West Texas A&M University
Advising Services
Degree Checklist
2014-2015
(For assistance completing this form, contact Advising Services at 806-651-5300)

NAME:_____ **WT ID:**_____ **DATE:**_____

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

Bachelor of Science Degree
BS.CS (307)

CORE CURRICULUM COURSES: 42 HOURS ♦	HRS	
Communication (Code 10)		
ENGL 1301 *(ENG 101)* Introduction to Academic Writing and Argumentation	3	
COMM 1315 *(SCOM 101, 1315),* 1318 *(SCOM 103, 1318)*, or 1321** *(SCOM 201, 1321)*	3	
Mathematics (Code 20)		
See **University Core Requirements** below	(3)	
Life and Physical Sciences (Code 30)		
See **University Core Requirements** below	(6)	
Language, Philosophy and Culture (Code 40)		
ANTH 2351 *(201),* ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311 *(110)*, 2323, 2372 *(210)*; PHIL 1301 *(101)*, 2374 *(204)*; SPAN 2311* *(206)*, 2312*/*** *(207)*, 2313* or SPAN2315*/*** **Choose 1**	3	
Creative Arts (Code 50)		
HUMA 1315 *(FA 101)*; ARTS 1303 *(ART 151)*, ARTS 1304 *(ART 152)*; DANC 2303; MUSI 1306 *(MUS 101)* **or** 1208 **and** 1209*; or THRE 1310 *(105)* **Choose 1**	3	
American History (Code 60)		
HIST 1301 *(201)*, 1302 *(202)*, 2301, 2381 **Choose 2**	6	
Government/Political Science (Code 70)		
POSC 2305 *(101)* and 2306 *(102)*	6	
Social and Behavioral Sciences (Code 80)		
AGBE 2317* *(213)*; COMM 2377 *(SCOM 255, 2377)*; CRIJ 1301 *(CJ 105)*; ECON 2301 *(ECO 201)*, 2302 *(ECO 202)*; ANTH 2351 *(201)*; CRIJ 1301 *(CJ 105)*; ECON 2301 *(ECO 201)*, 2302 *(ECO 202)*; PSYC 2301 *(PSY 201)*; SOCI 1301 *(201)* **Choose 1**	3	
Component Area Option (Code 90)		
See **University Core Requirements** below	(6)	
COMPUTER SCIENCE—SOFTWARE ENGINEERING TRACK REQUIREMENTS: 94 HOURS • **A grade of "C" or better must be earned in all courses required for major.** • **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] *(240)* Calculus I	3	
CORE 30 CHEM 1411*[3] *(101)* and 1412*[3] *(102)* **OR** PHYS 2425*[3] *(210)* and 2426*[3] *(211)*	6	
CORE 90 MATH 2413[1] **AND** CHEM 1411L[1] and 1412L[1] **OR** PHYS 2425L[1] and 2426L[1]	3	
CORE 90 ENGL 2311* *(ENG 270)* Introduction to Professional and Technical Communication	3	
MAJOR REQUIREMENTS: 45 HOURS		
CS 1301 Introduction to Computer Science	3	
CS 1337, 1337L *(1437)* Introduction to Object-Oriented Programming	3	
CS 2325*, 2325L *(2425)* Computer Organization and Assembly Language	3	
CS 2336*, 2336L *(2436)* Objects and Data Abstraction	3	
CS 3305* *(290, 2377)* Data Structures and Algorithms	3	
CS 3307* *(307)* Algorithm Design and Analysis	3	
CS 3310* Programming Languages	3	
CS 3315* *(315)* Scripting Languages	3	
CS 3352* Operating Systems and Networking	3	
CS 3372* Net-Centric Computing	3	
CS 4325* *(425)* Computer Architecture	3	
CS 4340* Database Systems Use, Design and Implementation	3	
CS 4385* *(485)* Concurrency and Distributed Systems	3	
CS 4390* Software Development & Systems Prog.	3	
CS 4391* Software Development & Prof. Practice	3	
REQUIRED MATH COURSES: 16 HOURS		
MATH 2321* Discrete Structures I	3	
MATH 2322* Discrete Structures II	3	
MATH 2414* *(241)* Calculus II	4	
Take 6 hours from: MATH 3311* *(411)* Linear Algebra MATH 3321* *(321)* Probability and Finite Mathematics MATH 3325* Introduction to Proofs MATH 3340* *(340)* Calculus III MATH 3342* *(342)* Differential Equations I MATH 3343* Differential Equations II MATH 4310* *(310)* Modern Algebra with Cryptography MATH 4340* *(440)* Complex Variables I MATH 4341* *(441)* Advanced Calculus MATH 4361* *(461)* Statistics for the Sciences MATH 4362* *(492)* Introduction to Numerical Analysis	6	
ADDITIONAL REQUIREMENTS FOR SOFTWARE ENGINEERING TRACK: 18 HOURS		
CS 3303* Object-Oriented Software Development	3	
CS 4360* Approaches to Internet and Computer Networks Security	3	
Take twelve hours from: CS 3321*, 3322*, 3387*, 4095*, 4097*, 4310*, 4321*, 4322*, 4330*, 4350*, 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 French or German.

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. After completing 30 hours, students are encouraged to request an official degree plan in the office of the dean of the College of Agriculture, Science and Engineering, located in the Agriculture and Natural Sciences Building, Room 106 (or call 651-2585). Students who have completed 45 hours will not be allowed to progress without requesting a degree plan.

Advising Services

2014 - 2015 Curriculum Guide

Computer Science Software Engineering Track

School of Engineering and Computer Science
Bachelor of Science Degree
BS.CS

ECS 119 651-5257

Degree Plan Total Hours: 120

Major Code: 307

First Year

Fall		Hours	Spring	
CS 1301	3	15	CS 1337	3
CORE 80	3		CORE 40	3
See Checklist for Options			See Checklist for Options	
CORE 10-ENGL 1301	3		CORE 90-ENGL 2311	3
CORE 60-HIST	3		CORE 60-HIST	3
1301, 1302, 2301 or 2381			1301, 1302, 2301 or 2381	
CORE 10-COMM	3		MATH 2413	4
1315, 1318 or 1321				

Second Year

Fall		Hours	Spring	
CS 2336	3	16	CS 2325	3
MATH 2321	3		CS 3305	3
CORE 30-LAB SCIENCE	3		MATH 2322	3
CHEM or PHYS				
MATH 2414	4		CORE 70-POSC	3
			2305 or 2306	
CORE 50-ARTS	3		CORE 30-LAB SCIENCE	4
See Checklist for Options			CHEM or PHYS	

Third Year

Fall		Hours	Spring	
CS 3307	3	15	CS 3372	3
CS 3303	3		CS 3315	3
CS 3352	3		CS 3310	3
CS ELECTIVE	3		CS ELECTIVE	3
See Checklist for Options			See Checklist for Options	
CS 4325	3		MATH ELECTIVE	3
			See Checklist for Options	

Fourth Year

Fall		Hours	Spring	
MATH ELECTIVE	3	15	CS ELECTIVE	3
See Checklist for Options			See Checklist for Options	
CS 4390	3		CS 4391	3
CS ELECTIVE	3		CORE 70-POSC	3
See Checklist for Options			2305 or 2306	
CS 4340	3		CS 4385	3
CS 4360	3			

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 45 hours. Students should always seek the advice of their academic adviser before scheduling classes.

7/26/14