COMP

Computer Science

WEB LINKS	http://cs.rice.edu/undergrad/
FRANK ADVICE	The sample schedule is the best guide, especially for the first few semesters where it's important to take the core courses. But, generally, take the following as early as possible: COMP 130, 140 or 160, 182, 215, and ELEC 220.
ADVICE FOR STUDENTS WITH AP CREDIT	Computer science AP credit does not count toward the major requirements. If you have AP credit for Math, you should take the upper level math requirements earlier.
ALTERNATIVE CURRICULA	There is a lot of flexibility with the timing of the MATH/CAAM/STAT requirements and the upper-level COMP courses.
BS VERSUS BA	The B.S. provides more depth than the B.A. The only difference in courses in the first two years is the physics requirements for a B.S. Students should speak with a major adviser about the choice of degrees as the best choice depends largely on circumstances and objectives.
NOT REQUIRED BUT HIGHLY RECOMMENDED COURSES	Some popular computer science courses include COMP 330, 410, 430, 440.

RESEARCH	Many computer science undergraduates pursue research. The best way to find out about research opportunities is to talk with faculty who work in areas that you are interested in.
INTERNSHIPS	Internships are plentiful in computer science, some of which are posted on the department web site and emailed to majors. Most students have little trouble finding internships if they are interested.
STUDY ABROAD	With advance planning, it's not difficult to study abroad, even if not taking major-related courses while abroad. Most of the project-oriented courses are hard to get transfer credit for, while the mathematical requirements and theoretical courses are fairly easy to get transfer credit for.
PROFESSIONAL ORGANIZATIONS	Rice University Computer Science Club (http://csclub.rice.edu/) CSters (Rice University's Society for Women in Computer Science) (http://csters.rice.edu/) ACM Programming Contest – contact John Greiner (greiner@rice.edu) for info.
INTERESTING COURSES FOR NON–MAJORS	COMP 130, 140, 160, 162 COMP 182, 435

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 adviser. Examples are posted on the Undergraduate Academics section of www.compsci.rice.edu/undergrad. COMP specializations designed by students must be approved by an academic adviser.

Sample Degree Plan

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

FALL			SPRING		
FRESHMAN		**15 credits**	**FRESHMAN**		**14 credits**
MATH 101	Single Variable Calculus I	3	MATH 102	Single Variable Calculus II	3
PHYS 101•	Mechanics w/Lab	4*	COMP 182	Algorithmic Thinking	4*
or 111 or 125			ELEC 220	Fund of Comp Engineering	4*
COMP 140	CompThinking	4*	DIST	Distribution elective	3
or 130 or 160					
FWIS	Freshman Writing	3			
LPAP	Lifetime Phys Activity elective	1			
SOPHOMORE		**16 credits**	**SOPHOMORE**		**18 credits**
MATH 211	Ordinary Differential Equations	3	PHYS 102••	Electricity and Magnetism	4*
or 212 or 221 or 222			or 112 or 126		
COMP 215	Introduction to Program Design	4*	COMP 321	Intro to Computer Systems	4*
DIST	Distribution elective	3	COMP 322	Principles of Parallel Prog	4*
DIST	Distribution elective	3	DIST	Distribution elective	3
OPEN	Open elective	3	OPEN	Open elective	3
JUNIOR		**16 credits**	**JUNIOR**		**17 credits**
COMP 310	Adv Object-Oriented Prog & Design	4*	COMP 421	Operating Sys & Concurrent Prog	4
MATH 355	Linear Algebra	3	STAT 310	Probability and Statistics	3
or 354 or CAAM 335			or 312 or ELEC 303		
COMP 382	Reasoning About Algorithms	4*	CORE	COMP elective course	4
CORE	COMP elective course	4	DIST	Distribution elective	3
OPEN	Open elective	1	OPEN	Open elective	3
SENIOR		**15 credits**	**SENIOR**		**17 credits**
COMP 412	Compiler Construction	4	SPEC	COMP cap course elective	4
or 411			SPEC	COMP cap course elective	4
COMP 413	Distributed Program Construction	4	OPEN	Open elective	3
or 410 or 460			OPEN	Open elective	3
SPEC	COMP cap course elective	4	OPEN	Open elective	3
DIST	Distribution elective	3			

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

• When registering for PHYS 101, you must also register for PHYS 103, the discussion section for 101.

•• When registering for PHYS 102, you must also register for PHYS 104, the discussion section for 102.

BASIC REQUIREMENTS	General math & science courses	23
	Core courses in major	40
ELECTIVE REQUIREMENTS	Computer science electives	6–8
	Engin spec (COMP design & "cap" courses)	15
	Open electives and LPAP	23
	FWIS and distribution courses	21
	Minimum credit required for the B.S.	128

Of the 128 total degree credits, the B.S. in computer science requires 84–86 credits in general math and science courses, core courses, CS electives, and design and "cap" courses.

Major Requirements

NUMBER	CREDIT	TITLE
MATH 101	3	Single Variable Calculus I
MATH 102	3	Single Variable Calculus II
MATH 211/212/221/222	3	Ordinary Differential Equations & Linear Algebra/Multivariable Calculus/ Honors Calculus III/Honors Calculus IV
MATH 355/354/ CAAM 335	3	Linear Algebra/Honors Linear Algebra/ Matrix Analysis
STAT 310/312 or ELEC 303	3	Probability & Statistics/Probability & Statistics for CEVE/ Applied Probability
PHYS 101•/111/125	3-4*	Mechanics w/Lab/General Physics w/Lab
PHYS 102••/112/126	4*	Electricity & Magnetism w/Lab/General Physics II w/Lab
ELEC 220	4*	Fundamentals of Computer Engineering
COMP 140/130/160	4*	Computational Thinking/Elements of Algorithms and Computation/ Intro to Computer Game Creation
COMP 182	4*	Algorithmic Thinking
COMP 215	4*	Introduction to Program Design
COMP 310	4*	Advanced Object - Oriented Programming And Design
COMP 321	4*	Introduction to Computer Systems
COMP 322	4*	Principles Of Parallel Programming
COMP 382	3	Reasoning About Algorithms
COMP 411/412	4	Advanced Programming Languages/Compiler Construction
COMP 413	4	Distributed Program Construction
COMP 421	4	Operating Systems and Concurrent Programming
COMP Elective	3–4	COMP 300 or above
COMP Elective	3–4	COMP 300 or above
SPEC Design	4	COMP design course (COMP 410/413/460)
SPEC	4	COMP cap course elective
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SPEC	3–4	COMP cap course elective

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•• When registering for PHYS 102, you must also register for PHYS 104, the discussion section for 102.