B.S. In Computer Science

Specializations: One design course and any coherent set of 3-4 CS-related courses with a minimum of 15 credits that is approved by an academic advisor. Examples are posted on the Undergraduate Academics section of www.cs.rice.edu. COMP specializations designed by students must be approved by an academic advisor.

Sample Degree Plan

THIS IS ONE EXAMPLE OF MANY POSSIBLE SCHEDULES.
CONSULT A DIVISIONAL OR DEPARTMENTAL ADVISOR TO CUSTOMIZE YOUR DEGREE PLAN.

FALL

FRESHMAN — 16 credits

MATH 101	Single Variable Calculus I	3
PHYS 101	Mechanics w/Lab	3*
or 111/125		
COMP 140	Computational Thinking	4*
or 160/170		
DIST	Distribution elective	3
OPEN	Open elective	3
LPAP	Lifetime Phys Activity elective	0

SOPHOMORE — 16 credits

MATH 211	Ordinary Diff. Equa.	3
or 221		
COMP 221	Intro to Computer Systems	4*
DIST	Distribution elective	3
DIST	Distribution elective	3
OPEN	Open elective	3

JUNIOR — 16–17 credits

COMP 311	Program Languages	4
or 412		
STAT 331	Applied Probability	3
or 310		
MATH 355	Linear Algebra	3–4
or MATH 354 or CAAM 335		
DIST	Distribution elective	3
OPEN	Open elective	3

SENIOR — 17 credits

COMP 482	Design and Analysis of Algorithms	3
or 481		
COMP 410	Software Eng. Methodology	4
or 402/460		
SPEC	COMP cap course elective	4
DIST	Distribution elective	3
OPEN	Open elective	3

SPRING

FRESHMAN — 18 credits

MATH 102	Single Variable Calculus II	3
PHYS 102	Electricity and Magnetism	4*
or 112/126		
COMP 211	Principles of Program Design	4*
ELEC 220	Fund of Comp Engineering	4*
DIST	Distribution elective	3
LPAP	Lifetime Phys Activity elective	0

SOPHOMORE — 16 credits

MATH 212	Multivariable Calculus	3
or 222		
COMP 280	Mathematics of Computation	3
COMP 314	Appl Algorithms & Data Struct	4
DIST	Distribution elective	3
OPEN	Open elective	3

JUNIOR — 16–18 credits

COMP 421	Operating Sys & Concurrent Prog	4
CORE	COMP elective course	3
CORE	COMP elective course	3–4
OPEN	Open elective	3–4
OPEN	Open elective	3

SENIOR — 17 credits

SPEC	COMP cap course elective	4
SPEC	COMP cap course elective	4
DIST	Distribution elective	3
OPEN	Open elective	3
OPEN	Open elective	3

** In addition to class hours, these courses have a regularly scheduled lab that must fit into your schedule.*

BASIC REQUIREMENTS	General Math & Science Courses	25–26
	Core Courses in Major	34
ELECTIVE REQUIREMENTS	Computer Science Electives	6–8
	Engin Spec (COMP design & "cap"c ourses)	15
	Open Electives	21–24
	Distribution Courses in Humanities and Social Science	24
	Minimum credit required for the B.S.	128

Of the 128 total degree credits, COMP requires 80–83 credits in general math and science courses and core, and specialization area courses.

Major Requirements

NUMBER	CREDIT	TITLE
MATH 101	3	Single Variable Calculus I
MATH 102	3	Single Variable Calculus II
MATH 211/221	3	Ordinary Diff. Equations & Linear Algebra/Honors Calculus III
MATH 212/222	3	Multivariable Calculus/Honors Calculus IV
STAT 331/310	3	Applied Probability/Probability and Statistics
MATH 355/354/ CAAM 335	3–4*	Linear Algebra/Honors Linear Algebra/ Matrix Analysis
PHYS 101/111/125	4*	Mechanics w/Lab/General Physics w/Lab
PHYS 102/112/126	4*	Electricity & Magnetism w/Lab/General Physics II w/Lab
COMP 140/160/170	4*	Introduction to Computation/Intro to Computer Games/ Computational Thinking in Biology
COMP 211	4*	Principles of Program Design
ELEC 220	4*	Fundamentals of Computer Engineering
COMP 221	3	Introduction to Computer Systems
COMP 280	4	Mathematics of Computer Science
COMP 314	4	Applied Algorithms and Data Structures
COMP 311/412	4	Programming Languages/Compiler Construction
COMP 421	3	Operating Systems
COMP 481/482	3	Automata, Formal Languages, and Computability/ Design and Analysis of Algorithms
COMP Elective	3–4	COMP 300 or above
COMP Elective	3–4	COMP 300 or above
SPEC	4	COMP design course (COMP 402/410/460)
SPEC	4	COMP cap course elective
SPEC	4	COMP cap course elective
SPEC	3	COMP cap course elective

** In addition to class hours, these courses have a regularly scheduled lab that must fit into your schedule.*