

**West Texas A&M University
Advising Services
Degree Checklist
2021-2022**

(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 | CC |
|--|-----|-----|----|
| Communication (Code 10) | | | |
| ENGL 1301 Introduction to Academic Writing and Argumentation | 3 | | |
| COMM 1315, 1318, or 1321** | 3 | | |
| Mathematics (20) | | | |
| See University Core Requirements below | (3) | | |
| Life and Physical Sciences (30) | | | |
| See University Core Requirements below | (6) | | |
| Language, Philosophy and Culture (40) | | | |
| 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 | | |
| Creative Arts (50) | | | |
| ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 Choose 1 | 3 | | |
| American History (60) | | | |
| HIST 1301, 1302, 2301, 2381 Choose 2 | 6 | | |
| Government/Political Science (70) | | | |
| POSC 2305 and 2306 | 6 | | |
| Social and Behavioral Sciences (80) | | | |
| AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301 Choose 1 | 3 | | |
| Component Area Option (90) | | | |
| See University Core Requirements below | (6) | | |
| COMPUTER SCIENCE—SOFTWARE ENGINEERING TRACK REQUIREMENTS: 94 HOURS | | | |
| <input type="checkbox"/> A grade of "C" or better must be earned in all courses required for major. <input type="checkbox"/> A grade of "C" or better is mandatory for all prerequisites listed for ECS courses required for Computer Science majors. | | | |
| UNIVERSITY CORE REQUIREMENTS: 15 HOURS | | | |
| CORE 20 | | | |
| MATH 2413*[3] Calculus I | 3 | | CC |
| CORE 30 | | | |
| CHEM 1411*[3] and 1412*[3] OR PHYS 2425*[3] and 2426*[3] | 6 | | CC |
| CORE 90 | | | |
| MATH 2413[1] AND CHEM 1411L[1] and 1412L[1] OR PHYS 2425L[1] and 2426L[1] | 3 | | |
| CORE 90 | | | |
| ENGL 2311* Introduction to Professional and Technical Communication | 3 | | CC |
| MAJOR REQUIREMENTS: 51 HOURS | | | |
| CS 1301 Introduction to Computer Science | 3 | | |
| CS 1337, 1337L Programming Principles I OR CIDM 2315 – Programming Business Applications | 3 | | |
| CS 2337*, 2337L Programming Principles II | 3 | | |
| CS 2325*, 2325L Computer Organization and Assembly Language | 3 | | |
| CS 3303* Object-Oriented Software Development | 3 | | |
| CS 3305* Data Structures and Algorithms | 3 | | |

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

| | | | |
|--|-----|--|----|
| CS 3307* Algorithm Design and Analysis | 3 | | |
| CS 3310* Programming Languages | 3 | | |
| CS 3340* Software Engineering or CIDM 4360* – Object-Oriented Analysis and Design | 3 | | |
| CS 3350* Database Systems Use, Design & Implementation or CIDM 3350* Database system design | 3 | | |
| CS 3352* Operating Systems and Networking | 3 | | |
| CS 3372* Net-Centric Computing or CIDM3385* – Network Security and Data Communications | 3 | | |
| CS 4325* Computer Architecture | 3 | | |
| CS 4385* Concurrency and Distributed Systems | 3 | | |
| CS 4360* Approaches to Internet and Computer Networks Security | 3 | | |
| CS 4390* Senior Capstone Project I | 3 | | |
| CS 4391* Senior Capstone Project II | 3 | | |
| REQUIRED MATH COURSES: 16 HOURS | | | |
| MATH 2321* Discrete Structures I | 3 | | |
| MATH 2322* Discrete Structures II | 3 | | |
| MATH 2414* Calculus II | 4 | | CC |
| Take 6 hours from: | | | |
| MATH 3311* Linear Algebra | | | CC |
| MATH 3321* Probability and Finite Mathematics | | | |
| MATH 3325* Introduction to Proofs | | | |
| MATH 3340* Calculus III | | | CC |
| MATH 3342* Differential Equations I | | | CC |
| 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 | | | |
| ADDITIONAL REQUIREMENTS FOR SOFTWARE ENGINEERING TRACK: 12 HOURS | | | |
| Take twelve hours from: | | | |
| CS 3321*, 3322*, 3387*, 4095*, 4097*, 4321*, 4322*, 4330*, 4392*, 4398 | 12 | | |
| TOTAL HOURS REQUIRED TO COMPLETE DEGREE | 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 36 hours of advanced work (3000- or 4000-level courses) for which tuition is paid 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. All undergraduate students must request an official degree plan from their academic dean's office by the time they have completed 30 credit hours.

**WTAMU ADVISING SERVICES
2021-2022 Curriculum Guide**

Major: Computer Science - Software Engr. Track

Major Code: 307

| First Year | |
|----------------|----------------|
| Fall | Spring |
| | |
| Semester Hours | Semester Hours |

| Second Year | |
|----------------|----------------|
| Fall | Spring |
| | |
| Semester Hours | Semester Hours |

| Third Year | |
|----------------|----------------|
| Fall | Spring |
| | |
| Semester Hours | Semester Hours |

| Fourth Year | |
|----------------|----------------|
| Fall | Spring |
| | |
| Semester Hours | Semester Hours |

Degree Total Hours 120

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.

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|---|
| <p>Identified Marketable Skills:</p> |
|---|

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|---|
| <p>Top 3 Local Employers or Industries/Professional Programs/Possible Career Opportunities</p> |
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|---|
| <p>Prerequisites/Important Sequences/Other degree Notes:</p> |
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