

**West Texas A&M University  
Advising Services  
Degree Checklist  
2020-2021**

(For assistance completing this form, contact Advising Services at 806-651-5300)

NAME: \_\_\_\_\_ WT ID: \_\_\_\_\_ DATE: \_\_\_\_\_

**Computer Science—Software Engineering Track  
Engineering and Computer Science  
ECS Building, Room 119 651-5257**

CORE CURRICULUM COURSES: 42 HOURS ♦		HRS
<b>Communication (Code 10)</b>		
ENGL 1301 Introduction to Academic Writing and Argumentation	3	
COMM 1315, 1318, or 1321**	3	
<b>Mathematics (20)</b>		
See University Core Requirements below	(3)	
<b>Life and Physical Sciences (30)</b>		
See University Core Requirements below	(6)	
<b>Language, Philosophy and Culture (40)</b>		
ANTH 2351, ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311, 2323, 2372; MCOM 1307; PHIL 1301, 2374; SPAN 2311*, 2312*/***, 2313*, 2315*, or 2371 Choose 1	3	
<b>Creative Arts (50)</b>		
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 Choose 1	3	
<b>American History (60)</b>		
HIST 1301, 1302, 2301, 2381 Choose 2	6	
<b>Government/Political Science (70)</b>		
POSC 2305 and 2306	6	
<b>Social and Behavioral Sciences (80)</b>		
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301 Choose 1	3	
<b>Component Area Option (90)</b>		
See University Core Requirements below	(6)	
<b>COMPUTER SCIENCE—SOFTWARE ENGINEERING TRACK REQUIREMENTS: 94 HOURS</b>		
<ul style="list-style-type: none"> <li>• A grade of "C" or better must be earned in all courses required for major.</li> <li>• A grade of "C" or better is mandatory for all prerequisites listed for ECS courses required for Computer Science majors.</li> </ul>		
<b>UNIVERSITY CORE REQUIREMENTS: 15 HOURS</b>		
<b>CORE 20</b> MATH 2413*[3] Calculus I	3	
<b>CORE 30</b> CHEM 1411*[3] and 1412*[3] OR PHYS 2425*[3] and 2426*[3]	6	
<b>CORE 90</b> MATH 2413[1] AND CHEM 1411L[1] and 1412L[1] OR PHYS 2425L[1] and 2426L[1]	3	
<b>CORE 90</b> ENGL 2311* Introduction to Professional and Technical Communication	3	
<b>MAJOR REQUIREMENTS: 45 HOURS</b>		
CS 1301 Introduction to Computer Science	3	
CS 1337, 1337L Introduction to Object-Oriented Programming	3	
CS 2325*, 2325L Computer Organization and Assembly Language	3	
CS 2336*, 2336L Objects and Data Abstraction	3	
CS 3305* Data Structures and Algorithms	3	
CS 3307* Algorithm Design and Analysis	3	
CS 3310* Programming Languages	3	

**Bachelor of Science Degree  
BS.CS (307)**

CS 3315* Scripting Languages	3	
CS 3352* Operating Systems and Networking	3	
CS 3372* Net-Centric Computing	3	
CS 4325* Computer Architecture	3	
CS 4340* Database Systems Use, Design and Implementation	3	
CS 4385* Concurrency and Distributed Systems	3	
CS 4390* Software Development & Systems Prog.	3	
CS 4391* Software Development & Prof. Practice	3	
<b>REQUIRED MATH COURSES: 16 HOURS</b>		
MATH 2321* Discrete Structures I	3	
MATH 2322* Discrete Structures II	3	
MATH 2414* Calculus II	4	
<b>Take 6 hours from:</b> MATH 3311* Linear Algebra MATH 3321* Probability and Finite Mathematics MATH 3325* Introduction to Proofs MATH 3340* Calculus III MATH 3342* Differential Equations I MATH 3343* Differential Equations II MATH 4310* Modern Algebra with Cryptography MATH 4340* Complex Variables I MATH 4341* Advanced Calculus MATH 4361* Statistics for the Sciences MATH 4362* Introduction to Numerical Analysis	6	
<b>ADDITIONAL REQUIREMENTS FOR SOFTWARE ENGINEERING TRACK: 18 HOURS</b>		
CS 3303* Object-Oriented Software Development	3	
CS 4360* Approaches to Internet and Computer Networks Security	3	
<b>Take twelve hours from:</b> CS 3321*, 3322*, 3387*, 4095*, 4097*, 4310*, 4321*, 4322*, 4330*, 4350*, 4392*, 4398	12	
<b>TOTAL HOURS REQUIRED TO COMPLETE DEGREE</b>	121	

♦ The core curriculum must total **exactly 42 hours**; excess hours must be moved to the major as an elective or a major requirement and stay within the 120-hour requirement or approved total submitted to the Coordinating Board for degree requirements. Some majors specify particular courses to meet core curriculum requirements when options are available.

\* Indicates prerequisites—see catalog for more information.

\*\* Recommended.

\*\*\* Or an equivalent course (second year, second semester) in a foreign language.  
NOTE: At least 39 hours of advanced work (3000- or 4000-level courses) for which tuition is paid must be earned at WTAMU, and 30 of the final 36 hours counted toward the degree must be earned at WTAMU. A maximum of six semester hours in religion (RELI) and six semester hours in physical education (PHED) courses can count toward a baccalaureate degree.

Note: This is NOT a degree plan. Upon completing 30 credit hours, students must request an official degree plan (using the online [Degree Plan Request](#) form) in order to progress. Students who have questions about their degree plan should contact the office of the dean of the Paul and Virginia Engler College of Business, located in the Classroom Center, Room 216 (phone 806-651-2530).

# WTAMU ADVISING SERVICES

## 2020-2021 Curriculum Guide

**Major:** Computer Science - Software Engr. Track

**Major Code:** 307

First Year <b>Boldface type indicates major requirements</b>																																							
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### Degree Total Hours 121

**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.

**Identified Marketable Skills:**

**Top 3 Local Employers or Industries/Professional Programs/Possible Career Opportunities**

**Prerequisites/Important Sequences/Other degree Notes:**

**Note 1 - CORE:** Computer Science majors are required to take specific courses for Core 20, Core 30, and Core 90. For all other core 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.

**Note 2 - CS Electives:** Take 12 hours from CS 3321, 3322, 3387, 4095, 4097, 4310, 4321, 4322, 4330, 4350, 4392, and 4398.

**Note 3 - MATH Elective:** Take 6 hours from MATH 3311, 3321, 3325, 3340, 3342, 3343, 4310, 4340, 4341, 4361, and 4362.