Program Map: Computer Science Technology-Cyber Security Option
Engineering Technology Department, College of Science and Technology

Name: **SID:** **Advisor:**
Start Date: **Catalog Date:** **Expected Graduation Date:**

Freshman

Fall Courses			Spring Courses			Notes
Course	**Name**	**Hours**	**Course**	**Name**	**Hours**	
ENGL 1101* Area C	Composition I Pre-requisite: None	3	ENGL 1102* Area C	Composition II Pre-requisite: ENGL 1101	3	*A grade of C or better must be earned for this course Accumulate maximum of 30 semester hours in your Freshmen Year.
MATH 1113* Area M	Pre-Calculus Pre-requisite: MATH 1111	3	MATH 2101 Field of Study Area	Calculus I Pre-requisite: MATH 1113	4	
HUMN 1201 Area I	Critical Thinking & Communication Pre-requisite: None	3	PHYS 1111K** Area T Lab	Introductory Physics I Pre-requisite: MATH 1113	4	
COST 1103 Field of Study Area	COST First Year Experience Pre-requisite: None	2	ELET 3101K Major ENGG Tech Core	Electric Circuit I Pre-requisite: MATH 1113	4	
CSCI 1130 Area T	Computer & its Applications Pre-requisite: None	3				
CSCI 1301* Field of Study Area	Computer Science I Pre-requisite: MATH 1111	3				
Fall Milestones		**Total**	**Spring Milestones**		**Total**	
Students must take MATH 1113 and CSCI 1301 to prevent delay in graduation		17			15	

Sophomore

Fall Courses			Spring Courses			Notes
Course	**Name**	**Hours**	**Course**	**Name**	**Hours**	
MATH 2301* Field of Study Area	Discrete Mathematics Pre-requisite: MATH 1113	3	MATH 2111* Major Math Core	Calculus II Pre-requisite: MATH 2101	4	Accumulate maximum of 60 semester hours in your Sophomore Year.
CSCI 2231K* Field of Study Area	Programming Languages Pre-requisite: CSCI 1301	3	ENGT 2101K* Major ENGG Tech Core	Computer Graphics Pre-requisite: MATH 1113	3	
ELET 3301K* Major ENGG Tech Core	Digital Systems I Pre-requisite: ELET 3101K	4	PHYS 1112K Area T Lab	Introductory Physics II Pre-requisite: PHYS 1111K	4	
CSCI 2601K* Major	Information Security Fundamentals Pre-requisite: CSCI 1301	3	CSCI 1302 Field of Study Area	Computer Science II Pre-requisite: CSCI 1301	4	
Fall Milestones		**Total**	**Spring Milestones**		**Total**	
Students must take CSCI 2601K and ELET 3301K to prevent delay in graduation		13			15	

Junior

Fall Courses			Spring Courses			Notes
Course	**Name**	**Hours**	**Course**	**Name**	**Hours**	
CSCI 3385K*/ CILS 3325* Major CSCI Core	Computer Network & Design/ Data Comm. & Comp. Network Pre-requisite: CSCI 1301 or CSCI 1371	3	CSCI 4010K Major*	Ethical Hacking and Penetration Testing Pre-requisite: CSCI 2601K	4	Accumulate maximum of 90 semester hours in your Junior Year. Apply for graduation.
CSCI 3000 Major CSCI Core	Data Structure & Algorithm Pre-requisite: CSCI 1302	3	CSCI 4310* Major CSCI Core	Compiler Construction Pre-requisite: CSCI 3000	3	
ELET 3411K* Major ENGG Tech Core	Microcontrollers Pre-requisite: ELET 3301K	4	CSCI 4210* Major CSCI Core	Database Management Pre-requisite: CSCI 4110	3	
Area A Option	Pre-requisite: Varies	3	ELET 3412K* Major	Cyber Security and Embedded System Pre-requisite: ELET 3411K	4	
Area A Option	Pre-requisite: Varies	3				
Fall Milestones		**Total**	**Spring Milestones**		**Total**	
Students must take CSCI 3000, ELET 3411K to prevent delay in graduation.		16			14	

Senior

Fall Courses			Spring Courses			Notes
Course	**Name**	**Hours**	**Course**	**Name**	**Hours**	
CSCI 4020K* Major	Mobile Computing Pre-requisite: CSCI 3000	4	CSCI 4622K* Major	Cyber Forensics Pre-requisite: CSCI 4110	4	Does this Degree Program Require a Minor? No Total Hours Required for this Degree Program: 122
CSCI 4110* Major CSCI Core	Operating System Pre-requisite: CSCI 3000	3	ENGT 4401* Major CSCI Core	Senior Project Pre-requisite: Varies	3	
Area S Option	Pre-requisite: Varies	3	AFRS 1501 Area I	Survey African American History Pre-requisite: None	2	
POLS 1101 Area P	American Government Pre-requisite: None	3	Area S Option	Pre-requisite: None	3	
ELET 4402K* Major	Network Defense and Counter Measures Pre-requisite: CSCI 3385K	4	HIST 2111 or 2112 Area P	U.S. History Pre-requisite: None	3	
Fall Milestones		**Total**	**Spring Milestones**		**Total**	
		17			15	

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Core Curriculum (Programmed Preferred Options in Bold)

Area I – Institutional Options 5 hrs
- i. AFRS 1501 Survey of African-American Experience 2 hrs
- ii. HUMN 1201 Critical Thinking & Communication 3 hrs

Area M – Mathematics and Quantitative Skills 3 hrs.
- i. MATH 1001 Quantitative Reasoning 3 hrs.
- ii. MATH 1111 College Algebra 3 hrs.
- iii. MATH 1401 Elementary Statistics 3 hrs.
- **iv. MATH 1113 Pre-Calculus 3 hrs.**

Area P – Social Science and U.S History 6 hrs
- i. POLS 1101 American Government 3 hrs

Select one of the following:
- ii. HIST 2111 U.S. History to the Post-Civil War Period 3 hrs
- iii. HIST 2112 U.S. History from the Post-Civil War to Pre 3 hrs

Area A – Humanities/Fine Arts, and Ethics 6 hrs,

Select two of the following:
- i. ENGL 2111 World Literature I 3 hrs.
- ii. ENGL 2112 World Literature II 3 hrs.
- iii. ENGL 2121 British Literature I 3 hrs.
- iv. ENGL 2122 British Literature II 3 hrs.
- v. ENGL 2131 American Literature I 3 hrs.
- vi. ENGL 2132 American Literature II 3 hrs.
- vii. ENGL 2140 Introduction to African American Literature 3 hrs.
- viii. ENGL 2521 Introduction to Film 3 hrs.
- ix. ARTS 1101 Introduction to Visual Art 3 hrs.
- x. HUMN 2011 Humanities 3 hrs.
- xi. MUSC 1101 Introduction to Music 3 hrs.
- xii. THEA 2101 Introduction to Theatre 3 hrs.
- xiii. DNCE 2010 Dance Appreciation 3 hrs.
- xiv. PHIL 2010 Introduction to Philosophy 3 hrs.
- xv. PHIL 2030 Introduction to Ethics 3 hrs.

Area C – Communications in Writing 6 hrs.
- i. ENGL 1101 English Composition I 3 hrs.
- ii. ENGL 1102 English Composition II 3 hrs.

Area T – Technology, Mathematics, and Sciences 11 hrs

1. Select one of the following:
   - **i. CSCI 1130 Computer and its Applications 3 hrs.**
   - ii. CSCI 1301 Computer Science I 3 hrs.
   - iii. CILS 1130 Introduction to Computer Applications 3 hrs.
   - iv. ASTR 1000 Introduction to the Universe 3 hrs.
   - v. ISCI 1101 Integrated Science I 3 hrs.
   - vi. BIOL 1103 General Biology 3 hrs.
   - vii. BIOL 1104 Human Biology 3 hrs.
   - viii. DATA 1501 Introduction to Data Science 3 hrs.
   - ix. ENVS 1140 Environmental Issues 3 hrs.
   - x. FSCI 1101 Introduction to Molecular Forensic Science 3 hrs.
   - xi. MATH 1111 College Algebra 3 hrs.
   - xii. MATH 1401 Elementary Statistics 3 hrs.
   - xiii. MATH 1113 Pre-Calculus 3 hrs.
2. Select two of the following lab sciences in sequence:
   - i. BIOL 1103/1103L General Biology 4 hrs.
   - ii. BIOL 1104/1104L Human Biology 4 hrs.
   - iii. CHEM 1101K Introductory Chemistry 4 hrs.
   - iv. ISCI 1111K Integrated Science II 3 hrs.
   - v. MSCI 1501K Introduction to Marine Biology 4 hrs.
   - vi. PHSC 1011K Physical Science 1 4 hrs.
   - vii. PHSC 1012K Physical Science II 4 hrs.
   - **viii. PHYS 1111K Introductory Physics I 4 hrs.**
   - **ix. PHYS 1112K Introductory Physics II 4 hrs.**
   - **x. PHYS 2211K Principles of Physics I 4 hrs.**
   - **xi. PHYS 2212K Principles of Physics II 4 hrs.**
   - xii. BIOL 1107/1107L Principles of Biology I 4 hrs.
   - xiii. BIOL 1108/1108L Principles of Biology II 4 hrs.
   - xiv. CHEM 1211/1211L Principles of Chemistry 4 hrs.
   - xv. CHEM 1212/1212L Principles of Chemistry 4 hrs.

Area S – Social Sciences 6 hrs.

Select two of the following:
- i. AFRS 2000 Introduction to Africana Studies 3 hrs.
- ii. ANTH 1101 Introduction to Anthropology 3 hrs.
- iii. ECON 2105 Principles of Macro-Economics 3 hrs.
- iv. GEOG 1101 Introduction to Human Geography 3 hrs.
- v. HIST 1111 World Hist. to Early Modern Times 3 hrs.
- vi. HIST 1112 World History Early Modern Times to Pres 3 hrs.
- vii. POLS 2401 Global Issues 3 hrs.
- viii. PSYC 1101 Introduction to General Psychology 3 hrs.
- ix. PSYC 2103 Human Growth & Development 3 hrs.
- x. SOCI 1101 Introduction to Sociology 3 hrs.
- xi. SOCI 1160 Social Problems 3 hrs.

Distinctive Courses/Descriptions

Computer Science Technology – Cyber Security Option

The computer science technology curriculum – cybersecurity track is designed for students interested in pursuing a career in cybersecurity. This track combines the fundamentals of computer science, electronics engineering technology with cybersecurity concepts. Students in this track will assess the trends and impact of current and past actions within the cyber world. Students will become adept at making rationalized digital decisions, evaluating threats, and managing risks in today's cyber infrastructure. Students in this track will also learn how to apply the tools required to solve problems and mitigate new risks. Students with this track will be marketable and prepared for future-proof employment in the following areas: Information security analyst, Data security analyst, Penetration tester, Forensic computer analyst, Cyber security analyst, Security Software Developer.