

## Degree Requirements Worksheet for the Degree of

# BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Name: \_\_\_\_\_

Expected Graduation Date: \_\_\_\_\_

Honors? \_\_\_\_\_

### Pre-Major Declaration Requirements

A grade of C or better is required in *each* of these courses before the CS major can be declared. (Courses in which the student has received *By Examination (BE)* credit or have transferred from another university are exempt from this rule.)

Course	Course Title <sub>prerequisites</sub>	Semester Offered	Semester	Grade
PHYS 26/116	Mechanics			
PHYS 27/117	Electromagnetics and Optics			
MATH 31/231	Calculus of Functions of one Variable I			
MATH 32/232	Calculus of Functions of one Variable II			
MATH 33/233	Calculus of Functions of Several Variables			
MATH 81/381 OR 41/215	Discrete Mathematics <sub>MATH 32/232 (for MATH 81/381 only)</sub>			
COMP 114/401	Foundation of Programming <sub>COMP 14/110</sub>			
COMP 121/410	Data Structures <sub>COMP 114/401, MATH 81/381 (Co-requisite)</sub>			
COMP 120/411	Computer Organization <sub>COMP 114/401</sub>			

### Honors Requirements

- Accumulate a 3.2 GPA overall and in Mathematics, Physics, and Computer Science courses (3.6 for consideration for Highest Honors).
- Enroll in section of COMP 90/393 Independent Study with a faculty member and complete an Honors Project. See the Director of Undergraduate Studies for details.

## Junior/Senior Requirements

	Course	Course Title	Prerequisites	Semester Offered	Semester	Grade
	MATH 147/547	Linear Algebra	MATH 32/232, 33/233			
	STAT 126/435	Introduction to Probability	MATH 33/233			
	COMP 122/550	Algorithms and Analysis	COMP 121/410, 120/411 & MATH 81/381			
<b>Theory Group</b>	MATH 166/566	Numerical Analysis	MATH 81/383 or 147/547	Fall		
At least one	COMP 181/455	Models of Languages & Computation	COMP 14/110 & MATH 81/381			
<b>Systems Group</b>	COMP 123/431	Internet Protocols and Services	COMP 121/410, 120/411	Spring		
At least one	COMP 142/530	Introduction to Operating Systems	COMP 121/410, 120/411	Fall		
	COMP 160/541	Digital Computer Design	COMP 121/410, 120/411	Spring		
	INLS 578	Protocols and Network Management	INLS 574	Spring		
<b>Programming Languages Group</b>	COMP 140/520	Compilers	COMP 121/410, 120/411	Fall-Even		
At least one	COMP 144/524	Programming Language Concepts	COMP 121/410	Spring		
	COMP 145/523	Software Engineering Laboratory	COMP 121/410, 120/411	Spring		
<b>Applications Group</b>	COMP 117/416	Introduction to WWW Programming	COMP 114/401	Fall		
At least one	COMP 118/426	Advanced WWW Programming	COMP 117/416	Spring		
	COMP 130/521	Files and Databases	COMP 121/410, 120/411 & MATH 81/381	Spring		
	COMP 136/575	Introduction to Graphics	COMP 121/410, 120/411 & MATH 147/547	Spring		
<b>Interdisciplinary Group</b>	MATH 1xx	Any MATH course numbered greater than 520				
At most one	OR xxx	One of Operations Research 415, 445, or 515.				
	LING 540	Appropriate courses from Linguistics				
	INLS xxx	One of Information Science 485, 509, or 512.				
	BMME 4xx	One of Biomedical Engineering 410, 430, or 440.				
	Other computing-related courses can be counted as an Interdisciplinary course with the (advance) approval of the Director of Undergraduate Studies.					

### Notes:

- A minimum of six courses from the Theory, Systems, Programming Languages, Applications, and Interdisciplinary groups are required, subject to the constraints listed in the left-most column. Note that students are not required to take a course from the Interdisciplinary Group. However if they do take an Interdisciplinary Group course, at most one such course may be counted towards the Distribution requirement.
- A GPA of 2.0 or better in MATH 147/547, STAT 126/435, COMP 122/550 and the six Distribution courses, with no individual grade lower than a C-, is required for graduation. (An overall GPA of 2.0 or better is also required for graduation.)
- COMP 92/392, 90/396, and 190/590 are electives and cannot normally be used to satisfy the Distribution Requirements.