Program Map: Computer Science Technology
College of Engineering Technology and Computing

Name: **SID:** **Advisor:**

Start Date: **Catalog Date:** **Expected Graduation Date:**

Freshman

Fall Courses				Spring Courses				Notes
Course	**Name**	**Hours**	**Completed**	**Course**	**Name**	**Hours**	**Completed**	
ENGL 1101* Area C	Composition I # Pre-requisite: None	3		ENGL 1102* Area C	Composition II # Pre-requisite: ENGL 1101	3		*This course is meant to fulfill the core IMPACT Area. **This course is meant to satisfy the Field of Study Area (Area F) requirement. # A grade of C or better must be earned for this course Accumulate a maximum of 30 semester hours in your freshman year. Students must take MATH 1113, CSCI 1301, and ELET 3101K to prevent delay in graduation
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						
	Total	17			**Total**	**15**		
Suggested Summer Course Options: ENGT 2101K, MATH 2101, MATH 2111, PHYS 1111K, PHYS 1112K, CSCI 1130, CSCI 1301								

1Sophomore

Fall Courses				Spring Courses				Notes
Course	**Name**	**Hours**	**Completed**	**Course**	**Name**	**Hours**	**Completed**	
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 a maximum of 60 semester hours in your Sophomore Year. Students must take CSCI 2601K, ENGT 2101K, and ELET 3301K to prevent delay in graduation
CSCI 2231K** Field of Study Area	Programming Languages # Pre-requisite: CSCI 1301	4		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	3		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		
	Total	**13**			**Total**	15		
Suggested Summer Course Options: ENGT 2101K, MATH 2111, PHYS 1112K, CSCI 1301, ELET 3101K								

Junior

Fall Courses				Spring Courses				Notes
Course	**Name**	**Hours**	**Completed**	**Course**	**Name**	**Hours**	**Completed**	
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		Apply for graduation. Accumulate a maximum of 90 semester hours in your Junior Year. Students must take CSCI 3000, ELET 341K to prevent delays in graduation. Students are encouraged to obtain a summer internship, which can be used for Major Technical Elective Credit.
CSCI 3000 Major CSCI Core	Data Structure & Algorithm # Pre-requisite: varies	3		CSCI 4310* Major CSCI Core	Compiler Construction # Pre-requisite: CSCI 3000	3		
ELET 3411KK Major ENGG Tech Core	Microcontrollers # Pre-requisite: ELET 3301K	4		CSCI 4210 Major CSCI Core	Database Management # Pre-requisite: CSCI 3000	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						
	Total	**16**			**Total**	**14**		
Suggested Summer Course Options: ELET 3101K, CSCI 1301, ELET 3501K, and ELET 3511K								

Senior

Fall Courses				Spring Courses				Notes
Course	**Name**	**Hours**	**Completed**	**Course**	**Name**	**Hours**	**Completed**	
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 3411K Major	Network Defense and Counter Measures # Pre-requisite: CSCI 3385K	4		HIST 2111 or 2112 Area P*	U.S. History	3		
	Total	**17**			**Total**	**15**		

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

Core Curriculum (Program Preferred Options in Bold)

Area I – Institutional Options 5 hrs

i. AFRS 1501 Survey of African American Experience 2 hrs

Select one of the following:

i. DATA 1501 Introduction to Data Science 3 hrs
ii. POLS 2401 Global Issues 3 hrs
iii. HUMN 1201 Critical Thinking & Communication 3 hrs
iv. AFRS 2000 Introduction to Africana Studies 3 hrs

Area M – Mathematics & Quantitative Skills 3 hrs

Select one of the following:

i. MATH 1001 - Quantitative Reasoning 3hrs
ii. MATH 1111 - College Algebra 3hrs
iii. MATH 1401 - Elementary Statistics 3hrs
iv. MATH 1113 - Pre-Calculus 3hrs

Area P – Social Science 6 hrs

i. POLS 1101 American Government 3 hrs

1. Select one of the following:
   i. HIST 2111 U.S. History to the Post-Civil War Period 3 has
   ii. 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 – Communicating in Writing 6 hrs

i. ENGL 1101 English Composition I 3 hrs
ii. ENGL 1102 English Composition II 3hrs

Area T – Natural Sciences, Math & Technology 11 hrs

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

Area S – Social Science 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 Intro 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

<u>Computer Science Technology – Cyber Security Option</u>

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.