

DEPARTMENT OF COMPUTING AND CYBER SECURITY

Mission

The mission of the Department of Computing and Cyber Security is to support the development of comprehensive computer science, cyber security and information systems education and research programs that will prepare students for careers in computing, cyber security and information systems; increase campus, community and experiential awareness in computing, cyber security and information systems; and promote faculty and student research in the fields of computing, cyber security and information systems.

Contact Information

Dr. Izzat Alsmadi
Department Chair
STEM

Grade Requirements

For all departmental students in the Department of Computing and Cyber Security (CCS), to avoid department probation or withdrawal, the minimum GPA requirement in all CCS department courses (hereby called DCGPA) is 2.25. Courses with prefix CSCI, CISA, CETE, CSEC are departmental courses. A student majoring in any of these disciplines is a departmental student: BS Computer Science (BSCS), BS Cyber Engineering Technology (BS-CETE), BS Cyber Security (BS-CSEC), BBA-Computer Information Systems (general and IA track) (BBA-CIS), and Bachelor of Applied Arts and Sciences (general and IA track) (BAAS-IT/BAAS-IT-IA).

Department Probation

After a departmental student has completed four departmental courses, if the DCGPA drops below 2.25, the student will be placed on a department probation that term. In order to get off of department probation, a student must bring their DCGPA to 2.25 or higher by the following term. If the student does not bring their DCGPA to a 2.25 in one semester or term, the student will then be placed on a department withdrawal. A student can be on probation a maximum of two times. After that, the student will be placed on department withdrawal instead of department probation.

Department Withdrawal

A student who has been placed on department probation and earns the DCGPA below 2.25 will be placed on department withdrawal. Because it is the first withdrawal, the student will be required to complete a departmental appeal, submit a personal letter, and an academic success plan of action to bring the DCGPA to 2.25 or higher by the following term. The plan has to be approved by the department chair or a designee. If a student is unable to bring the DCGPA to 2.25 or higher in one semester, the student will be required to select another major out of the department. A student can be on withdrawal only once. A second withdrawal will require a student to select a major out of the department.

Mandatory Requirements for Students on Department Probation and Withdrawal

1. Meet with an Academic Success Coach for coaching on appropriate tutoring, study habits, etc.
2. Meet with their academic advisors and faculty mentors to seek guidance on computing courses and careers.

3. Not register for more than 9 hours of departmental courses in the semester following probation/withdrawal.

Programs

- Computer Information Systems Information Assurance and Security Concentration, Bachelor of Business Administration (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/computer-information-systems-assurance-security-concentration-bba/>)
- Computer Information Systems, Bachelor of Business Administration (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/computer-information-systems-bba/>)
- Computer Information Systems, Minor (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/computer-information-systems-minor/>)
- Computer Science, Bachelor of Science (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/computer-science-bs/>)
- Computer Science, Minor (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/computer-science-minor/>)
- Cyber Engineering Technology, Bachelor of Science (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/cyber-engineering-technology-bs/>)
- Cyber Security, Bachelor of Science (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/cyber-security-bs/>)
- Information Technology Concentration, Bachelor of Applied Arts and Sciences (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/information-technology-concentration-baas/>)
- Information Technology/Information Assurance and Security Concentration, Bachelor of Applied Arts and Sciences (<https://catalog.tamusa.edu/undergraduate/business/computing-cyber-security/information-technology-assurance-security-concentration-baas/>)

Courses

Cyber Engineering Technology

Code	Title	Credits
CETE 3370	Cloud Cmpt Infrastrct Security	3
CETE 4375	Wireless and Mobile Security	3
CETE 4380	Applied Cryptosystems	3
CETE 4385	Cyber Security Architecture	3
CETE 4390	Cyber-Physical Sys Security	3
CETE 4392	Big Data Analytics & Security	3
CETE 4394	Cyber Intelligence	3
CETE 4396	Internship Cyber Engineer Tech	3
CETE 4481	Penetration Test Using Python	4

Computer Information Systems

Code	Title	Credits
CISA 1305	Business Computer Applications	3
CISA 2301	Microcomput Assembly Language	3
CISA 2302	Business Apps Using C++	3

CISA 2305	Java Programming	3
CISA 2306	Computer Networks	3
CISA 2313	Python Programming	3
CISA 2354	Cobol Programming I	3
CISA 2356	Systems Analysis and Design	3
CISA 3101	Jag Tracks III: Cmptr Info Sys	1
CISA 3304	Database Systems	3
CISA 3309	Scripting Languages	3
CISA 3311	Project Management	3
CISA 3321	Information Security	3
CISA 3325	Network Security	3
CISA 3328	Internship in Computr Info Sys	3
CISA 3351	Database Design & SQL	3
CISA 3352	Mobile Application Development	3
CISA 3355	Cobol Programming II	3
CISA 3358	Management Information Systems	3
CISA 3367	Adv Microcomputer Appl & Sys	3
CISA 4101	Ethical Issues in Computing	1
CISA 4303	Client Server App Dev	3
CISA 4312	Risk Management	3
CISA 4313	Programming for Data Analytics	3
CISA 4322	Information Policy Assurance	3
CISA 4323	Computer Forensics	3
CISA 4324	Penetration Testing	3
CISA 4326	Security & Operation Practicum	3
CISA 4331	Enterprise Resource Plan Sys	3
CISA 4332	Business Intel/ Data Mining	3
CISA 4333	Supply Chain Integration	3
CISA 4334	Business Process Integration	3
CISA 4335	ABAP SAP Programming	3
CISA 4358	Senior Project and Seminar	3
CISA 4359	Topics in Computer Inform Syst	3

Computer Science

Code	Title	Credits
CSCI 1436	Programming Fundamentals I	4
CSCI 1437	Programming Fundamentals II	4
CSCI 2322	Discrete Structures for Comput	3
CSCI 2325	Computer Organization	3
CSCI 2353	Web App Programming	3
CSCI 2436	Data Structures	4
CSCI 3101	Jag Tracks III: Computer Sci	1
CSCI 3304	Database Systems	3
CSCI 3321	Cyber Security	3
CSCI 3343	Algorithms	3
CSCI 3344	Computer Architecture	3
CSCI 3352	System Programming	3
CSCI 3353	Applications Programming	3
CSCI 3354	Web Application Development	3
CSCI 3362	Operating Systems	3
CSCI 3366	Programming Languages	3
CSCI 4101	Ethical Issues in Computing	1

CSCI 4315	Computer Graphics	3
CSCI 4316	Software Engineering I	3
CSCI 4317	Software Engineering II	3
CSCI 4321	Computer Security	3
CSCI 4322	Cyber Intelligence	3
CSCI 4325	Mobile App Development I	3
CSCI 4331	Cryptography	3
CSCI 4335	Mobile App Development II	3
CSCI 4359	Advanced Topics in Comp Sci	3
CSCI 4391	Senior Project	3
CSCI 4406	Computer Networks	4

Cyber Security

Code	Title	Credits
CSEC 1360	Security Tools I	3
CSEC 1436	Cyber Security Prog + Lab	4
CSEC 1437	Cyber Security Prog II + Lab	4
CSEC 2306	Computer Networks	3
CSEC 2325	Hardware Security	3
CSEC 2336	Cyber Security Applications	3
CSEC 2341	Web App Progs for Security	3
CSEC 2356	Systems Analysis and Design	3
CSEC 2360	Security Tools II	3
CSEC 3309	Scripting Languages	3
CSEC 3321	Information Security	3
CSEC 3325	Network Security	3
CSEC 3351	Systems Analysis and Design	3
CSEC 3366	Database Security	3
CSEC 3385	Secure Software Engineering	3
CSEC 4101	Ethical Issues in Computing	1
CSEC 4322	Information Policy Assurance	3
CSEC 4323	Computer Forensics	3
CSEC 4324	Penetration Testing	3
CSEC 4326	Security & Operation Practicum	3
CSEC 4350	Security Research Practicum	3
CSEC 4351	Internship in Cyber Security	3
CSEC 4358	Senior Project and Seminar	3
CSEC 4380	Applied Cryptosystems	3
CSEC 4386	Cloud and Big Data Security	3
CSEC 4391	IoT Security	3
CSEC 4392	Topics in Cyber Security	3
CSEC 4394	Cyber Intelligence	3

Certificates

- The Department of Computing and Cyber Security offers students the opportunity to gain marketable skills Certificates in:
 - Cyber Security
 - Mobile Computing
 - Data Analytics
 - NSA/ DHS Cyber Defense Education

The courses in these certificates can be taken by any undergraduate student, unless otherwise stated, enrolled at Texas A&M University-San Antonio and count as electives according to degree plan requirements. All certificates will only be awarded in conjunction with a baccalaureate degree.

Cyber Security Certificate

The Cyber Security Certificate includes the following five courses (13 SCH):

Code	Title	Credits
CSCI 1336	Programming Fundamentals I	3
CSCI 1136	Programming Fundamentals I Laboratory	1
CSCI 3321	Cyber Security	3
or CISA 3321	Information Security	
CISA 2306	Computer Networks	3
CISA 4323	Computer Forensics	3
or CISA 4324	Penetration Testing	
Total Credits		13

Mobile Computing Certificate (Available to computing majors)

The Mobile Computing Certificate includes the following four courses (12 SCH):

Code	Title	Credits
CSCI 3354	Web Application Development	3
CSCI 4325	Mobile App Development I	3
CSCI 4335	Mobile App Development II	3
Select one elective from the following:		3
CSCI 3304	Database Systems	
CSCI 4316	Software Engineering I	
CISA 3304	Database Systems	
CISA 4303	Client Server App Dev	
CISA 4313	Programming for Data Analytics	
CISA 4332	Business Intel/ Data Mining	
CETE 3370	Cloud Cmpt Infrastrct Security	
CETE 4375	Wireless and Mobile Security	
CETE 4392	Big Data Analytics & Security	
Total Credits		12

Data Analytics Certificate (open to ALL majors)

To earn a certificate in Data Analytics, students need to complete the following three courses:

Code	Title	Credits
CISA 2313	Python Programming	3
CISA 4313	Programming for Data Analytics	3
CISA 4332	Business Intel/ Data Mining	3
Total Credits		9

NSA/ DHS Cyber Defense Education Certificate

ALL students graduating from the BS-CS, BBA-CIS, and the BAAS-IT programs with Cyber Security concentrations are eligible to get the NSA/DHS Cyber Defense Education Certificate upon graduation if they

complete the following required courses successfully with a grade of C or better.

Code	Title	Credits
CSCI 1336 & CSCI 1136	Programming Fundamentals I and Programming Fundamentals I Laboratory	4
MATH 1342 or QMBS 3360	Introductory Statistics Business Statistics II	3
CISA 2306 or CSCI 4406	Computer Networks Computer Networks	3-4
CISA 3351 or CSCI 3304	Database Design & SQL Database Systems	3
CISA 3309	Scripting Languages	3
CISA 3321 or CSCI 3321	Information Security Cyber Security	3
CISA 3325 or CSCI 4321	Network Security Computer Security	3
CISA 4323	Computer Forensics	3
CISA 4324	Penetration Testing	3
Total Credits		28-29