

Modified Course Sequences
CSAR Fast Track Course Sequence

FIRST SEMESTER		SECOND SEMESTER	
Introduction to Scientific Programming or Introduction to Programming	3	Intro to Object Oriented Progr. (RS)*	4
College Composition I	3	College Composition II	3
Pre-Calculus	4	Calculus I	4
General Education course (HHL bank) Rowan Seminar (RS) course if not already taken)	3	General Education course (HHL Literature (LIT) course if not already taken)	3
General Education course ++	3	Discrete Structures	3
TOTAL	16	TOTAL	17
THIRD SEMESTER		FOURTH SEMESTER	
Foundations of Computer Science	3	Data Structures and Algorithms	4
Calculus II	4	Linear Algebra	3
Obj. Oriented Prog. & Data Abstractn	4	Lab Science Choice **	4
Computer Organization	3	Public Speaking	3
Free Elective	3	Computer Lab Techniques +++	3
TOTAL	17	TOTAL	17
FIFTH SEMESTER		SIXTH SEMESTER	
Programming Languages	3	Principles of Digital Computers and Digital Computer Laboratory	4
Software Engineering I	3	Operating Systems	3
Lab Sequence 1 **	4	Design & Analysis of Algorithms	3
Probability and Statistical Inference for Computing Systems	3	Lab Sequence 2 **	4
General Education course++	3	General Education course (SBS Bank) (Multicultural/Global Studies (M/G) course)	3
TOTAL	16	TOTAL	17
SEVENTH SEMESTER		EIGHTH SEMESTER	
Computer Science Senior Project	3	CS Restricted elective	3
CS restricted elective	3	CS Restricted elective	3
CS restricted elective	3	General Education course (ACE bank)	3
Computers and Society (Writing Intensive (WI)) ⁺	3	Free Elective (if needed to complete 120 credit hours requirement)	3
TOTAL	12	TOTAL	Up to 12

**CSAR Slow Track Course Sequence with < B+ in Introduction to Scientific Programming
or Introduction to Programming**

FIRST SEMESTER		SECOND SEMESTER	
Introduction to Scientific Programming or Introduction to Programming	3	Introduction to Scientific Programming or Introduction to Programming	3
College Composition I	3	College Composition II	3
Pre-Calculus	4	Calculus I	4
General Education course (ACE bank)	3	Discrete Structures	3
General Education course ++	3		
TOTAL	16	TOTAL	13
THIRD SEMESTER		FOURTH SEMESTER	
Intro to Object Oriented Progr. (RS)*	4	Foundations of Computer Science	3
Calculus II (Linear Algebra, if Calc. II was taken)	4	Linear Algebra	3
General Education course (HHL Literature (LIT) course if not already taken)	3	Computer Lab Techniques +++	3
General Education course (HHL bank) Rowan Seminar (RS) course if not already taken)	3	Obj. Oriented Prog. & Data Abstractn	4
TOTAL	14	TOTAL	13
FIFTH SEMESTER		SIXTH SEMESTER	
Data Structures and Algorithms	4	Design & Analysis of Algorithms	3
Computer Organization	3	Operating Systems	3
Lab Science Choice **	4	Computers and Society (Writing Intensive (WI)) ⁺	3
Probability & Statistics I (if not taken, or General Ed. (HHL LIT) course	3	Lab Sequence 1 **	4
TOTAL	14	TOTAL	13
SEVENTH SEMESTER		EIGHTH SEMESTER	
Lab Sequence 2 **	4	Principles of Digital Computers and Digital Computer Laboratory	4
Programming Languages	3	CS restricted elective	3
Principles of Software Engineering	3	General Education course (SBS Bank) (Multicultural/Global Studies (M/G) course)	3
Public Speaking	3	General Education course++	3
			3
TOTAL	13	TOTAL	Up to 12
NINTH SEMESTER		TENTH SEMESTER	
Computer Science Senior Project	3	CS Restricted elective	3
CS restricted elective	3	Free Elective (if needed to complete 120 credit hours requirement)	3
CS restricted elective	3		
Free Elective	3		
TOTAL	12	TOTAL	UP TO 6

**CSAR Slow Track Course Sequence with \leq C in Pre-Calculus
and $<$ B+ in Introduction to Scientific Programming or Introduction to Programming**

FIRST SEMESTER		SECOND SEMESTER	
Introduction to Scientific Programming or Introduction to Programming	3	Pre-Calculus	4
College Composition I	3	College Composition II	3
Pre-Calculus	4	Introduction to Scientific Programming or Introduction to Programming	3
General Education course (ACE bank)	3	General Education course (HHL Literature (LIT) course if not already taken)	3
General Education course ++	3		
TOTAL	16	TOTAL	13
THIRD SEMESTER		FOURTH SEMESTER	
Calculus I	4	Calculus II (Linear Algebra, if Calc. II was taken)	4
Discrete Structures	3	Foundations of Computer Science	3
Intro to Object Oriented Progr. (RS)*	4	Computer Lab Techniques +++	3
General Education course (HHL bank) Rowan Seminar (RS) course if not already taken)	3	Obj. Oriented Prog. & Data Abstractn	4
TOTAL	14	TOTAL	13
FIFTH SEMESTER		SIXTH SEMESTER	
Data Structures and Algorithms	4	Design & Analysis of Algorithms	3
Computer Organization	3	Operating Systems	3
Lab Science Choice **	4	Computers and Society (Writing Intensive (WI)) ⁺	3
Linear Algebra	3	Probability & Statistics I (if not taken, or General Ed. (HHL LIT) course)	3
TOTAL	14	TOTAL	12
SEVENTH SEMESTER		EIGHTH SEMESTER	
Lab Sequence 1 **	4	Principles of Digital Computers and Digital Computer Laboratory	3
Programming Languages	3	CS restricted elective	3
Principles of Software Engineering	3	Lab Sequence 2 **	4
Public Speaking	3	General Education course++	3
TOTAL	13	TOTAL	13
NINTH SEMESTER		TENTH SEMESTER	
Computer Science Senior Project	3	CS Restricted elective	3
CS restricted elective	3	General Education course (SBS Bank) (Multicultural/Global Studies (M/G) course)	3
CS restricted elective	3	Free Elective (if needed to complete 120 credit hours requirement)	3
Free Elective	3		
TOTAL	12	TOTAL	UP TO 9

CSAR Slow Track Course Sequence with \leq C in Pre-Calculus

FIRST SEMESTER			SECOND SEMESTER	
Introduction to Scientific Programming or Introduction to Programming	3		Pre-Calculus	4
College Composition I	3		College Composition II	3
Pre-Calculus	4		Intro to Object Oriented Progr. (RS)*	4
General Education course (ACE bank)	3		General Education course (HHL Literature (LIT) course if not already taken)	3
General Education course ++	3			
TOTAL	16		TOTAL	14
THIRD SEMESTER			FOURTH SEMESTER	
Calculus I	4		Calculus II (Linear Algebra, if Calc. II was taken)	4
Discrete Structures	3		Foundations of Computer Science	3
Obj. Oriented Prog. & Data Abstractn	4		Computer Lab Techniques +++	3
General Education course (HHL bank) Rowan Seminar (RS) course if not already taken)	3		General Education course (SBS Bank) (Multicultural/Global Studies (M/G) course)	3
TOTAL	14		TOTAL	13
FIFTH SEMESTER			SIXTH SEMESTER	
Data Structures and Algorithms	4		Design & Analysis of Algorithms	3
Computer Organization	3		Operating Systems	3
Lab Science Choice **	4		Computers and Society (Writing Intensive (WI)) ⁺	3
Linear Algebra	3		Probability & Statistics I (if not taken, or General Ed. (HHL LIT) course)	3
TOTAL	14		TOTAL	12
SEVENTH SEMESTER			EIGHTH SEMESTER	
Lab Sequence 1 **	4		Principles of Digital Computers and Digital Computer Laboratory	3
Programming Languages	3		CS restricted elective	3
Principles of Software Engineering	3		Lab Sequence 2 **	4
Public Speaking	3		General Education course++	3
TOTAL	13		TOTAL	13
NINTH SEMESTER			TENTH SEMESTER	
Computer Science Senior Project	3		CS Restricted elective	3
CS restricted elective	3		Free Elective (if needed to complete 120 credit hours requirement)	3
CS restricted elective	3			
Free Elective	3			
TOTAL	12		TOTAL	UP TO 6

**CSAR Track Course Sequence with \leq C+ in Pre-Calculus
and \leq B+ in Introduction to Scientific Programming or Introduction to Programming**

FIRST SEMESTER		SECOND SEMESTER	
Introduction to Scientific Programming or Introduction to Programming	3	Calculus I	4
College Composition I	3	College Composition II	3
Pre-Calculus	4	Intro to Object Oriented Progr. (RS)*	3
General Education course (ACE bank)	3	General Education course (HHL Literature (LIT) course if not already taken)	3
General Education course ++	3		
TOTAL	16	TOTAL	13
THIRD SEMESTER		FOURTH SEMESTER	
Calculus II (Linear Algebra, if Calc. II was taken)	4	Linear Algebra	4
Discrete Structures	3	Foundations of Computer Science	3
Obj. Oriented Prog. & Data Abstractn	4	Computer Lab Techniques +++	3
General Education course (HHL bank) Rowan Seminar (RS) course if not already taken)	3	Data Structures and Algorithms	4
TOTAL	14	TOTAL	14
FIFTH SEMESTER		SIXTH SEMESTER	
Design & Analysis of Algorithms	4	Lab Sequence 1 **	4
Computer Organization	3	Operating Systems	3
Lab Science Choice **	4	General Education course++	3
Computers and Society (Writing Intensive (WI)) ⁺	3	Probability & Statistics I (if not taken, or General Ed. (HHL LIT) course	3
TOTAL	14	TOTAL	13
SEVENTH SEMESTER		EIGHTH SEMESTER	
Lab Sequence 2 **	4	Principles of Digital Computers and Digital Computer Laboratory	3
Programming Languages	3	CS restricted elective	3
Principles of Software Engineering	3	Free Elective	4
Public Speaking	3	General Education course (SBS Bank) (Multicultural/Global Studies (M/G) course)	3
TOTAL	13	TOTAL	13
NINTH SEMESTER		TENTH SEMESTER	
Computer Science Senior Project	3	CS Restricted elective	3
CS restricted elective	3		
CS restricted elective	3		
Free Elective	3		
TOTAL	12	TOTAL	3

* Computer Literacy/Rowan Seminar: All students must either pass the University's Computer Competency Exam or pass Computer Literacy, by the end of their freshman year. Similarly all students must enroll in a Rowan Seminar course (marked RS in course catalog) in their freshman year
** Lab Sequence courses must be Biology I and II (BIOL.100-101), Chemistry I and II (CHEM.100-101), or Physics I and II with Calculus (PHYS.200-201). The Lab Science choice is another course chosen from these courses.
+ Rowan's Writing Intensive requirement is satisfied by the Writing Intensive version of Computers and Society
++ Must be a General Education Course from the ACE, HHL, or SBS banks
+++ Comp. Lab Techniques is not required, but strongly recommended. Counts as one "free elective"