BS COMPUTER SCIENCE

MAJOR COURSES

1. CSC 101 Fundamentals of Computer Science I ........ 4
2. CSC 102 Fundamentals of Computer Science II ....... 4
   or CSC 108 Accelerated Intro Computer Science .... 4
3. CSC 103 Fundamentals of Computer Science III .... 4
4. CSC 141 Discrete Structures I .......................... 4
5. CSC 225 Intro to Computer Organization (4) ....... 4
   Technical electives. ........................................ 4
6. CSC 307 Intro to Software Engineering (4) or
   2. CSC 308, 309 Software Engineering I, II (4)(4) 4/8
7. CSC 315 Computer Architecture .......................... 4
8. CSC 349 Design and Analysis of Algorithms ......... 4
9. CSC 357 Systems Programming ............................ 4
10. CSC 430 Programming Languages I .................... 4
11. CSC 431 Programming Languages II .................... 4
12. CSC 445 Theory of Computing .......................... 4
13. CSC 453 Introduction to Operating Systems .......... 4
14. CSC 491, 492 Senior Project Design Lab I, II ...... 2,3
15. Technical electives ....................................... 28/24

Select from lists in technical electives guidelines,
below.

SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2)* 2, 2
ENGL 149 Technical Writing for Engineers (A3)* 4
MATH 141, 142 Calculus I, II (B1)* 4, 4
STAT 321 Prob/Stats for Engrs/Scientist or STAT 312 Stat Methods for Engrs (B6)* 7(7/23/09) 4
4
4
Approved support electives ............................... 8

The courses selected may not be used to satisfy
other major, support, or General Education requirements
(no double counting of coursework) Select 8 units from the following:
ENGL 302, 310, 392;
PSY 252, 302;
RELS 370;
COMS 201, 301, 315

Mathematics/statistics electives. Select from ........ 8
CSC 142; MATH 143, 206, 241, 244, 248, 306, 335, 336, 437, 470; STAT 322-325.
Corrected effective Summer 2009.

Science elective (Add’l Area B)* Select from
BIO 111, 115, 161; BOT 121; CHEM 124;
MCRO 221, 224; PHYS 141 (no double
counting of units) ......................................... 4

Physical science electives (B3/4)* (Add’l Area B)* 12
CHEM 124, 125, 129 or
PHYS 141, 132, 133

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GENERAL EDUCATION (GE)
72 units required, 32 of which are specified in Support.
→ See page 50 for complete GE course listing.
→ Minimum of 8 units required at the 300 level.

Area A Communication (8 units)
A1 Expository Writing ........................................ 4
A2 Oral Communication ...................................... 4
A3 Reasoning, Argumentation, and Writing * 4
   units in Support ........................................... 0

Area B Science and Mathematics (no add’l units req’d)
B1 Mathematics/Statistics * 8 units in Support .... 0
B2 Life Science * 4 units in Support .................. 0
B3 Physical Science * 4 units in Support .......... 0
B4 One lab taken with a B3 course
B5 (requirement for Liberal Arts students only)
B6 Upper-division Area B * 4 units in Support ..... 0
Additional Area B units * 8 units in Support ....... 0

Area C Arts and Humanities (16 units)
C1 Literature .................................................. 4
C2 Philosophy ................................................ 4
C3 Fine/Performing Arts ................................. 4
C4 Upper-division elective ................................ 4

Area D/E Society and the Individual (16 units)
D1 The American Experience (40404) ................. 4
D2 Political Economy ........................................ 4
D3 Comparative Social Institutions .................... 4
D4 Self Development (CSU Area E) .................... 4

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FREE ELECTIVES ............................................ 0

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Technical Electives Guidelines

Courses used to satisfy any other major, support, or general
education requirement are not allowed to count toward
Technical Elective requirement. Credit/No Credit grading is
not allowed.

Contact the CSC Department for further information.

Category 1 ..................................................... 16
Category 1a: Prerequisites and Individual Courses
Select 8 units from the following:
CSC/CPE 305, 341/342, 365, 369, 448, 464, 471,
477, 480, 484, 488, 587

1 CPE 129/169 and CPE 229/269 may be substituted for CSC 225.
2 CSC 309 counts as technical elective.
3 CSC/CPE 123 replaces CSC 431 for freshmen and transfer students
   admitted Fall 2010. (4/29/10)
4 Consultation with advisor is recommended prior to selecting technical
electives or approved electives; bear in mind your selections may
impact pursuit of post-baccalaureate studies and/or goals.
Category 1b: Specialization Areas
Select 4 units from each of two separate areas:

Graphics: CSC/CPE 473, 474, 475, 476, 478, or CSC 572
Databases: CSC/CPE 366, 466, 468, or CSC 560
Networks: CSC/CPE 465 or 564
Distributed Computing: CSC/CPE 469 or 569
OS: CSC/CPE 454, 456, 458, 556, or CSC 550
Architecture: CSC/CPE 316, 416, 459, 520, or CPE 482 "Robotics"
Languages/Compilers: CSC/CPE 434 or CSC 530
Software Engineering: CSC/CPE 402, 405, 406, 409, 437; CSC 508, or 509
GUI/HCI: CSC/CPE 435, 483, 487, 581, or CSC 486
Artificial Intelligence: CSC/CPE 416, 481, 485, 489, 580, 581, or CPE 482 "Autonomous Mobile Robots or Multi-Robot Systems"
Computational Sciences/Theory: CSC/CPE 449, CSC 343, 540, or 541

Category 2
Select from Categories 2a, 2b, and/or 2c.
If CSC 308 and 309 are taken for the Major Core, only 8 units are required for Category 2.

Category 2a: Additional CSC/CPE Electives
Select any unused course from Categories 1a and 1b (maximum 12 units).

Category 2b: Auxiliary CSC/CPE Electives
Select from:
- CSC 358, 400 (requires form/approval), 479
  (maximum 2 units), 490

Category 2c: External Electives
Select from:
- AERO 450;
- ART 384;
- BUS 310, 320;
- CHEM 312, 316, 317, 318;
- ECON 339;
- EE 201/251, 314, 336, 424;
- ENVE 542;
- GRC 316, 331, 338 ;
-IME 301, 314, 356;
-MATH 206, 241, 242, 244, 248, 304, 341, 350, 412;
-ME 211, 212, 405;
-PHIL 412, 422;
-PSY 329, 333, 351, 366, 457;
-STAT 323, 324, 330

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