The University of Texas RioGrande Valley

Bachelor of Science in Computer Science (BS) Computer Science

2020-2021

		H Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
		3 Choose 1	Communication (Core)	С	010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Options: ENGL 1301
		4 MATH 2413	Calculus I	С	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	
		1 CSCI 1101	Introduction to Computer Science	С			
RST YEAR FALL		3 CSCI 1370	Computer Science I for Majors	С		Grade of 'C' or better in any of the following: MATH 1314, MATH 1414 or placement in a higher level Math course (MATH 2412, MATH 2413) and credit for or concurrent enrollment in CSCI 1101 or CMPE 1101. Co-requisite: CSCI 1170.	
		1 CSCI 1170	Computer Science I Laboratory for Majors	С		Co-requisites: CSCI 1370.	
Ē		UNIV	1301 Learning Framework 1101 Academic and Career Success 1001 Living and Working by Design				As required, based on credit hours earned, TSI status, High School rank, major declaration.
	1	12 Semester Total Hours					
			Communication (Core)	С	010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Options: ENGL 1302 or ENGL 1305
NG		4 MATH 2414				MATH 2413 with a grade of 'C' or better.	
SPRING		3 Choose 1	American History (Core)		060	Orada at 0 as hattas in 10001 4070 as OMDE 40701 and 10001	HIST 1301 OR HIST/MASC 2327
<i>w</i>			Computer Science II	С		Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170].	OR CSCI 2388
			Free Elective - Any Level				
		17 Semester Total Hours			_		
			Course Title	IVIII I.	CEC		Additional Notaa
			Course Title	Grade		Prerequisite	Additional Notes
			Course Title Public Speaking Life and Physical Sciences (Core)		GEC 090 030	Prerequisite	Additional Notes MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425
		3 COMM 1315 4 Choose 1	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment		090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178].	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or
R Fall		3 COMM 1315 4 Choose 1	Public Speaking Life and Physical Sciences (Core)	Grade	090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or
OND YEAR		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 Choose 1 3 CSCI 2333 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language	Grade	090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI
SECOND YEAR FALL		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 Choose 1 3 CSCI 2333 6 Semester To 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language	Grade C C	090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI
SECOND YEAR		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 Choose 1 3 CSCI 2333 6 Semester To 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language	Grade C C	090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI
SECOND YEAR		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 Choose 1 3 CSCI 2333 5 Semester To 3 PHIL 2326 3 CSCI 3310 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language Dial Hours Ethics, Technology and Society (Core) Mathematical Foundations of Computer	C C C C	090	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170]. Grade of C or better in: [MATH 2413 or MATH 2487] and [CSCI 1370 or CMPE 1370 or CSCI 1378 or CMPE 1378] and [CSCI	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI
SECOND YEAR SPRING		3 COMM 1315 4 Choose 1 3 CSCI 2344 3 Choose 1 3 CSCI 2333 5 Semester To 3 6 Semester To 3 3 CSCI 3310 4 Choose 1	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language otal Hours Ethics, Technology and Society (Core) Mathematical Foundations of Computer Science	C C C C	090 030 030 040	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170]. Grade of C or better in: [MATH 2413 or MATH 2487] and [CSCI 1370 or CMPE 1370 or CSCI 1378 or CMPE 1378] and [CSCI	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI 3329 MUST choose from BIOL, CHEM, or PHYS. See degree
SECOND YEAR		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 CSCI 2344 3 CSCI 2333 5 Semester To 5 PHIL 2326 3 CSCI 3310 4 Choose 1 3 Choose 1 3 Choose 1 3 ELEE 2330 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language Dial Hours Ethics, Technology and Society (Core) Mathematical Foundations of Computer Science Life and Physical Sciences (Core) Free Elective - Any Level Digital Systems Engineering I	C C C C	090 030 030 040	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170]. Grade of C or better in: [MATH 2413 or MATH 2487] and [CSCI 1370 or CMPE 1370 or CSCI 1378 or CMPE 1378] and [CSCI	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI 3329 MUST choose from BIOL, CHEM, or PHYS. See degree
SECOND YEAR		 3 COMM 1315 4 Choose 1 3 CSCI 2344 3 CSCI 2344 3 CSCI 2333 5 Semester To 5 PHIL 2326 3 CSCI 3310 4 Choose 1 3 Choose 1 3 Choose 1 3 ELEE 2330 	Public Speaking Life and Physical Sciences (Core) Programming in Unix/ Linux Environment Object Oriented Programming, Java or Visual Basic or Object Oriented Programming in C# Computer Organization and Assembly Language otal Hours Ethics, Technology and Society (Core) Mathematical Foundations of Computer Science Life and Physical Sciences (Core) Free Elective - Any Level Digital Systems Engineering I Digital Systems Engineering I Lab	C C C C	090 030 030 040	Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170]. Grade of C or better in: [MATH 2413 or MATH 2487] and [CSCI 1370 or CMPE 1370 or CSCI 1378 or CMPE 1378] and [CSCI 1370 or CMPE 1370 or CSCI 1378 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178].	MUST be BIOL 1406 or BIOL 2401 or CHEM 1311 or CHEM 1309 or PHYS 1401 or PHYS 2425 CSCI 3326 OR CSCI 3327 OR CSCI 3328 OR CSCI 3329 MUST choose from BIOL, CHEM, or PHYS. See degree plan for options. Prerequisite may apply.

	! H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	CSCI X3XX	CSCI Additional Computer Science Elective				See degree plan for options.
	3	CSCI 3333	Algorithms and Data Structures	С		Grade of C or better in: Grade of C or better in: [CSCI 3310 or MATH 2346 or MATH 2305] and [CSCI 2380 or CMPE 2380].	
FALL			Free Elective - Any Level				
E E	3	ENGL 3342	Technical Communication			6 hours of English.	
			U.S. Federal Govt & Politics		070		
~	15 Semester Total Hours						
YEAF	3	CSCI 3340	Software Engineering I	С		Grade of C or better in: [3 advanced hours in CSCI or CMPE] and [CSCI 2380 or CMPE 2380].	
THIRD	3	Choose 1	CS Electives - Databases, Networking, Operating Systems and Computer Architecture	С		CSCI 3333 for Databases; CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Choose from: CSCI 4333 Database Design and Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks
SPRING	3	MATH 2318	Linear Algebra			MATH 2413 with a grade of 'C' or better.	
ß	3	POLS 2306	Texas Government & Politics		070		
	3	CSCI 3336	Organization of Programming Languages	с		Grade of C or better in: [CSCI 2380 or CMPE 2380] and [CSCI 3326 or CMPE 3326 or CSCI 3327 or CMPE 3327 or CSCI 3328 or CMPE 3328 or CSCI 3329].	
	15 Semester Total Hours						
	! H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
							Choose from: CSCI 4333 Database Design and
	3	Choose 1	CS Electives - Databases, Networking, Operating Systems, and Computer Architecture	С		CSCI 3333 for Databases; CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks
	3	CSCI 4325	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345
ALL	3	CSCI 4325	Operating Systems, and Computer Architecture Automata, Formal Languages, and	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345
YEAR FALL	3	CSCI 4325 CSCI X3XX	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability	C	090	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks
	3	CSCI 4325 CSCI X3XX Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective	C	090	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category
<u> </u>	3	CSCI 4325 CSCI X3XX Choose 1 Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core)	C	090	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category
FOURTH YEAR FALL	3 3 1 1 3 3	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core)	C	090	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326.
	3 3 1 1 3 3 3 17	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1 Semester To	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) tal Hours	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301
	3 3 1 1 3 3 3 17	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1 Semester TC CSCI X3XX	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) tal Hours CSCI Additional Computer Science Elective	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301
FOURTH YEAF	3 3 1 1 3 3 3 17	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1 Semester TC CSCI X3XX Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) tal Hours CSCI Additional Computer Science Elective Free Elective - Any Level	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301 See General Education Core for course options.
FOURTH YEAF	3 3 1 1 3 3 17 3	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1 Semester TC CSCI X3XX Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) tal Hours CSCI Additional Computer Science Elective	C		2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301 See General Education Core for course options.
FOURTH YEAF	3 3 1 1 3 3 17 3 3 3	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Choose 1 Semester To CSCI X3XX Choose 1 Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) tal Hours CSCI Additional Computer Science Elective Free Elective - Any Level	C	050	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301 See General Education Core for course options. See degree plan for options.
<u> </u>	3 3 1 1 3 3 3 3 3 3 3 3 3 3	CSCI 4325 CSCI X3XX Choose 1 Choose 1 Choose 1 Semester To CSCI X3XX Choose 1 Choose 1 Choose 1	Operating Systems, and Computer Architecture Automata, Formal Languages, and Computability CSCI Additional Computer Science Elective Integrative/Experimental Learning (Core) Free Elective - Any Level Support Courses - Probability Creative Arts (Core) Datal Hours CSCI Additional Computer Science Elective Free Elective - Any Level American History (Core)	C	050	2380 or CMPE 2388 and CSCI 2333 or CMPE 2333 for Networking, Architecture, and OS	Implementation or CSCI 4334 Operating Systems or CSCI 4335 Computer Architecture or CSCI 4345 Computer Networks See degree plan for options. Choose an additional 1-hour course from this category except PHIL 2326. STAT 3337 OR ELEE 3340 OR STAT 3301 See General Education Core for course options. See degree plan for options. HIST 1302 OR HIST/MASC 2328

Graduation Requirements

All courses in the Computer Science Core must be completed with a grade 'C' or better. All courses in Sections Programming Language and Databases, Architecture, Networking, and Operating Systems must be completed with a grade of 'C' or better.

CORE: The 2020-2021 list of core courses can be found in the 2020-2021 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Core Curriculum'

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Critical ('!'): sequence sensitive course. Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory. **General Education Core (GEC) Sections:** 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary ; 090 - Technologies; 090 - Language Diversity & Writing.