

## WTAMU ADVISING SERVICES – 2024-2025 Curriculum Guide

### Major: Computer Science – Software Engr. Track, B.S. Major Code: 307

Year 1: Fall	Year 1: Spring
CORE 10 (Communication) – ENGL 1301 or 1311 3	CS 1337/1337L Programming Principles I or CIDM 2315 Programming Business Applications 3
CS 1301 Introduction to Computer Science 3	CORE 20 (Mathematics) – MATH 2413 Calculus I 4
CORE 10 – See checklist for options <sup>1</sup> 3	CORE 90 (Component Area Option) – ENGL 1302, 1312, or 2311 3
CORE 40 – See checklist for options <sup>1</sup> 3	CORE 60– See checklist for options <sup>1</sup> 3
CORE 60 – See checklist for options <sup>1</sup> 3	CORE 80 – See checklist for options <sup>1</sup> 3
<b>Total:</b> 15	<b>Total:</b> 16
Year 2: Fall	Year 2: Spring
CS 2337/2337L Programming Principles II 3	CS 3325/3325L Computer Organization & Assembly Languages 3
MATH 2321 Discrete Structures I 3	CS 3305 Data Structures and Algorithms 3
CORE 30 (Life & Phys. Sci.) – CHEM 1411 or PHYS 2425 3	CORE 30 (Life & Phys. Sci.) – CHEM 1412 or PHYS 2426 3
CORE 90 (Component Area Option) – CHEM 1411L or PHYS 2425L 1	CORE 90 (Component Area Option) – CHEM 1412L or PHYS 2426L 1
MATH 2414 Calculus II 4	CORE 70 – See checklist for options <sup>1</sup> 3
CORE 70 – See checklist for options <sup>1</sup> 3	MATH 2322 Discrete Structures II 3
<b>Total:</b> 17	<b>Total:</b> 16
Year 3: Fall	Year 3: Spring
CS 3307 Algorithm Design and Analysis 3	CS 3372 Net-Centric Computing or CIDM 3385 Network Security & Data Communications 3
CS 3310 Programming Languages 3	CS 3340 Software Engineering or CIDM 4360 Object-Oriented Analysis & Design 3
CS 3352 Operating Systems and Networking 3	CS 3303 Object-Oriented Software Development 3
CS 3350 Database Systems Use, Design & Implementation or CIDM 3350 Database Systems Design 3	Soft. Engr. Electives – Take 1 <sup>st</sup> of 4 courses from: CS 3321, 3322, 3341, 3387, 4095, 4097, 4321, 4322, 4330, 4392, 4398, 4341, 4342 3
CS 4325 Computer Architecture 3	1 <sup>st</sup> of 2 courses from: MATH 3311, 3321, 3325, 3340, 3342, 3343, 4310, 4340, 4341, 4361, 4362 3
<b>Total:</b> 15	<b>Total:</b> 15
Year 4: Fall	Year 4: Spring
2 <sup>nd</sup> of 2 courses from: MATH 3311, 3321, 3325, 3340, 3342, 3343, 4310, 4340, 4341, 4361, 4362 3	CS 4391 Senior Capstone Project II 3
CS 4390 Senior Capstone Project I 3	CS 4385 Concurrency & Distributed Systems 3
Soft. Engr. Electives – Take 3 <sup>rd</sup> of 4 courses from: CS 3321, 3322, 3341, 3387, 4095, 4097, 4321, 4322, 4330, 4392, 4398, 4341, 4342 3	Soft. Engr. Electives – Take 4 <sup>th</sup> of 4 courses from: CS 3321, 3322, 3341, 3387, 4095, 4097, 4321, 4322, 4330, 4392, 4398, 4341, 4342 3
CS 4360 Approaches to Internet & Computer Networks Security 3	CORE 50 – See checklist for options <sup>1</sup> 3
Soft. Engr. Electives – Take 3 <sup>rd</sup> of 4 courses from: CS 3321, 3322, 3341, 3387, 4095, 4097, 4321, 4322, 4330, 4392, 4398, 4341, 4342 3	
<b>Total:</b> 15	<b>Total:</b> 12

<sup>1</sup> **CORE:** Computer Science majors are required to take specific courses for Core 20, Core 30, and Core 90. For all other categories, they may select from any available options (see degree checklist). Apart from the major-specific core requirements, there is no set order in which core courses must be taken.

Identified Marketable Skills	Top Three Local Employers or Industries/Professional Programs/Possible Career Opportunities
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**Additional notes:**

DISCLAIMER: This curriculum guide should be used in conjunction with the corresponding degree checklist for general planning purposes only. The degree checklist (later a student's official degree plan) should be referred to as the comprehensive list of all courses required for the degree. An official degree plan is required after completing 30 hours. Students should always seek the advice of their academic adviser before scheduling classes.