Texas A & M University-Corpus Christi
Curriculum Sheet for 2019-2020 Catalog

This Curriculum expires in 6 years.

* Asterik Symbol = Upper Division Hours

+ Plus Symbol = Double counting core and major requirement

Degree: **Bachelor of Science**

Major: **Computer Science**

Option: **Systems Programming**

Course offered
(Subject to Change)

COMMON UNIVERSITY CORE CURRICULUM

	Course	Title	SCH	PREREQUISITES
	ENGL 1302	Eng. Composition	3	
	COMM 1311	Oral Communication	3	n/a
	See Catalog	Language, Philosophy, or Culture	3	see catalog
	HIST 1301	US History I	3	n/a
	HIST 1302	US History II	3	n/a
	POLS 2305	US GOVT	3	n/a
	POLS 2306	TX GOVT	3	n/a
	See Catalog	Creative Arts (see catalog)	3	see catalog
	ECON 2301, ECON 2302, PSYC 2301, or SOCI 1301	Social/Behavioral Sciences	3	n/a

MAJOR SPECIFIC UNIVERSITY CORE CLASSES (See note below)

	Course	Title	SCH	PREREQUISITES
	+MATH 2413	Calculus I	(4)	MATH 1314 & MATH 1316 or MATH 2312
	+(CHEM 1411 AND CHEM 1412) OR (PHYS 2425 AND PHYS 2426) OR (BIOL 1406 AND BIOL 1407) OR (GEOL 1403 AND GEOL 1404)	Natural Science	(6)	Co-requiste SMTE Lab Safety Seminar Register by discipline (0 hrs)
	+CAO Option I	MATH 2414 Calculus II Lab from Calculus I Lab from Natural Science core-See	(4)	MATH 2413
	+CAO Option II	Natural Science core list above	(2)	see catalog

NOTE: Taking core curriculum classes other than those listed in the major specific university core classes section will result in taking additional courses that may not be required to complete your degree. Please consult with your major academic advisor for more details.

Computer Science Core

	Course	Title	SCH	PREREQUISITES
	COSC 1100	Skills for Computing Professional I	1	Co-requisite w/ COSC 1435
	COSC 1435	Intro Prob Solving I w/lab	4	MATH 1314
	COSC 1436	Intro Prob Solving II w/lab	4	COSC 1435
	COSC 2334	Computer Architecture	3	COSC 1435 & MATH 2305
	COSC 2437	Data Structures	4	COSC 1436 & Co-req MATH 2305
	*COSC 3336	Intro to Database Systems	3	COSC 2437
	*COSC 3346	Operating Systems	3	COSC 2437 & COSC 2334 or ENTC 3418
	*COSC 3370	Software Engineering	3	COSC 2437
	*COSC 4100	Skills for Computing Professionals III	1	COSC 1100 and ENGL 3310
	*COSC 4354	Senior Capstone	3	COSC 3370 & 3336
	*ENGL 3310	Technical and Professional Writing for CS	3	
	MATH 2305	Discrete Mathematics I	3	MATH 2312
	MATH 2413	Calculus I w/lab	4	MATH 1314 + 1316 OR 2312
	*MATH 3342 or MATH 3345	Applied Probability & Statistics or Statistical Modeling and Data Analysis	3	MATH 2413: MATH 2414 & COSC 1435 (or COSC 1330)

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Courses Specific to Systems Programming Option

	Course	Title	SCH	PREREQUISITES	Course offered
	COSC 2360	Cyber Security	3	COSC 1435	
	*COSC 3324	Object-oriented Programming	3	COSC 2437	Fall, Spring
	*COSC 3353	Survey of Programming Languages	3	COSC 2437	Spring
	*COSC 3373	Software Project Management	3	COSC 3370	
	*COSC 3385	Numerical Methods	3	MATH 2413, COSC 1435 (or 1330). MATH 2414 & 3311 Recommended.	Fall
	*COSC 4342	Computer Networks	3	COSC 3346 & MATH 2413	Fall, spring
	*COSC 4343	Algorithms	3	COSC 2437, MATH 2305, MATH 2413	Fall
	*COSC 4348	Systems Programming	3	COSC 3346 & (3353 or 3324)	Spring

Approved upper division Computer Science Electives (12 hrs):

	Course	SCH	PREREQUISITES	Course offered
	*COSC Upper Division Elective	3	See catalog for pre-requisites	see catalog
	*COSC Upper Division Elective	3	See catalog for pre-requisites	see catalog
	*COSC Upper Division Elective	3	See catalog for pre-requisites	see catalog
	*COSC Upper Division Elective	3	See catalog for pre-requisites	see catalog
	+MATH 2414 Calculus II	4	MATH 2413	Fall, Spring

Choose one course from:

	Course	SCH	PREREQUISITES	Course offered
	COSC 4353 Compile Construction (Fall, odd years) OR COSC 4360 Theory of Programming Languages (Fall odd) OR COSC 4370 Models of Computation (Spring, odd years)	3	COSC 3353, MATH 2305, COSC 2437; MATH 2305	Fall odd years; Fall odd years; Spring, odd years.

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	Course	SCH	PREREQUISITES	Course offered
	+Select a science sequence: (CHEM 1411 AND CHEM 1412) OR (PHYS 2425 AND PHYS 2426) OR (BIOL 1406 AND BIOL 1407) OR (GEOL 1403 AND GEOL 1404)	8	See catalog for pre-requisites	See catalog

Electives as needed to fulfill university mininum total hour requirements — 0-1

Program requirement: All COSC majors are required to meet with their assigned faculty mentor every fall. Contact the Academic Advisor for more information.

College Minimum major grade point average (g.p.a) — 2.25

All classes under the heading of Computer Science core (including MATH 2413, 2305, 3342 or 3345) and all COSC courses on degree plan taken at TAMU-CC.

University Requirements

Minimum Total Hours for degree:	120
*Upper Division minimum total hours:	45
*Upper Division minimum residency hours:	36
*Upper Division minimum major residency hrs:	12
Cumulative TAMU-CC minimum g.p.a.:	2
Foreign Language Requirement:	see catalog