

# Mayfield College of Engineering

## B.S. in Cybersecurity

Degree Offered at the Waco Location

Course rotation and availability may vary based on Location\*

# Tarleton State



University Center

### 2024-2025 Texas Common Course Numbering System Advising Guide

YEAR	FIRST SEMESTER						
	TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered	
FIRST SEMESTER	ENGL 1301 – Composition I	090	ENGL 1301	3	None	F, SP, SU	
	COSC 1302 – Introduction to Computer Science* (Need to be taken at TSU)	-	-	3	None	F, SP	
	MATH 1342 – Elementary Statistics	020	MATH 1342	3	None	F, SP, SU	
	TSU Core – Life and Physical Science <sup>1</sup>	030	See Options	3	See Options	Varies	
	GOVT 2305 – Federal Government	070	GOVT 2305	3	None	F, SP, SU	
	<b>Total Hours</b>				<b>15</b>		
	SECOND SEMESTER						
		TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered
		ENGL 1302 – Composition II	010	ENGL 1302	3	ENGL 1301	F, SP, SU
		COSC 1310 – Procedural Programming	-	COSC 1336 or COSC 1436	3	Prereq: MATH 1314 or concurrently enrolled in one of the following: MATH 1316, 2412, 2413, or 2414	F, SP, SU
		MATH 2413 – Calculus I	-	MATH 2413	4	Prereq: MATH 1316 or MATH 2412	F, SP, SU
		TSU Core: Communications <sup>1</sup>	010	See Options	3	See Options	Varies
		HIST 1301 – United States History I	060	HIST 1301	3	None	F, SP, SU
<b>Total Hours</b>				<b>16</b>			
YEAR	FIRST SEMESTER						
	TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered	
SECOND SEMESTER	MATH 2414 – Calculus II	-	MATH 2414	4	MATH 2413	F, SP, SU	
	COSC 2341 – Data Structures and Algorithms	-	COSC 2336 or COSC 2436	3	Prereq: COSC 1310 or BCIS 3332 or BCIS 3343	F, SP	
	HIST 1302 – United States History II	060	HIST 1302	3	None	F, SP, SU	
	TSU Core: Language, Philosophy, & Culture <sup>1</sup>	040	See Options	3	See Options	Varies	
	TSU Core: Creative Arts <sup>1</sup>	050	See Options	3	See Options	Varies	
	<b>Total Hours</b>				<b>16</b>		
	SECOND SEMESTER						
		TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered
		COSC 2321 – C++ Programming	-	-	3	Prereq: COSC 1310	F, SP
		PHYS 2425 – University Physics I	030 / 090	PHYS 2425	4	Pre/coreq: MATH 2413	F, SP
		GOVT 2306 – Texas Government	070	GOVT 2306	3	None	F, SP, SU
		TSU Core – Social & Behavioral Sciences <sup>1</sup>	080	See Options	3	See Options	Varies
		TSU Core- Core Component Elective <sup>1</sup>	090	See Options	2	See Options	Varies
<b>Total Hours</b>				<b>15</b>			
<b>**Student should speak with their MCC Advisor about what additional courses they need to complete in order to earn their associates degree.**</b>							

WI: Writing Intensive Courses

Semester Offered: F = Fall, SP = Spring, SU = Summer

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## B.S. in Cybersecurity

YEAR	FIRST SEMESTER					
T H I R D	TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered
	COSC 4365 – Software Security	-	-	3	Prereq: COSC 2321	F (Even)
	COSC 3360 – Python Programming for Data Science	-	-	3	Prereq: COSC 1310 or 2321 or 2331 or BCIS 3332 or	F (Even)
	COSC 3364 – Principles of Cybersecurity	-	-	3	Prereq: COSC 2321 or COSC 2331 or COSC 2341 or COSC 2448 or ELEN 2448	F
	MATH 3310 – Discrete Mathematics	-	MATH 2305	3	Pre/Coreq: MATH 2413	F
	Approved COSC, MATH, BCIS, or CRIJ elective	-	See Options	4	See Options	Varies
	<b>Total Hours</b>			<b>16</b>		
SECOND SEMESTER						
TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered	
COSC 4360 – Machine Learning	-	-	3	Prereq: COSC 2341, COSC 3360 and either MATH 1342 or MATH 3311	SP (Odd)	
COSC 3380 – Operating Systems	-	-	3	Prereq: COSC 1310 and COSC 2341	SP	
COSC 4401 – Database Theory and Practice	-	-	4	Prereq: COSC 2341 by itself, or (MATH 3310 and one of the following: COSC 1310 or BCIS 3332 or BCIS 3333)	SP	
Advanced COSC, MATH, BCIS, or CRIJ elective	-	See Options	3	See Options	Varies	
Approved BCIS elective <sup>2</sup>	-	See Options	3	See Options	Varies	
<b>Total Hours</b>			<b>16</b>			
YEAR	FIRST SEMESTER					
F O U R T H	TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered
	COSC 3341 – Applied Cryptography	-	-	3	Prereq: COSC 2341 and either MATH 3310 or MATH 3301 concurrently	F (Odd)
	COSC 4378 – Computer Networks (WI)	-	-	3	Prereq: COSC 2341 by itself, or (MATH 3310 and one of the following: COSC 1310 or BCIS 3332 or BCIS 3343)	F
	Advanced COSC, MATH, BCIS, or CRIJ elective	-	See Options	3	See Options	Varies
	COSC 3443 – Computer Architecture	-	-	4	Prereq: COSC 1310 or COSC 2321 or COSC 2331	F
	<b>Total Hours</b>			<b>13</b>		
SECOND SEMESTER						
TSU Requirement	Core Category	MCC Option	Credit Hours	Pre-Req or Co-Req	Semester offered	
Approved BCIS elective <sup>2</sup>	-	-	3	See Options	Varies	
CRIJ 4353 – Global Cyber-Security	-	-	3	None	F, SP	
Advanced COSC, MATH, BCIS, or CRIJ elective	-	-	4	See Options	Varies	
COSC 4380 – Cybersecurity Capstone (WI)	-	-	3	Cybersecurity major and senior standing	SP	
<b>Total Hours</b>			<b>13</b>			

Total Hours: 120

### Footnotes:

1 - See Tarleton Website for options for this core category: <https://www.tarleton.edu/generaleducation/core-categories/>

2- Approved BCIS Electives. Select 2 from the following: BCIS 4320, BCIS 4342, and BCIS 4345

Advanced MATH Placement- <https://www.tarleton.edu/engineering/aleks/>