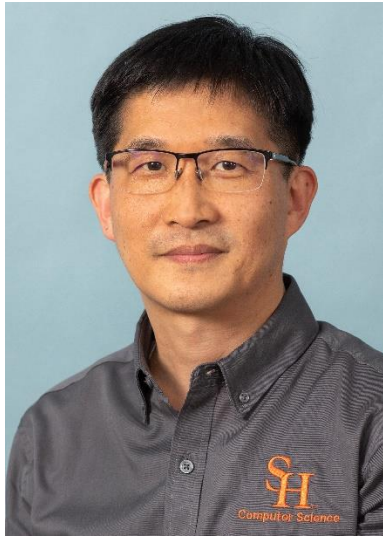
Dr. Hyuk Cho

Professor

hxc005@shsu.edu
Office: 216H
(936)294-1535

Data Mining, Statistical Pattern Recognition, Machine Learning, Co-clustering Algorithms, Text/Web Mining, Bioinformatics, and Pervasive Computing

Dr. Cihan Varol

Professor

cvarol@shsu.edu
Office: 216F
(936)294-3930

Information (data) quality and its applications on Digital Forensics and Information Security, Personal identity recognition, Record linkage, Entity resolution, Pattern matching techniques, Natural language processing, Multi-platform VoIP applications, Data cleansing of VoIP artifacts and web storage data

Dr. Min Kyung An

Associate Professor and Graduate Advisor

an@shsu.edu
Office: 212G
(936)294-4333

Wireless Sensor and Ad Hoc Networks, Internet of Things (IoTs), Design and Analysis of Approximation Algorithms, Graph Theory

Dr. (Frank) Qingzhong Liu	**Dr. Gary W. Smith**	**Dr. Li-Jen Lester**
Associate Professor	Associate Professor	Associate Professor
qxl005@shsu.edu Office: 216D (936)294-3569	gsmith@shsu.edu Office: 216G (936) 294-3647	lys001@shsu.edu Office: 216C (936)294-1582
Cybersecurity, digital forensics, artificial intelligence, multimedia analytics, and bioinformatics	Data Structures, Real-Time Programming and Introductory Programming and maintains, networks, database, GIS, and computer security	Computer and technology curriculum alignment from secondary to graduate levels, educational multimedia research, and international technology development in education

Dr. Vung Pham

Assistant Professor

vung.pham@shsu.edu
216E
(936)294-3574

Data Analytics, Data
Visualization, Machine
Learning, and Deep Learning

Dr. ABM Islam

Assistant Professor

ari014@shsu.edu
212D
(936)294-4198

Computer Vision, Machine
Learning and Image
processing
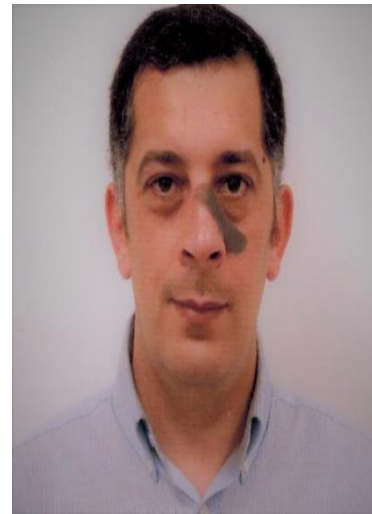
Dr. Amar Rasheed

Assistant Professor

axr249@shsu.edu
212E
(936)294-4781

Embedded Systems Security,
IoT, Industrial Control
Systems, sensor modeling
and data collection
algorithms, efficient data
collection schemes for
wireless sensor networks,
energy-efficient sensor data
gathering mechanisms,
secure mobile sensor data
communication models
design, cybersecurity
systems, cybersecurity risk
assessment, and analysis

Dr. Fan Liang

Assistant Professor

fxl027@shsu.edu
212D
(936)294-1569

Internet of Things, Cyber-Physical Systems, distributed computing, big data, machine learning, wireless networks, and network security

Administrative Staff

Ms. Ashley Miksch
Assistant to the Chair

Mr. Ricky Malcolm
System Administrator for the Department of Computer Science

Mr. Dustin Thornton
System Administrator for the Cyber Forensics Intelligence Center

All faculty/staff would love to meet with students to discuss and assist with their research interests. Feel free to contact our faculty members directly by phone or email to schedule an appointment.

Program Admission Requirements

Recruitment efforts will focus on attracting six to ten (6-10) highly motivated individuals to form a cohort group each academic year, to commence their studies in the Fall semester of the academic year. As noted earlier, 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 must submit the following directly to the Office of Graduate Admissions. More information is available at the Graduate Admissions website, here: https://www.shsu.edu/dept/graduate-admissions/prospective-students.html.

At a minimum, a complete application, comprises of:

- Graduate Admissions Application Form
- Application Fee
- 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
- Personal statement, not to exceed 1000 words and writing samples

- Three letters of recommendation. 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 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 will be required as determined by the admission committee

Application Guidelines

All application materials must be submitted electronically or mailed to the Office of Admissions-Graduate Programs.

a) An on-line application must be submitted through ApplyTexas.org. This application is processed in the Office of Admissions-Graduate Programs. The ApplyTexas.org application can be accessed at: http://www.shsu.edu/admissions/apply-texas.html

b) Transcripts of all college or university study, at all levels, must be sent from the specific registrar's office directly to the Office of Admissions-Graduate Programs.

   You may mail your official transcript(s) to:
   Office of Admissions – Graduate Programs
   Sam Houston State University
   Box 2478
   Huntsville, TX 77341-2478

   For **FedEx, UPS, and DHL deliveries**, please use the physical
   address: Office of Admissions – Graduate Programs
   1903 University Avenue
   Estill Bldg. Suite 112
   Huntsville, TX 77340

c) Official Graduate Record Examination scores must be submitted. Applicants taking the GRE should list SHSU as a site to receive scores. Applicants with previous GRE scores must provide the original form with the scores to the Office of Admissions-Graduate Programs. A copy will not be sufficient. *Scores can be no older than five years*.

d) SHSU Graduate Studies Application Fee.

Applicant Selection Process and Interview

The doctoral admissions committee will consider all applications through a holistic review process, taking into account Grade Point Averages, Graduate Record Examination scores, work experience, recommendations, writing samples, and online/on-campus interview ratings, if any. The doctoral admissions committee will recommend the top candidates for the online/on-campus interview process with the Department of Computer Science faculty and doctoral student representatives. If an interview is deemed to not be necessary by the committee, an admission decision is made. The decision can either be admit, deny or a provisional admission.

As part of the online/on-campus interview, applicants must demonstrate general proficiency in Computing, Digital Forensics and Cyber Security via verbal discussions completed on- site or online. To prepare for the online/on-campus interview process, applicants should be prepared to talk about the following, although this list is not exclusive:

a) What are your aspirations related to the fields of digital and cyber forensics?
b) Describe one or more significant life event(s) that contributed to the development of these aspirations.
c) What is your single greatest personal asset that will serve you in realizing your aspirations?
d) Describe several possible research topics you might pursue during your doctoral studies.

Scholarship/Stipend Award Process and Interview

Graduate Research Assistantships and Teaching Assistantships

The Department of Computer Science offers competitive graduate assistantships each year for students who are accepted into the program. Teaching assistantships are also available for students who have completed 18 credit hours of graduate course work. All students who have demonstrated distinguished academic performance may apply for a graduate assistantship. All full-time assistantships require students to work 20 hours per week.

To apply, please fill out the GA Application Form and the State of Texas Application for Employment. Students will be required to complete a General Application at Scholarships4Kats before being considered for any scholarship opportunities. Graduate assistantship Awards ($30,000 per year distributed as $24,000 [$8000, in Fall, Spring and Summer] in stipends and $6,000 [$2,500 in Fall/Spring, and $1,000 in Summer] in scholarships, guaranteed for four years contingent on satisfactory academic performance) to conduct research projects/stipend for teaching will be granted by a competitive selection process. The Doctoral Admissions/Research Committee comprised of faculty from the Department of Computer Science will evaluate the applications.

Application Process: Completed applications are due by 5:00 pm on the day of the deadline, and must include the following, in support of the assistantship application:

- Personal statement
- CV
- Transcripts
- Any teaching/research experiences
- Any additional documentation in support of the application

These documents must be merged into a single PDF file and sent by email to (*karpoor@shsu.edu*) with Ph.D. Scholarship *Year* in the subject line by 5:00 pm on the day of the application deadline.

A half-time graduate research or teaching assistant are qualified to pay in-state tuition waived. Graduate assistantships may also be available in other SHSU departments, Student Services, or other units of the university.

Other Financial Aid

Graduate students may be eligible for several other forms of financial aid including the Texas Public Education Grant, College Work-Study, on-campus employment, on-campus housing scholarships, and several loan programs. For information and application forms, contact Sam Houston State University Financial Aid office https://www.shsu.edu/dept/financial-aid/. Doctoral students may apply for scholarships following admission thru Scholarships4Kats. Information is available at this link: https://www.shsu.edu/dept/financial-aid/scholarships. The Graduate school accepts applications for scholarships each semester and accepts applications for support for travel to professional conferences when the student is presenting or working at the conference. The Department of Computer Science also has a limited amount of scholarship money that can be divided each year between the doctoral students, based on merit.

Assistantships and Fellowships
Graduate assistantship evaluation methods

The responsibilities of graduate assistantships and the performance evaluation method should be provided in writing to the student by the immediate supervisor at the beginning of the assistantship. An appeal process is available for students in graduate assistantships who assert they have not been fairly evaluated.

Conducting evaluations

The faculty or staff member who supervises the work of the student holding the graduate assistantship must conduct a written evaluation of the student's performance at least once a year and provide a copy to the student and to the chair/director of the program or department for placement in the student's file. This evaluation is separate from the annual review of student academic progress and should take the following criteria into account:

- Prompt, efficient, and accurate completion of assigned tasks.
- Independent work.
- Analysis and problem solving.
- Adequate evaluations by students for instructional and tutoring assignments in courses, laboratory, and office hours/mentoring settings.
- Cooperation with mentor, director, and other assistants.
- Professional and ethical behavior in all assigned tasks and duties, including course studies and research.
- Opportunities for improving performance should be outlined.

Equal treatment

Sam Houston State University is an equal opportunity/affirmative action institution. Evaluation of student performance in a graduate assistantship must not be influenced by race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability or protected veteran status. Discrimination on the basis of pregnancy, childbirth, or related medical conditions is also prohibited. In addition, evaluations must not be influenced by a student's exercise of First Amendment freedoms of expression and association.

The academic freedom of graduate teaching assistants is not necessarily coextensive with that of faculty. TAs are engaged in supervised teaching or instruction activities. Supervisors are responsible for defining the nature, scope, and manner of instruction for each course. Supervisors should communicate the extent to which TAs have discretion to introduce additional material, and TAs should follow supervisors' instructions. TAs may not be penalized for expressing their own views on matters within the scope of the course, provided they adequately represent these views as their own.

Renewing assistantships

An assistantship without a fixed term specified in the initial letter of offer may, at the discretion of the academic program, be renewed if the following criteria are met:

- Academic program guidelines for the funding duration are met and funding is available
- The student is making satisfactory academic progress, with a GPA not less than 3.0.
- The student's assistantship performance is judged by their supervisor to be satisfactory.
- The student's professional and ethical behavior in all assigned tasks and duties — including course studies and research — is judged to be satisfactory.
- If the renewal falls within number of years of funding specified in the initial letter of offer and the criteria listed above have been met, the assistantship may be renewed.

Transfer Credits and Course Substitutions

In accordance with Academic Policy Statement 801007, graduate courses completed at other accredited colleges and universities may be applied as transfer credit toward your Ph.D. program at Sam Houston State University at the discretion of Ph.D. program and College of Science and Engineering Technology. Only courses with an earned grade of "B" or better may be used as transfer credit.

The maximum number of hours that may be transferred into the Ph.D. program is 9. Students are encouraged to contact the Ph.D. program director for information concerning transfer credit allowed for the degree. Transfer credit will in all cases be individually evaluated by the Director of the Doctoral Program and approved by the Department Chair, Dean of the College of Science and Engineering Technology, and the Dean of the Graduate School. No transfer credits will be allowed for graduate courses with a grade less than a "B", and the applicant must have a "B" average (3.0) at the transfer institution. No coursework older than 5 years will be considered for transfer.

Time Limitation for Completion of the Ph.D. Program

A student is required to complete graduate work and all degree requirements within a six-calendar year period, measured from the date of initial enrollment for graduate credit in a particular degree program. The period of time a student is on an approved leave of absence will be counted as time accumulated toward that six-year deadline for completion of the degree. Any extension of the six-year deadline must be approved in writing by the appropriate academic dean. The graduate school supports a limit of eight years, maximum. Under special circumstances, students may apply for an additional extension, however, courses older than eight years must be retaken.

Note: Students lacking prior background in digital and cyber forensic science concepts and theories may be advised to register for leveling courses to bring them up to par within the first year in the doctoral program or show completion of such additional required leveling coursework prior to admission to a doctoral cohort. The Director of the Doctoral Program will meet with the potential applicant to establish required courses to meet this leveling equivalence requirement.

Accommodations for Students with Disabilities

All students with a disability requiring accommodations must contact the Director of the SHSU Office of Services for Students with Disabilities (SSD), as the SHSU Section 504/ADA Coordinator for Student Academic-Related Matters, by telephone at (936) 294-3512. The website link is https://www.shsu.edu/dept/disability/. An approved accommodation plan should be presented to the instructor. The instructor is obligated to honor approved accommodation plans.

Admission of International Students

A student from another country who seeks admission to Graduate Studies must meet the same requirements for admission and candidacy as students from the United States, including the submission of scores on the Graduate Record Examination (GRE).

In addition, prospective students from other countries must demonstrate the ability to speak, write, and understand the English language. More information about these requirements can be found at https://www.shsu.edu/admissions/international/. Prospective students whose native language is not English must take the Test of English as a Foreign Language (TOEFL), which is administered more than 50 times each year by the Educational Testing Service in centers around the world. A registration form and information for candidates may be obtained at the ETS TOEFL website: https://www.ets.org/toefl/ .

All applicants for admission from non-English-speaking countries must present a score of at least 79 on the Test of English as a Foreign Language (TOEFL). Sam Houston State University has an English Learning Institute for English-as-a-second language for international students. Information about this program may be obtained by contacting the Office of International Programs at Sam Houston State University, https://www.shsu.edu/dept/international-programs/english-language-institute/program-information.html .

The Director of the Doctoral Program

Upon admission to the doctoral program, the student will meet with the Director of the Doctoral Program in Digital and Cyber Forensic Science. The Director will discuss courses to be taken, options for specialization electives, the completion of core course requirements, and will provide general information regarding the department and the doctoral program in a scheduled orientation session each Fall.

The doctoral student, under the guidance of the Director of the Doctoral Program, will develop the Temporary Study Plan. The Director will discuss the student's career goals for the purpose of suggesting courses. The Director will also carefully review all graduate courses on the student's transcript and record those applicable as specialization or general electives. After the Temporary Study Plan has been approved it will be loaded into a program called DegreeWorks, where students

can monitor their progress through required and elective coursework. After a student successfully passes comprehensive exams and become a doctoral candidate, their dissertation chair and advisory committee will continue to offer advice on scholarship and research. More information about forming the committee and choosing a dissertation chair can be found in subsequent sections of this handbook.

Change of dissertation chair/advisory committee/grievance/other issues

As a student, you have rights and duties. There are procedures to follow to rectify the situation you are facing. The processes range depending on the form of problem. Underneath is a listing containing descriptions of conditions, the faculty coverage that applies to every situation, wherein to discover the information and the suggested first touch you ought to make with the management.

A) You believe you have been discriminated against because of your race, ethnicity, sex, disability, or age
B) You believe you have been discriminated against because of HIV-positive status
C) A student, faculty member, or administrator makes sexual remarks to you that make you uncomfortable
D) You are sexually assaulted on campus
E) You witness another student or students cheating
F) You believe someone has tampered with your lab data or broken into your computer account
G) You receive a final course grade that you think is unfair
H) There is a dispute about what requirements you need to fulfill for your degree
I) You believe you should be exempted from or receive special accommodations in a course because of a disability
J) You are accused of a behavioral violation
K) Another student assaults or verbally abuses you

Changing your Doctoral Dissertation Chair and/or your advisory committee is possible, and sometimes advisable, but it usually slows a student's completion of degree requirements. Therefore, this decision should be approached carefully. If a student wants to initiate such a change, the student should formally inform both the Ph.D. director, the Department chair and the current dissertation chair about this request. The Ph.D. program committee members will discuss this request in the next scheduled meeting and will make a decision on it.

Students can also be dismissed from the program at any time if the dissertation chair (in consultation with the student's advisory committee) determines that the student is not making acceptable progress. Such a dismissal in itself will not constitute dismissal from the Department, but it is the obligation of the student to find an acceptable replacement dissertation chair in the Department within one semester. Students will not be allowed to continue their education with the Department without a dissertation chair. If you find yourself in this situation, you should schedule a session with the Program Director to determine the best course of action. Students can be terminated from the Graduate Program by their dissertation chair/advisory committee for the following reasons:

- Failure to meet minimum academic standards
- Failure to make acceptable progress in their degree work
- Failure to meet generally acceptable ethical standards of the University
- Failure on the candidacy or research proposal exam
- Failure during the thesis/dissertation defense

It is the obligation of the student to ensure that they are complying with University and Departmental guidelines with respect to these aspects of their education. If students are unsure or concerned about their status within the Department, they should consult with their dissertation chair, advisory committee, the Ph.D. program director, and/or the Department Chair.

Checklist and Recommended Time Frame

The following checklist is to help doctoral students schedule important events and serve as a guide to help students follow the required steps in the program. It is the student's responsibility to know and follow university policy regarding the completion of these steps leading to satisfactorily completion of their doctoral studies. Additional information concerning doctoral studies and requirements are presented in the SHSU *Graduate Catalog*. The *Graduate Catalog* can be accessed at http://www.shsu.edu/home/catalog.html.

Check When Completed:

_____Meet Doctoral Program Director to Create Temporary Study Plan (as soon as possible after start of the first semester). In the first semester of the Ph.D. program, meet with the Doctoral Program Director to develop the Temporary Study Plan. There will be a general Cohort meeting to discuss the Temporary Study Plan and students should follow-up individually to complete the initial plan.

_____Elective courses listed on the plan can be replaced with a new choice at a later date, after discussing with the program director.

_____Complete Leveling Equivalence (during first year of classes) courses if required. These are coursework to show competence in digital and cyber forensics to be taken in the first year of the program. Courses can be taken along with the prescribed curriculum for the Cohort, as advised by the program director.

_____Start process of researching dissertation chair and advisory committee (in the second year of the program). Meet or consult with the Doctoral Program Director to discuss research interests and possible dissertation chairs. Meet with Department faculty to identify your dissertation chair and advisory committee. In some cases, you may have co-chairs. Discuss with your program director and dissertation chair to identify your dissertation advisory committee. This may include a methodologist and/or member(s) with expertise in your research area. Once you have selected your dissertation chair and dissertation advisory committee, inform the Doctoral Program Director of your selections and complete required forms. It is imperative to have an external member in the advisory committee. Four members of your advisory committee, including the dissertation chair, must be tenured or tenure-track faculty in our Department AND the fifth member can be from SHSU but outside the CS Department or can be a tenured/tenure-track faculty member or an industry professional from outside SHSU. The fifth advisory committee member must hold a Ph.D. in CS/Cybersecurity or related terminal degree. The dissertation chair heads the committee. Committee formation forms must be approved by the Department, Graduate school and the College.

_____Chair selection and committee formation must be completed between the fourth long semester and the sixth long semester in the program.

_____Successful Completion of Required Course Work and Declare Intention to Take the Comprehensive Examination (Comps)

_____Comps are taken in the fall semester of the third year of the program after the completion of at least 36 hours of required and elective doctoral courses. Register your intention to take Comps with the Doctoral Program Director.

_____Take Comprehensive Examinations. The Doctoral Testing Committee in conjunction with the director of the program schedules the Written/Oral/Lab Demonstrative Comprehensive Examination in the third fall semester. These examinations are conducted over several content areas usually the 3rd or 4th week in the Fall semester. Content areas currently include *1. OS Forensics (DFSC 7350), 2. DF Tools and Techniques (DFSC 7340) and 3. Network Forensic Analysis (DFSC 7352).* Each area has a recommended graduate course and occasionally exams may be offered in the Spring semester as well, as required. Students are given two opportunities to pass the exam based on the rubric: FAIL (0-69)/LOW PASS(70-84)/HIGH PASS (85+). Oral examinations are scheduled about four weeks after the written examination. Oral examinations are conducted for students with one or more content areas **receiving a low pass or one failure**. The committee can choose to conduct oral exams and demonstratives in lieu of written exams, as warranted by circumstances – detailed instructions for the exams will be provided to the students prior to the examination. Students failing two or more content areas must retake the written examination in the next full semester. The oral examination panel will have at least three faculty including those representing content areas of concern and the student's dissertation chair, although all doctoral faculty in the department are invited to attend.

_____Admission to the Candidacy. Students are admitted as candidates for the doctoral degree after passing the written and, as required, oral/lab demonstrative examinations and an approved portfolio (more on that below). A letter stating the student is a candidate for the Ph.D. is filed with the Registrar's Office after passing these examination(s).

_____Portfolio. Students will be provided access to a Departmental Blackboard portal with a section for students to upload their portfolio materials annually. This annual portfolio will be used to evaluate the progress of the students in the program. The portfolio consists of:

- All journal articles and other published written materials that have been developed during your time as a doctoral student.
- All conference presentation materials (PowerPoint, video, posters etc.) from presentations at conferences, whether in-person or remote.
- Any patents, patents pending, copyrights, digital artifacts, software, etc. that you have developed.
- Details of any grants or contracts that you have been involved in.
- Any documents, currently in progress that relate to publication or conference presentation.
- Course notes, PowerPoint decks, assignments, quizzes, and tests from classes that you have taught.
- If students have IDEA teaching evaluations/scores from classes taught, do include them.
- Any other materials, written or electronic that students would want to include, if it pertains to their accomplishments in the program.
- A short (less than one page) biographical sketch that includes a statement of research focus.
- A link to students' homepage.

Residence. The normal residency requirement is the equivalent of Four Academic Years of full-time study beyond the bachelor's degree. Use of a previously earned master's degree/transfer courses to reduce PhD residency requirements is contingent upon approval of the program Director.

Dissertation Chair and advisory committee guides student in developing a proposal once student becomes a candidate for the Ph.D.

Develop Dissertation Proposal (while students will be encouraged to identify a research topic early in the program, all students must certainly have selected a topic after passing the Comprehensive Examination). Select a research topic and develop the dissertation proposal in collaboration with the dissertation chair and advisory committee.

Schedule Proposal Defense with Dissertation Chair

Schedule the dissertation proposal defense with the Dissertation Chair and advisory committee members.

Distribute Final Version of Dissertation Proposal (Upon approval of the Dissertation Chair and at least three weeks prior to the date of proposal defense not including holidays and semester breaks). Distribute dissertation proposal (Chapters 1-3) electronically and as a hard copy to dissertation chair and committee members. Students are responsible for delivering hard copies to committee members.

Defend Proposal. Present and defend the proposal during the scheduled proposal defense meeting. Dissertation chair and committee ensures that candidate meets the criterion established for a successful defense proposal. Students have two chances to successfully defend their research proposal. Dissertation chair and committee determines whether the proposal has merit and can lead to significant research contributions, and if the student has knowledge and skills to complete proposed work successfully, and in a timely manner.

Submit Proposed Study to the Sam Houston State University Human Subjects Protection Committee and IRB if required. Prior to conducting the proposed study, candidates must receive approval from the Institutional Review Board (IRB). Documentation of approval must be included as an addendum with the final draft of the dissertation.

Report Outcome of Proposal Defense (immediately after proposal defense) by using the appropriate form to the program director. Program director will present the outcome of the proposal defense using the Dissertation Proposal/Defense Form to the Administrative Assistant for the doctoral program in the Dean's office.

Students are required to maintain continuous enrollment in DFSC 8370 Dissertation beginning the semester after Admission as a Candidate for the Ph.D. degree and after successful completion of the proposal defense. They must maintain continuous enrollment in DFSC 8370 until the dissertation is completed and approved by the dissertation chair and committee.

Complete the Dissertation. Doctoral students are expected to graduate within six years of entering doctoral studies, although extensions may be granted up to eight years. Students with permission may continue beyond eight years but will have to repeat courses that are over eight years old.

_____**S**chedule Dissertation Defense and Distribute Copy of Final Dissertation to Committee (Obtain approval from the Dissertation Chair and committee at least three weeks prior to defense). Present a final copy of your dissertation to all members of your dissertation committee at least three weeks prior to your dissertation defense date. Submit the dissertation electronically as well as in hard copy form to all dissertation committee members.

_____**D**efend the Dissertation. Defend the dissertation at the scheduled defense session. At the end of the defense, obtain signatures of the dissertation committee members on the appropriate forms. The dissertation chair ensures that the candidate meets 100% of the criterion for a successful defense. Proposal defense and defending the dissertation cannot be done in the same term.

_____**F**ollow the Dissertation Guide to Completion. The university guidelines for templates, review, and final approval are found at https://shsulibraryguides.org/thesisguide.

_____**S**ubmit Final Copy of Dissertation Electronic and Route Sheet for Final Approval (after completing final dissertation corrections). Subsequent to completion of final copy of dissertation, secure signatures from the Dissertation Chair, from the Department of Computer Science Chair, the program director, from the Dean of the College of Science and Engineering Technology, from the Director of the Newton Gresham Library. Once these signatures are obtained, submit final copy of dissertation to the Office of the Dean of Graduate Studies.

_____**A**ttend Commencement Exercises (date in academic calendar). Please keep us informed of your professional activities, career accomplishments, and work location. One way to do this is to respond to our requests for information. Another is to maintain an active role in our professional associations.

_____**P**lease respond to our requests for program evaluations after you graduate. Your anonymous responses are used to help us plan a better program. A summary of graduates' evaluations is made available to prospective and current students on request. Please let us know when your contact information changes.

Filing for Graduation

The Application for Degree is required in order to have a degree posted to your academic transcript and to be permitted to participate in the commencement ceremony. The Application for Degree must be submitted during the term you plan to graduate. Submit the Application for Degree by the published deadline dates in the Academic Calendar, which is the 12th class day for spring and fall terms, and the 4th class day for summer.

Code of Ethics and Confidentiality for Graduate Students

Ph.D. students must obey all pertinent guidelines and rules of the Department/College/Graduate Studies/and the University. As a student, you need to recognize that there are common ethical standards with regard to exercises such as cheating or plagiarism. As a student or a student employee, there are different benchmarks with regard to the execution of your duties, including the security of University property. For example, you need to recognize that all research work carried out under a supervising faculty legally belongs to the university, not to the student. Failure to comply with standards by University or Departmental rules can result in dismissal from the program. If a student has a concern about an ethical situation, the student should counsel

the Doctoral Director, Dissertation Chair or the Department Chair. All academic integrity and ethics hearings are closed to public information and these cases are considered confidential. The hearing panels will keep all materials and discussions of the cases confidential to the extent permitted by law.

Course List and Expectations

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's 60x30TX plan and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas. The Ph.D. in Digital and Cyber Forensic Science is designed to provide graduates with the following marketable skills:

- Solve complex cybersecurity-related problems.
- Apply theoretical principles to the development of digital forensics tools and techniques.
- Post-secondary teaching capability.
- Technical communication ability.
- Strong research-oriented capabilities.

To accomplish the above-mentioned goals, these are the course requirements. 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 successfully complete the program, students must have successfully completed their graduate credit hours of coursework (core and electives) and internship, submit a portfolio annually for review, and pass Comprehensive Examinations. Once the doctoral program director, dissertation chair and the advisory committee determines that the portfolio, proposal, and comprehensive examinations are satisfactory, the student may enroll in dissertation credits.

As noted earlier, 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:

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 5337	Fundamentals of Criminalistics	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**

Course List

[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.

Ph.D. Minimum Competencies

The Digital and Cyber Forensic Science Doctoral program requires students to meet the criteria for the following areas: a) Research and scholarly activities; b) Departmental service activities; c) Dissertation proposal and defense; and d) Professional service. To fulfill these minimum competencies, students must, in general, complete the following activities prior to the defense of their dissertation:

    a). Engage in scholarly or research activities with their dissertation chair/committee outside of coursework or assistantship requirements. The intent of these activities is to lead to either manuscripts submitted for publication in peer-reviewed journals or conferences at a state, regional, or national level.
    b). Engage in departmental service activities for at least 20 hours per week.
    d). Engage in at least one professional service activity. Examples include:
        A) Being a peer reviewer for proposals for a conference (i.e., local, state, regional, or national);
        B) Being elected, appointed or serving in some capacity in a: 1) local organization; 2) state organization; 3) regional organization; or, 4) national organization.
        C) Serve as a volunteer at conferences.
        D) Be engaged in grantsmanship activities with their dissertation chair and/or committee.

The dissertation chair and the advisory committee decides the actual metrics and measures about satisfactory progress and accomplishments and ultimately readiness to defend and graduate, including:

- Number of publications (as 1st or 2nd author)
    - Journals/Conferences – multiple publications in students' primary research area
        - Quality of publications are evaluated by the committee using either Web of Science or Scopus indices.
    - The dissertation chair and advisory committee may require more publications and add additional requirements prior to graduation.
    - The publications must be accepted by defense date.
    - Grants, professional service, teaching and departmental service requirements etc. are also entirely at the dissertation chair and committee's discretion.

Dissertation Enrollment Requirement

After doctoral candidates are admitted to candidacy, they are required to enroll in DFSC 8370 Dissertation (3 cr.) and maintain continuous enrollment for 15 credits. Once a student enrolls in a thesis or dissertation course, the student must continuously enroll in such a course **every fall, spring, and summer semester** until the Dissertation Committee approves the completed research and the signed thesis/dissertation route sheet is received by the Dean of the Graduate School. Students must be enrolled in at least one course in the semester of graduation. Students who fail to enroll for dissertation during any semester after admission to candidacy will be withdrawn from the program. If the student wishes to request re-admittance, they would need to submit a letter to the program director, and the department chair with the rationale as to why they should be readmitted. The doctoral faculty committee will then make a recommendation to the Dean of the College of Science and Engineering. Please note that re-admittance to the program is at the sole discretion of the Dean of the College of Science and Engineering. The degree can be conferred no sooner than eight months after admission to candidacy.

Preparation and Presentation Of Dissertation Proposal

Dissertation Proposal

The proposal is a detailed plan for conducting the investigation and should communicate to the dissertation chair and committee precisely what the student plans to do, as well as why, how, when and where the student plans to do it. The proposal is significant in that it becomes a contract between the student and the committee. Any significant changes or deviation in the proposal will require chair and committee approval. The more accurate, complete, and detailed the proposal, the easier it will be to complete the dissertation. In this stage of the student's program, it is imperative that the chair of the dissertation committee is appropriately matched to the student's research area. The committee monitors the student's progress in writing the dissertation, advises accordingly, and conducts the oral defense of the dissertation.

Preparation of the Proposal

Students are encouraged to work with their dissertation chair on their research projects during the core coursework of the program to develop an *initial* proposal. It benefits the student if this initial effort is closely related to the proposal which will later be presented to the student's dissertation committee. Work closely with the dissertation chair and other committee members in selection of an adequate topic or area for research.

Before the Proposal Meeting

At least three weeks prior to the dissertation proposal meeting date, copies of the proposal must be distributed to the dissertation chair and other committee members. Feedback from committee members will be relayed to the dissertation chair at least one week prior to the scheduled proposal meeting. Each proposal should reflect and be based upon an extensive review of the literature. Although the design of the study normally determines the items included in a proposal, most proposals include, but are not necessarily limited to the following information:
- Statement of the Problem
- Purpose of the Study---states the goals of the research
    - Explain the purpose of your project and what you hope to develop in your research.
- Describe the background material. Develop a 4-to-6-page introduction to your project.
- Research Questions or Hypotheses
- Significance---indicates why this problem and this study are important, conceptual framework, relevant literature
    - Indicate the relationship of your study to relevant research and findings by scholars in your general area of concentration. *(Provide an annotated bibliography, discussing 6-10 references.)*
- Method (or Procedures) ---describes instrumentation, how the study will be conducted, how the data will be collected
    - Outline your proposed procedure and method(s) of investigation. *(What questions will you explore? Elaborate on the techniques and put them in a firm mathematical foundation.)*
- Limitations---conditions beyond the control of the researcher that may restrict the study's conclusions
- Delimitations---restrictions placed on the study by the researcher that may restrict the study's conclusions
- Assumptions---the researcher's beliefs about design aspects of the study which may or may not have been validated
- Treatment of the Data – analyses to be conducted, including, as appropriate, the specific statistical procedures, and alternatives to be used if they are necessary

- Comment on all source materials and/or facilities available for the successful completion of the research.
- Timeline/schedule of action items.

The decision to include each or any of the above proposal parts (or others) should depend upon the section's appropriateness to the specific study. Further, the proposal must show clear evidence that an appropriate methodology in which the candidate is proficient has been chosen prior to submission.

How is the presentation conducted?

The proposal defense is open to all interested faculty and students. The proposal presentation usually lasts approximately 1-1/2 hours. The procedure may vary, but a standard format includes introductions, introductory remarks by the student regarding his/her interest areas, and an explanation of the proposed study by the student. During the session any faculty member present may ask for clarifications and/or offer suggestions regarding the proposed study. Near the end of the proposal meeting, the student and any student observers leave the room, and the committee chair allows faculty members time for additional comments. The student returns to the session, at which time the student is informed of the dissertation committee's recommendation(s) regarding to the proposed study. Voting persons include the Dissertation Chair or Co-chairs and committee members only.

Outcome of Proposal Meeting

After the proposal presentation, the committee members will discuss, without the student present, their recommendation concerning the student's proposed study. The outcome may be one of the following: (a) accept the proposal as is; (b) modify and accept the proposal and the proposal modifications will be reviewed by the chair and/or co-chairs only; (c) modify and accept the proposal but the committee will review the proposal after the recommended modifications have been made; (d) modify the proposal and student will present proposal again to the dissertation committee; or, (e) reject the proposal. When the proposed study has been approved, the student will complete the IRB if required and once IRB approval is received, student will begin the actual research.

Students complete and submit IRB application materials to the SHSU Institutional Review Board. The application is available at the website of the Office of Research and Sponsored Programs at http://www.shsu.edu/dept/office-of-research-and-sponsored-programs/compliance/irb/index.html prior to initiating the dissertation research (collection of data), the student must have the approval of the SHSU committee for Research on Human Subjects using the IRB review process.

Doctoral Dissertation Procedures

The dissertation chair or co-chairs are selected from among the doctoral faculty in the department of computer science according to faculty expertise and research interests. The student, in consultation with the Dissertation Chair, will recommend committee appointments to the Director of the Doctoral Program.

Dissertation Committee Membership

The committee consists of five members, including the Dissertation Chair and three other doctoral faculty members from the Department of Computer Science. The Graduate Catalog states that the committee must consist of at least a Chair and two other committee members. All tenure-track and tenured faculty in the Department of Computer Science are members of the Graduate Faculty and may serve as chair/co-chair with the recommendation of the department chair and approval of the Dean. The Fifth member, if a faculty at SHSU, must be from outside the Department of Computer Science. The fifth member may be a tenure-track/tenured faculty member at another institution and must hold a Ph.D. in Computer Science/Cybersecurity or terminal degree in a related field. The fifth member may also be from the industry and is required to hold a terminal degree in a related field of the students' dissertation topic.

External committee membership: The policy concerning committee membership of individuals not employed by SHSU is found in Academic Policy Statement 950601: https://www.shsu.edu/dept/academic-affairs/documents/aps/curriculum/950601%20Members%20Not%20Employed%20Thesis%20Dis sertation_2017doc.pdf .

Dissertation Committee Membership Changes

The committee may be changed upon approval of the Department Chair, Program Director and written notification to the Dean of the College of Science and Engineering Technology. This documentation should be included within the doctoral student's folder. A student might change a member and/or chair when the research area calls for a specialization not represented on the original committee. The student may elect to retain or release any members, with appropriate approval, on the dissertation committee. This release from committee assignment is agreed upon by the student and member and should be formally communicated to the Chair of the Department of Computer Science, and the Dean of the College of Science and Engineering Technology with a copy of the request placed on file in the student's departmental folder.

Format for the Dissertation

The dissertation typically follows a five-chapter format. The most recent edition of the Sam Houston State University Publication *Directions on Form, Preparation and Submission of the Final Copies of Master's Theses and Doctoral Dissertation*, is the official style guide. The guide is available at the following website: https://shsulibraryguides.org/thesisguide . The committee may approve another style should that format better suit the need of organizing and presenting the research; however, the official SHSU guidelines outlined on the aforementioned website take precedence over those in the style manuals required by the Computer Science department, and students must use the required dissertation template. In any case, the dissertation is evidence the student is an expert in the chosen topic area. Students are requested to work closely with their Dissertation Director in determining the topic and in formulating the research design. Students are encouraged to work closely with the dissertation committee while writing the dissertation.

<h1 style="text-align:center">Dissertation Defense</h1>

Submission of Dissertation before the Final Defense

The candidate will complete the agreed upon research and prepare a final manuscript. After receiving approval from the Dissertation Chair and the committee, the candidate will schedule a defense date coordinating times and dates that are convenient for all committee members. At least three weeks prior to the final dissertation defense date, copies of the completed manuscript should be distributed to the Dissertation Chair, other committee members and the Program Director. The defense must be held at least six weeks prior to graduation. The dissertation or thesis defense should be open to all interested faculty and students. Voting persons include the Dissertation Chair and committee members only.

After the Defense

The candidate will obtain relevant signatures on the Dissertation Signature Page. Additionally, the candidate and the Dissertation Chair will prepare a list of agreed upon changes or modifications to be made to the defended manuscript prior to attaching the document to the Electronic Route Sheet for approvals. When the Dissertation Chair approves the final draft of the dissertation, she/he will submit the Electronic Route Sheet (https://www.shsu.edu/dept/graduate-studies/theses-and-dissertations.html). This form will be routed to the program director, Chair of the Department of Computer Science and the Dean of the College of Science and Engineering Technology, the Director of the Newton Gresham Library, and the Dean of Graduate Studies. The completed Route Sheet is then sent to the Office of the Registrar. The last date for submission can be found in the Academic Calendar. Reproduction of the dissertation and binding costs are the responsibility of the candidate. The original copy will remain in the library collection. Candidates are cautioned to be aware of required deadlines for final admission of all dissertation or thesis manuscripts, necessary forms, copyright agreements, fee payments, applications for graduation, etc.

Special Assistance

Doctoral students may receive assistance from the Writing Center. This center does not proof-read or edit, but tutors and materials are available to assist with writing skills. If the student uses an outside editor in the preparation of the dissertation, the editor should be familiar with dissertation format/style requirements.

<h1 style="text-align:center">Graduation</h1>

Filing for Graduation

As specified in the Graduate Catalog, the student must file for graduation in the Registrar's Office by the deadline indicated in the schedule of classes or the Graduate Catalog for that particular semester. For fall and spring graduates, a formal application and payment of the degree/diploma fee must be made in the Registrar's Office on or before the 12th class day of the semester in which the degree is to be conferred. Summer graduates will be required to file a formal application and pay the degree/diploma fee prior to the semester in which the degree is to be conferred. Specific dates can be found in the Academic Calendar. A student filing a degree application after the published deadline will be assessed a late fee. A student is entitled to graduate under the degree provisions of the catalog in effect at the time of admission into the doctoral program or a subsequent year, provided that in all cases the student fulfills the requirements of a catalog within six-eight years of enrollment in doctoral course work.

Commencement

The degree is conferred at the commencement following the fulfillment of all requirements. The candidate is expected to be present at the ceremony, and permission from the Doctoral Program Director must be obtained if circumstances prevent a candidate from attending commencement.

Graduation Filing Process Flow Chart

(https://www.shsu.edu/dept/graduate-studies/theses-and-dissertations.html#f35f38a9-6160-421f-b002-e609ee43f868)

Coursework Completion	Initiation Sheet * Register for dissertation writing course * Form dissertation committee	First Draft Review * Submit all required sections plus three chapters
Public Defense Announcement * Shouse be completed two weeks prior to the defense	Route Sheet * Submit a route sheet immediately after successfully defending your dissertation	Embargo Request * Seeking a one-year or permanent embargo must submit it
Final Draft Review * Submit the revision to the Dissertation Specilist	Vireo and Embargo Submission * Reveive a final pdf version of approved dissertation to submit throught Viero	

Equal Opportunity – Affirmative Action

Sam Houston State University policy and practice strongly support the goals of equal opportunity and affirmative action in its educational programs and activities. SHSU does not discriminate on the basis of sex, religion, race, color, national origin, age, disability or other criteria prohibited by law in employment of faculty and staff, or admission and treatment of students, and both in terms of staff and programs we are moving ahead to comply with the goals and objectives of Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments Act of 1972 and Executive Order 11246. No otherwise qualified applicant for student enrollment shall be illegally denied admission to Sam Houston State University on the above-mentioned basis.

Retention/Dismissal Procedures - Academic and Non-Academic

Retention/Dismissal Related to Academic Performance

Academic dismissal will result from failure to maintain the university's required grade point average. The student should consult the graduate catalog (http://www.shsu.edu/home/catalog.html) regarding academic probation and suspension from degree programs. Any student who wishes to contest a final grade shall follow the provisions outlined in the Sam Houston State University Grievance Policy.

Retention/Dismissal Related to Non-Academic Limitations

A student who fails to demonstrate appropriate communication, interpersonal or professional skills, as identified by a faculty member, may be required by the department to seek remediation including, but not limited to, repeating courses and/or receiving counseling. In accordance with university policy, a student may be suspended or expelled for academic dishonesty, including, but not limited to, cheating, falsifying assignments, and plagiarism. (www.shsu.edu/gradcat/degreerequirements.html). In addition, a student who demonstrates personal limitations that impede professional performance, who is harmful to peers, or who violates ethical standards, may be asked to leave the program. If a faculty member has concerns regarding non-academic limitations of a student:

1. The faculty member will confer with the student regarding the concern, clarifying that the student's continuation in the program could come under review according to the program's Retention Procedure. The faculty member will document the meeting in a "memorandum to file," one copy of which will be given to the student and another placed in the student's file.
2. If an agreement is not reached with the student, if the student fails to progress satisfactorily after the conference, or if the situation is of a nature that suggests program action might be necessary, the faculty member will bring the matter to the Director and may consult with the Director regarding options. If resolution is not reached at this point, the Director may refer the matter to the Computer Science doctoral faculty committee. Recommendations will be made and referred to the department chair.
3. The department chair will notify the student in writing of the recommendations of the Computer Science doctoral faculty committee and notify the Dean of the College of Science and Engineering Technology. The Dean will review the matter and assure that due process was followed.

It is the professional responsibility of the Doctoral program faculty committee to ensure that students not only exhibit the knowledge and skills required, but also have the personality and relationship capacities to utilize those skills. Faculty must regularly review and discuss individual student's progress. Students are expected to model professional behavior throughout the program.

Evaluation and Improvement of Program

1. An annual progress report is evaluated by analyzing the metrics listed below to ensure a continuous improvement feedback cycle is implemented. We review the following information:

- Projected enrollment
- Actual enrollment by ethnicity and gender
- Student financial support
- Projected and actual program cost
- Faculty publications and other accomplishments
- Faculty grants
- Student performance (number of publications, presentations, advancing to candidacy, and graduates)
- New faculty added and their vitae
- Equipment, facilities, and library procured
- Other items and the cost procured
- Other information related to program progress

2. The PhD program is also evaluated through the Anthology Planning/CampusLabs system annually. Information collected within Anthology Planning is used by the department and program to drive continuous improvement. Additionally, these data also serve as a source of evidence of continuous improvement assessment for internal and external constituents, agencies, and accreditors.

3. The department has a standing Advisory Board which includes industry, external faculty and will include alumni after the graduation of our first cohort. The program education objectives are periodically reviewed by our Advisory Board, faculty, and students at bi-annual Advisory Board meetings.

Evaluation of Instructors and the Program

In addition to students evaluating the instructor near the end of each course they take, graduates of the program are expected to participate in periodic program evaluations by completing and returning program evaluation forms requested by the department. These forms will be sent out every two years to students in the program and recent graduates, along with forms for the graduates to provide to their employer/supervisor who, in turn, complete and return the form to the department. All forms must be returned anonymously. A very high response rate is needed by the department to provide information necessary to make changes to improve the program, and your participation will be greatly appreciated. The results of the surveys of graduates and supervisors/employers will be tabulated and summarized. Results will be distributed to students, the university administration, and the agencies with whom we have working relationships.

SHSU Grievance Policy

The following procedures are quoted directly from the "Process for Dealing with Student Grievance Cases", University policy number APS 900823, revised May 4, 2018:

1. PURPOSE

The purpose of this academic policy statement is to provide for the resolution of student academic grievances in a prompt and equitable manner.

2. GENERAL

2.01 Under the provisions of this policy, academic grievances include disputes over:

a. Course and/or assignment grades, except cases of academic dishonesty (see Academic Policy Statement 810213 for procedures in cases of academic dishonesty)

b. Unauthorized class absences or tardiness

c. An instructor's alleged unprofessional conduct related to academic matters

d. Withdrawal or suspension of privileges related to degree-required clinical rotation, internships, or other clinical service delivery in professional degree programs

2.02 Allegations, questions, or appeals involving academic dishonesty, i.e., cheating, plagiarism, collusion, and/or abuse of resource materials, will be processed in accordance with the procedures set forth in Chapter VI of the Rules and Regulations, Board of Regents, The Texas State University System and addressed under Academic Policy Statement 910312 "Academic Probation, Suspension, and Termination".

2.03 If the dispute is determined to be based upon professional judgment, the aggrieved student is entitled to have, as appropriate and in turn, the department/school chair, College Academic Review Panel, academic dean (or his or her designee), and Provost and Vice President for Academic Affairs (or his or her designee) form an opinion about the dispute and so advise the individual(s) involved. After considering the advice provided by any or all of the administrators participating in hearing the grievance, the individual(s) involved in the dispute shall retain the academic freedom to decline to change the original judgment in the matter. The University retains the obligation and right to adjust the record in accordance with the ultimate grievance decision.

2.04 If, in turn, the department/school chair, College Academic Review Panel, academic dean, or Provost and Vice President for Academic Affairs finds that a disputed action conflicts with federal or State law, University, college, or departmental policy, or with an instructor's stated class policy, a decision should be rendered in favor of the aggrieved student.

2.05 Degree programs in fields requiring governmental licensing to practice the profession may propose internal academic grievance procedures for matters including, but not limited to those listed in 2.01.d above. Once approved and signed by the Provost, the program grievance procedures shall govern 2.01.d matters in that department and be the final authority over academic grievances in that program. Professional degree programs include, but are not limited to Clinical Psychology, Music Therapy, and Nursing.

3. COLLEGE ACADEMIC REVIEW PANEL

3.01 There shall be in each college a Standing College Academic Review Panel. The members of the panel shall be chosen by procedures established by the college dean. The panel will consist of three (3) faculty members and two (2) student members. The chair of the panel will be selected from the panel members by the appointees to the panel. A department/school chair or any party to the appeal being heard may not serve on the panel. At least two (2) faculty members and at least one (1) student member must be present for action to be taken.

3.02 The Academic Review Panel will be involved in an alleged grievance only after the procedures outlined in paragraph 4.01 through 4.04 below have been exhausted.

3.03 The Academic Review Panel will hear only appeals involving disputes over those matters set forth in paragraph 2.01.a through 2.01.d of this policy. Appeals regarding University/college degree requirements or student misconduct will not be addressed by the panel.

4. PROCEDURES

The steps below are to be followed in pursuing an academic grievance (Sec 2.01, a-d):

4.01 The student must first appeal to his/her instructor for a resolution of the matter and must do so in writing within ten (10) working days following the posting of the grade, the absence or tardiness, or the alleged conduct.

4.02 The instructor must reply in writing to the aggrieved student within ten (10) working days following receipt of the appeal.

4.03 If an academic grievance is not satisfactorily resolved with the instructor, or the student does not receive a response from the instructor within ten (10) working days, the student may appeal to the chair of the academic department/school in which the complaint or dispute is centered. The student appealing must provide to the chair a written summary of the pertinent issues of the grievance within ten (10) working days of the date of the response of the instructor or when the response from the instructor was due. In addition, a student may include other faculty or staff members or any other informed individual who might act as advocates in support of his/her appeal.

4.04 The chair of the academic department/school in which the complaint or dispute is centered reviews the evidence provided by students and may request/review information provided by the instructor. The chair must respond to the student and the instructor with a written decision within ten (10) working days of receipt of a timely appeal.

4.05 If the student remains aggrieved after an appeal to the chair of the department/school, the student may, within ten (10) working days of receipt of the chair's decision, forward the written appeal (plus any other additional material) to the college dean in whose college the dispute arose with a request to have the case heard by the College Academic Review Panel. Within ten (10) working days of receiving the appeal, the Panel will investigate the alleged grievance and present such findings and recommendations as the Panel finds appropriate as soon as possible to the student and to other relevant parties, including the department/school chair and the faculty member(s) against whom the grievance is directed. During the panel hearing(s), all parties involved in the original grievance will be invited to appear before the Panel. The student may

request either oral or written statements from advocates. The inclusion of these statements at the hearing(s) will be at the discretion of the Panel. Under no circumstances will advocates be permitted to directly question or cross-examine any person who is involved in the grievance. Legal counsel, if included by the grievant, may act only in an advisory capacity and may not be a directly active participant in the proceedings.

4.06 If a student wishes to appeal the Academic Review Panel resolution, he or she may, within ten (10) working days, request in writing that the grievance be forwarded to the college dean in whose college the dispute arose for review and adjudication. The Review Panel will forward all documents pertaining to the dispute to the dean, and the dean will inform the student, the instructor, and the administrators participating in the appeals process of the decision and the disposition of the matter within ten (10) working days of receipt of the appeal.

4.07 If a student wishes to appeal the college dean's decision, he or she may, within ten (10) working days, request in writing that the grievance be forwarded to the Provost and Vice President for Academic Affairs. The Provost will receive all documents pertaining to the dispute from the Academic Review Panel and the dean for review. The Provost, or his/her designee, will inform the student, the instructor, and/or the committee chair, and the administrators participating in the appeals process of the decision and the disposition of the matter within ten (10) working days of receipt of the appeal. The Provost's decision is final.

https://www.shsu.edu/dept/academic-affairs/documents/aps/curriculum/910312%20Academic%20Probation%20and%20Suspension_2021.pdf

Sam Houston State University Academic Policy Statement 910312
Academic Probation, Suspension, Dismissal, and Termination
Reviewed July 14, 2021

ACADEMIC GOOD STANDING FOR GRADUATE STUDENTS (excluding students in the College of Osteopathic Medicine, addressed in Section 11, et seq., of this policy)

7.01 A minimum grade point average of 3.0 is required in all graduate course work. All grades earned at SHSU (A, B, C, F) in courses listed for graduate credit on the student's official Degree Plan will be included in computing the grade point average. The marks of Q, W, CR, NC, IP, and X are not counted as hours attempted in computing the SHSU grade point average.

7.02 Grades earned at another institution may not be used to remove a grade of "C" or lower earned at SHSU.

7.03 The appropriate academic dean may place on probation, retain on probation, or terminate any student deficient in grade points.

7.04 Graduate programs may establish additional standards for academic performance, including professional expectations in association with clinical settings, licensing, and/or accreditation. Graduate programs must clearly document and make available to students any academic performance standards in writing, subject to approval by the program coordinator, department chair/program director (when applicable), academic dean, Dean of the Graduate School, Office of General Counsel, and Provost and Sr. Vice President for Academic Affairs. These academic performance standards shall be subject to review as a component of the seven-year graduate program review.

8. ACADEMIC PROBATION, TERMINATION, OR DISMISSAL FOR GRADUATE STUDENTS

8.01 A graduate student who falls below a 3.0 SHSU grade point average at the close of any semester or summer semester during which one or more semester hours are attempted will be placed on probation. Two summer sessions are equivalent to one long semester. If an enrolled student on probation fails to achieve a minimum of a 3.0 SHSU grade point average at the close of the next semester following the start of the probation, the student will be terminated from graduate studies.

8.02 A graduate student who earns a grade of F in any graduate course at SHSU will be terminated from graduate studies.

8.03 A student who earns a grade of C in any course at SHSU (repeated or distinct course) within the academic program may have their graduate status reviewed by a committee of the department or college graduate faculty. The committee will recommend an appropriate remediation for the student.

8.04 A student who fails to meet any approved program-specific standards for academic performance, including professionalism standards, in consonance with section 7.04 of this policy may be dismissed from the program and not permitted to register for courses in the program.

9. REMOVAL OF ACADEMIC PROBATION FOR GRADUATE STUDENTS

The student will be removed from probation at the close of the semester or summer semester in which the SHSU grade point average achieves the required standard.

10. APPEALS PROCESS FOR TERMINATION AND DISMISSAL FOR GRADUATE STUDENTS

A student who believes they have been wrongly dismissed or terminated from graduate studies may appeal using the following procedures:

10.01 The student must first appeal to the graduate advisor for a resolution and must do so in writing and within ten (10) working days following the notification of probation, termination, or dismissal. The graduate advisor must respond to the appeal in writing within ten (10) working days of receipt.

10.02 If the appeal to the graduate advisor is not satisfactorily resolved, the student may appeal in writing to the chair of the department within ten (10) working days following the graduate advisor's decision. The department chair must respond to the appeal in writing within ten (10) working days of receipt. The student may appeal the decision of the chair in writing to the appropriate academic dean within ten (10) working days following the chair's decision. The academic dean may elect to create appeal committees at the program, department/school, or college level to hear student appeals for readmission. These committees will be charged with making a recommendation to the academic dean. The academic dean must respond to the appeal in writing within ten (10) working days of receipt of the appeal or the committee's recommendation, if any.

10.03 If the appeal is not resolved with the academic dean, the student may appeal in writing to the Provost and Sr. Vice President for Academic Affairs, or thjeir designee, within ten (10) working days following the academic dean's decision. The decision of the Provost and Sr. Vice President for Academic Affairs or their designee is final.

10.04 Per Academic Policy Statement 900823, section 2.05, some programs are permitted to establish internal academic grievance procedures, subject to the approval of the Provost and Sr. Vice President for Academic Affairs. Such academic grievance procedures take precedence over the academic grievance procedures described in sections 10.01, 10.02, and 10.03 of this policy.

Scholarships

SHSU Financial Aid & Scholarships
- SHSU Financial Aid & Scholarships Website
- Scholarships4Kats: A list of all SHSU scholarship opportunities

Scholarships by the Computer Science Department
- Computer Science Majors Endowed Scholarship Fund
- Friends of Computer Science
- Johnnie Cook Kelly Endowed Scholarship Fund
- Mohamed Ahmed Noman Endowed Scholarship Fund

Scholarships by College of Science and Engineering Technology (COSET)
- COSET Graduate Achievement Scholarship
  To be considered for the COSET Graduate Achievement Scholarship, a student must be enrolled full-time in a graduate program in the College of Science and Engineering Technology and have an SHSU graduate GPA.
    o Students in their first semester of a COSET graduate program are <u>not</u> eligible for the scholarship and should consider applying for the COSET Graduate Recruitment scholarship instead.
    o Students who are already receiving a scholarship as a bonus to their graduate assistantship (generally, those students in their first or second semester in a COSET graduate program who have been awarded a graduate assistantship), are <u>not</u> eligible for the scholarship.
    o Students receiving a PhD stipend are also <u>not</u> eligible.

Certain exceptions are permitted; interested students are highly encouraged to inquire about eligibility. Please direct inquiries to Dr. Lester (lys001@shsu.edu).
The deadline of application for the Fall semester is by July 1, and Spring semester is by December 1. (Recommendation Letter from the nominating individual is mandatory.)
- COSET Graduate Recruitment Scholarship
  To be considered for the COSET Graduate Recruitment Scholarship, a student must be accepted into a graduate program in the College of Science and Engineering Technology, be entering their first semester in the program, and plan to be a full-time student. Nominations for the scholarship will be accepted from SHSU faculty, or students may self-nominate. An international student applying for the scholarship must have a transcript evaluation on file with the COSET Dean's office (transcript evaluations by qualified SHSU faculty are acceptable). Applicants will be evaluated by cumulative GPA.
  The application deadline for the Fall scholarship is July 15th, and the application deadline for the Spring scholarship is November 15th.

Scholarships by the Graduate School
- The GS General Scholarship
  The GS General Scholarship is competitively awarded each semester of the academic year. Graduate students may apply every semester during their course of graduate study at SHSU and may receive the award more than once. Part-time students are also eligible. Certificate students are also eligible.