

B.S. Computer Science (2008-2009) - Degree Requirements

Name _____

Student ID _____

Advisor _____

Email _____ Phone _____

CS Core

| | Cr | Gr | Sem |
|--|----|----|-----|
| CS 160 P: MA 153/159, CS 112 | 4 | | |
| CS 161 P: CS 160 C: MA 175 | 4 | | |
| CS 260 P: CS 161, MA 175 | 3 | | |
| CS 271 P: CS 161, MA 175 | 3 | | |
| CS 274 P: CS 260 | 3 | | |
| CS 321 P: CS 260 C: MA 351 | 3 | | |
| CS 350 P: CS 260, CS 271 | 3 | | |
| CS 364 P: CS 260 | 3 | | |
| CS 360 P: CS 260, ENG W234, OLS 252 | 3 | | |
| CS 460 P: CS 360, Senior Standing | 4 | | |
| CS 472 P: CS 260, CS 271 | 3 | | |
| CS 486 P: CS 260, MA 166 | 3 | | |
| CS Elective (1) | 3 | | |
| Sub Total | 42 | | |

Supporting Courses

| | Cr | Gr | Sem |
|---|----|----|-----|
| MA 165 P: MA 154/159 or placement | 4 | | |
| MA 166 P: MA 165, C or better | 4 | | |
| MA 175 C: CS 161 | 3 | | |
| ENG W131(2) P: ENG W130 or placement | 3 | | |
| ENG W234 P: ENG W131 | 3 | | |
| COM 114 | 3 | | |
| Subtotal | 20 | | |

Electives (CSA)

| | Cr | Gr | Sem |
|---|----|----|-----|
| Lab Science I (3) | 4 | | |
| Lab Science II (3) | 4 | | |
| Ind. Cult. & Soc. - Area III | 3 | | |
| Human Thought - Area IV | 3 | | |
| Art Expression - Area V | 3 | | |
| Approved Elective (4,5) | 3 | | |
| Approved Elective (4,5) | 3 | | |
| Approved Elective (4,5) | 1 | | |
| Subtotal | 24 | | |

CS Concentration

Software Development Concentration

| | | | |
|---------------------------------|--|--|--|
| CS 331 P: CS 260 | | | |
| CS 365 P: CS 364 | | | |
| CS 380 P: CS 260 | | | |
| CS 384 P: CS 160, MA 166 | | | |
| CS 474 P: CS 350 | | | |

Network & Visual Computing Concentration

| | | | |
|-------------------------|--|--|--|
| CS 368 P: CS 260 | | | |
| CS 372 P: CS 274 | | | |
| CS 374 P: CS 274 | | | |
| CS 421 P: CS 321 | | | |
| CS 445 P: CS 260 | | | |

Computing Foundations Concentration

| | | | |
|---|--|--|--|
| CS 384 P: CS 160, MA 166 | | | |
| CS 474 P: CS 350 | | | |
| CS 488 P: CS 350 | | | |
| CS 494 C: Junior/Senior Class Standing | | | |

Approved Concentration Substitutions

| | | | |
|---|--|--|--|
| CS 492 P: Consent of Instructor | | | |
| CS 494 C: Junior/Senior Class Standing | | | |
| CS 495 P: Permission of the Department | | | |

Sub Total 12

Math Concentration

| | Cr | Gr | Sem |
|-------------------------------------|----|----|-----|
| MA 351/511 P: MA 165, MA 166 | 3 | | |
| STAT 511 P: MA 165, MA 166 | 3 | | |
| Sub Total | 6 | | |

Electives

| | Cr | Gr | Sem |
|---|----|----|-----|
| Advanced Communication (7) | 3 | | |
| OLS 252 - Area III | 3 | | |
| Human Thought - Area IV | 3 | | |
| Inquiry & Analysis - Area VI (8) | 3 | | |
| Science (9) | 4 | | |
| Approved Elective | 3 | | |
| Approved Elective | 1 | | |
| Subtotal | 20 | | |

Total for Bachelor's Degree 124 Hrs

Other Degree Requirements: Only CS courses with a grade of C or better count. A maximum of 10 credits of D grades will be accepted in other courses for the Bachelor's degree program.

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Computer Science Degree 2008-2009 Continued

FOOTNOTES - PLEASE CHECK ALL PRE-REQS FOR CLASSES BELOW !

(1) Any CS 200+ course except CS 306

(2) ENG W130/R150/P131 and MA 109/113/153/154 do not count for credit towards the CS degree

(3) Approved Laboratory Science sequence must be as follows:

BIOL 108/109; BIOL 117/119

CHM 115/116

GEOL G103/G104/G211

PHYS 152/251*; PHYS 201/202; PHYS 218/219; PHYS 220/221; *PHYS 251 has Coreq of MA 261

(4) No credit toward graduation will be given for courses or sequences with overlapping content or for developmental courses (see the current IPFW Bulletin.)

(5) CS 106 will not count towards your Bachelor's degree

(6) The Bachelor of Science Degree in Computer Science defines two concentration areas as indicated below. Of the 12 Concentration Elective hours, 9 must be chosen from one of the concentration areas and 3 from the other concentration area. However, with prior written approval by the Department, 3 of the hours may be chosen from CS 492, CS 494, or CS 495.

Software Development Concentration

CS 331 C++ & Object-Oriented Programming

CS 365 Advanced Database Systems

CS 380 Artificial Intelligence

CS 384 Numerical Analysis

CS 474 Compiler Construction

Network & Visual Computing Concentration

CS 368 Human-Computer Interaction

CS 372 Web Application Development

CS 374 Computer Networks

CS 421 Advanced Computer Graphics

CS 445 Computer Security

Computing Foundations Concentration

CS 384 Numerical Analysis

CS 474 Compiler Construction

CS 488 Theory of Computation

CS 494 Directed Study (Research Project)

(7) Any COM or ENG Wxxx course with prerequisite of COM 114 or ENG W131

(8) Any Area VI course as listed in the Bulletin except CS 306

(9) BS graduates must have a total of **12 Credit Hours** of approved Laboratory Science Courses including the "Lab Science I & II Electives.

For this option, students may choose from the courses below and those listed at #3 above.

3 Credit Hour Classes

BIOL 250, BIOL 326

CHM 218, CHM 261

GEOL G210, GEOL G221

PHYS 302

4 Credit Hour Classes

BIOL 215, BIOL 350

CHM 224