Computer Science: Combined Bachelor of Science & Masters of Science (290BS)
Version for Students In Fall 2007 or Spring 2008
Revision of June 25, 2008

This degree program requires 150 SH and co-op division N
At least 32 SH must be Masters level courses in Computer Science

The College of Computer and Information Science reserves the right to modify the curriculum described in this document or the individual courses as necessary in the future.

Computer Science: Undergraduate Level Courses
44 or 45 SH: 10 @ 4 SH, 4 or 5 @ 1 SH
Required Computer Science Courses (32 or 33 SH)
CS U200 Discrete Structures & CS U201[0 SH]
CS U211 Fund of Computer Science 1 & CS U212 [1 SH]
CS U213 Fund of Computer Science 2 & CS U214 [1 SH]
CS U221 CS/IS Overview 1 [1 SH] CS U222 CS/IS Overview 2 [1 SH] or CS U223 CS/IS Co-op Preparation [1 SH]
CS U290 Logic and Computation
CS U370 Object-Oriented Design
CS U380 Computer Organization
CS U390 Theory of Computation
CS U670 Software Development
CS U600 Senior Seminar [1 SH]
CS Electives (8 SH)
CS Elective 1
CS Elective 2 (*Capstone*)
CS elective: CS U400 or higher, IS U535 or IS U570, or additional Masters Level CS electives
Note on Capstone: *One CS Elective must be a CS course that satisfies the university Capstone Requirement.*
Computer Science: Masters Level Courses
32 SH: 8 @ 4 SH
Required Masters Level CS Core Courses (12 SH)
CS G111 Principles of Programming Languages
CS G112 Computer Systems
CS G113 Algorithms
Masters Level CS Electives (20 SH)
MS Elective 1
MS Elective 2
MS Elective 3
MS Elective 4
MS Elective 5
The Masters Level CS electives may be chosen from either Masters courses or from those PhD level courses for which the student is qualified.
2 of the 5 Masters Level CS electives must be in one of the following concentrations: *Artificial Intelligence* *Database Management* *Graphics* *Information Security* *Networks* *Programming Languages* *Software Engineering* *Systems* *Theory*

English (8 SH: 2 @ 4 SH)
ENG U111 College Writing
ENG U302 Adv Writing in the Technical Professions
With permission, may substitute ENG U301 for ENG U302
Mathematics (16 SH: 4 @ 4 SH)
MTH U241 Calculus 1
MTH U242 Calculus 2
MTH U371 Linear Algebra
MTH U481 Probability and Statistics
Science (10 SH: 2 @ 4 SH and 2 @ 1 SH)
Science 1 & Science Lab 1 [1 SH]
Science 2 & Science Lab 2 [1 SH]
You must complete a pair from the same science.
See the next page for the list of permitted pairs
Electrical & Computer Engineering (4 SH: 1 @ 4 SH)
ECE U230 Computer Architecture for CS
General Requirements(4 SH: 1 @ 4 SH)
SOC U528 Computers & Society
General Electives (32 SH: 8 @ 4 SH)
Elective 1: Level 1 Arts/Humanities Core
Elective 2: Level 1 Social Sciences Core
Elective 3
Elective 4
Elective 5
Elective 6
Elective 7
Elective 8
The general electives must be consistent with the policy on general electives articulated by the College of Computer and Information Science on the college web site.
2 of the general electives must be used to satisfy: *Level 1 Arts/Humanities Core* *Level 1 Social Sciences Core*
Breadth-or-Depth Requirement: Among the 6 remaining general electives, either: *3 must fall into Arts, Humanities, or Social Sciences* *or* *3 must be in one discipline outside CS/IS and at least one of these electives must be at an intermediate level*
The Comparative Cultures Requirement must be satisfied. If this is done by taking a course then this must also be one of the general electives. A comparative cultures course may be counted as 1 of the 3 courses in Arts, Humanities, or Social Sciences in the breadth-or-depth requirement.

Science Details (10 SH: 2 @ 4 SH and 2 @ 1 SH)
Science 1 & Science Lab 1 [1 SH]
Science 2 & Science Lab 2 [1 SH]
You must complete a pair from the same science.
The following is a list of permitted pairs with labs.
For Biology, take:
BIO U111 General Biology 1 & U112
Then choose one from:
BIO U113 General Biology 2 & U114
BIO U301 Genetics & Molecular Biology & U302
For Chemistry, take:
CHM U211 General Chemistry 1 & U212 & U213
CHM U214 General Chemistry 2 & U215 & U216
For Earth & Environmental Sciences, take one or both of the following:
ENV U200 Dynamic Earth & U201
ENV U220 History of Earth & Life & U221
If you choose only U200/U201, then choose one from:
ENV U310 Earth Materials & U311
ENV U340 Earth Landforms & Processes & U341
ENV U520 Applied Hydrogeology & U521
ENV U544 Sedimentation & U545
ENV U546 Coastal Processes & U547
ENV U560 Geographic Information Systems & U561
If you choose only U220/U221, then choose:
ENV U542 Fossils and Paleontology & U543
For Physics, take one of the paired sequences:
A: PHY U161 Physics 1 & U162
A: PHY U165 Physics 2 & U166
B: PHY U145 Physics for Life Sciences 1 & U146
B: PHY U147 Physics for Life Sciences 2 & U148
C: PHY U151 Physics for Engineering 1 & U152 & U153
C: PHY U155 Physics for Engineering 2 & U156 & U157