# BS/MS Computer Science:Information Technology (60 CR)

**Program Code: ULASCSCIT** **Version Number : 2118 - Fall 2011** **Effective Date: August 29, 2011**

| **B. Major Program: 57 credits** | | |
|---|---|---|
| **1. Required Courses:** 33 credits | CR | GR |
| CSC 125: Discrete Math for CS I | | |
| CSC 130: IT Fundamentals | | |
| CSC 135: Comp Sci I | | |
| CSC 136: Comp Sci II | | |
| CSC 242: Web Programming | | |
| CSC 253: IT Systems | | |
| CSC 311: Computer Networks | | |
| CSC 341: Information Security | | |
| CSC 356: Introduction to Database Sys | | |
| CSC 354: Software Engineering | | |
| CSC 385: Seminar in CSC | | |
| **2. Elective Courses:** 24 credits | CR | GR |
| CSC 225: Discrete Math for CS II | | |
| CSC 235: Comp. Org & Assem. Lang | | |
| CSC 237: Data Structures | | |
| CSC 241: Adv Visual Basic | | |
| CSC 243: Java Programming | | |
| CSC 310: Proc Oriented Prog Lang | | |
| CSC 320: Intro to Game Programming | | |
| CSC 325: Intro to CS Theory | | |
| CSC 342: Web Technologies | | |
| CSC 343: Operating Systems | | |
| CSC 351: Digital Forensics | | |
| CSC 352: UNIX: Sys Prog/Adm | | |
| CSC 402: Data Structures II | | |
| CSC 411: Advanced Networking | | |
| CSC 421: Web-Based Soft Design & Dev | | |
| CSC 425: Compiler Design I | | |
| CSC 445: Intro to Intelligent Robotics | | |
| CSC 447: Artificial Intelligence I | | |
| CSC 456: Database Mgm Sys I | | |
| CSC 464: Human Computer Interaction | | |
| CSC 480: Special Topics | | |

| **C. Concomitant Courses: 3 credits** | | |
|---|---|---|
| **1. Required Courses:** 3 credits | CR | GR |
| MAT 105: College Algebra or above | | |
| MAT 140: Applied Stat Methods* | X | X |
| WRI 207: Writing for Workplace* | X | X |
| PHI 040: Intro to Ethics* | X | X |
| *accounted for in general education | | |
| | | |
| | | |
| **2. Internship – optional (free elective)** | CR | GR |
| CSC 280: Cooperative Internship I | 3-6 | |
| CSC 380: Cooperative Internship II | 3-6 | |
| | | |
| Recommendations | | |
| Consider taking a Minor in an Application Domain such as Math, Psychology, Sociology, Economics, Biology, or any Science. | | |
| Consider taking a second speech course in II E | | |
| | | |
| CSC-prefix courses below 125-level, CSC 280 and CSC 380 do not count toward the BS in Computer Science. | | |
| Before taking any 300-level course a student must have completed 18 credit hours in CSC courses numbered 125 or above with a GPA of 2.25 in the CSC courses. | | |

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| Internal Transfer: 2.25 GPA needed |
| Graduation requirement: 2.25 GPA Overall, 2.25 GPA Major |

# Five-Year Combined BS/MS in Computer Science Program

| | |
|---|---|
| 120 credits | BS in Computer Science:Information Technology – Five Year BS/MS Undergraduate Program |
| 30 credits | MS in Computer Science:Information Technology |
| –12 credits | Additional 12 credits of 400-level CSC courses counted toward the 120 credits for the BS above the 45 credit limit for the undergraduate degree counted for the MS |
| 138 credits | Total credits needed to receive both the BS and MS in Computer Science:Information Technology |

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|---|---|
| BS in Computer Science is awarded after the completion of 120 undergraduate credits; B-average or higher in CSC courses required for admission to Graduate School. | Program Code: ULASCSCIC |
| | Version Number: 2098 - Fall 2009 |
| | Effective Date: August 31, 2009 |
| **Undergraduate admission to the Combined BS/MS Program in Computer Science: Junior status (60 or more credits taken overall) and at least 24 computer science CSC course credits with 3.00 GPA or higher and a B or better in CSC 125, 130, 135, 253 each** | |

## Degree Requirements for the Master of Science in Computer Science:Information Technology track

1. Candidates for the MS degree in Computer Science must complete a total of 30 credits.
2. Students must select either the thesis option or the comprehensive exams option. The thesis option requires the completion of 24 credits of courses and 6 credits of thesis. The comprehensive exams option requires the completion of 30 credits of courses and passing the comprehensive exams. Comprehensive exams are given the first week in December, May, and August.
3. Students must complete at least 18 credits of 500-level courses.

### Masters in Computer Science:Information Technology (30 CR)

Comprehensive Examination Required for Those Not Writing a Thesis

| **Core Courses (18 – 24 credits)** | **Elective Courses (0 – 6 credits)** |
|---|---|
| CSC 411: Advanced Networking | CSC 402: Data Structures II |
| CSC 421: Web-Based Software Design | CSC 415: Design & Analysis of Algors I |
| CSC 456: Database I | CSC 425: Compiler Design I |
| CSC 464: Human Computer Interaction | CSC 445: Intro to Intelligent Robotics |
| CSC 505: Fundaments of Computer Systems | CSC 447: Artificial Intelligence I |
| CSC 510: Advanced Operating Systems | CSC 480: Special Topics |
| CSC 512: Network Architecture and Protocols | CSC 520: Advanced Object Oriented Prog. |
| CSC 521: Advanced Web-Based Soft. Devel. | CSC 526: Compiler Design II |
| CSC 541: Advanced Information Security | CSC 548: Artificial Intelligence II |
| CSC 552: Advanced UNIX Programming | CSC 555: Applied Cryptography |
| CSC 554: Project Management | CSC 580: Special Topics |
| CSC 557: Database II | |
| | |
| **Thesis (0 or 6 credits)** | |
| CSC 599: Thesis | |

STUDENT: _____ STUDENT ID NUMBER: _____

KUTZTOWN UNIVERSITY

# COLLEGE OF LIBERAL ARTS & SCIENCES • BS/MS • COMPUTER SCIENCE:INFORMATION TECHNOLOGY

**Program Code:** ULASCSCIT **Version Number:** 2118 - Fall 2011 **Effective Date:** August 29, 2011

## GENERAL EDUCATION

| I. UNIVERSITY CORE (12 credits) | RC | CR | GR |
|---|---|---|---|
| A. Oral Communication: COM 10 or above | | | |
| COURSE: | 3 | | |
| B. Written Communication: ENG 23, 24, or 25 | | | |
| COURSE: | 3 | | |
| C. Mathematics: MAT 17 or above | | | |
| COURSE: MAT 140 | 3 | | |
| D. Wellness: Any 3-credit HEA course | | | |
| COURSE: | 3 | | |

| II. UNIVERSITY DISTRIBUTION (15 credits) | RC | CR | GR | CAC |
|---|---|---|---|---|
| A. Natural Sciences: Any lab or non-lab course with prefix AST, BIO, CHM, ENV, GEL, MAR, NSE, or PHY; or certain GEG courses (see note at right) | | | | |
| COURSE: | 3 | | | |
| B. Social Sciences: Any course with prefix ANT, CRJ, ECO, HIS, INT, MCS, PSY, POL, SOC, SSE, or SWK; or certain GEG courses (see note at right) | | | | |
| COURSE: | 3 | | | |
| C. Humanities: Any course with prefix ENG, HUM, PAG, PHI, WRI, WGS, or Modern Language | | | | |
| COURSE: WRI 207 | 3 | | | |
| D. Arts: Any course with prefix ARC, ARH, ART, CDE, CDH, CFT, DAN, FAR, FAS, MUP, MUS, or THE | | | | |
| COURSE: | 3 | | | |
| E. Free Elective: Any course carrying university credit | | | | |
| COURSE: | 3 | | | |

| III. COMPETENCIES ACROSS THE CURRICULUM | RC | CR | GR | CAC |
|---|---|---|---|---|
| A. Writing Intensive (**WI**) (9 credits) | | | | |
| COURSE: | 3 | | | **WI** |
| COURSE: | 3 | | | **WI** |
| COURSE: | 3 | | | **WI** |
| B. Quantitative Literacy (**QL**) (3 credits) OR Computer-Intensive (**CP**) (3 credits) | | | | |
| COURSE: | 3 | | | |
| C. Visual Literacy (**VL**) (3 credits) OR Communication-Intensive (**CM**) (3 credits) | | | | |
| COURSE: | 3 | | | |
| D. Cultural Diversity (**CD**) (3 credits) | | | | |
| COURSE: | 3 | | | **CD** |
| E. Critical Thinking (**CT**) (3 credits) | | | | |
| COURSE: | 3 | | | **CT** |

A Competency Across the Curriculum (CAC) course is not a separate course, but rather an overlay that is "double counted" as fulfilling both the CAC requirement and another requirement in either General Education (except for the University Core), the major, or the minor.

**RC** = Minimum required number of credits
**CR** = Credits earned (fill in number of credits)
**GR** = Grade earned (fill in letter grade)
**CAC** = Competency Across the Curriculum (fill in designation)

**NOTE:** GEG courses with a lab and 40, 322, and 323 may be used in II.A. and GEG courses 40, 204, 274, 304, 322, 323, 324, 347, 380, and 394 may NOT be used in II.B.

| IV. COLLEGE DISTRIBUTION (33 credits) | RC | CR | GR | CAC |
|---|---|---|---|---|
| A. Natural Science, Mathematics, and Computer Science# (6 credits): Choose one course in each subcategory. | | | | |
| 1. Natural Science with Lab: AST, BIO, CHM, ENV, GEL, PHY, or MAR; or GEG (see note at right) | | | | |
| COURSE: | 3 | | | |
| 2. Elective: MAT, CSC, AST, BIO, CHM, ENV, GEL, PHY, or MAR; or GEG (see note at right) | | | | |
| COURSE: | 3 | | | |
| B. Social Science (9 credits): Choose one course in each subcategory. | | | | |
| 1. Elective: HIS, ANT, GEG (see note at right), or POL | | | | |
| COURSE: | 3 | | | |
| 2. Elective: PSY, SOC, CRJ, or SWK | | | | |
| COURSE: | 3 | | | |
| 3. Elective: ANT, HIS, ECO, GEG (see note at right), PSY, POL, SOC, CRJ, or SWK | | | | |
| COURSE: | 3 | | | |

| | RC | CR | GR | CAC |
|---|---|---|---|---|
| C. Humanities (9 credits): Choose one course in each subcategory. | | | | |
| 1. Elective: PAG*, ENG, WRI, or HUM | | | | |
| COURSE: | 3 | | | |
| 2. Elective: Modern Language (103 or above) or PHI | | | | |
| COURSE: PHI 40 CDCT | 3 | | | |
| 3. Elective: PAG*, ENG, WRI, HUM, Modern Language (103 or above), or PHI | | | | |
| COURSE: | 3 | | | |
| D. Free Electives (9 credits): Choose any university courses that count toward graduation. | | | | |
| COURSE: | 3 | | | |
| COURSE: | 3 | | | |
| COURSE: | 3 | | | |

**NOTE:** GEG courses with a lab and 40, 322, and 323 may be used in IV.A. and GEG courses 40, 204, 274, 304, 322, 323, 324, 347, 380, and 394 may NOT be used in IV.B.

# Students in the College of Liberal Arts and Sciences are required to take at least one course in Biological Science (BIO) and at least one course in Physical Science (AST, CHM, ENV, GEL, PHY, MAR, GEG with lab, or GEG 40, GEG 322, or GEG 323), and at least one of which must be a lab (each course may be counted in either sections II.A or IV.A).

* Excludes PAG 011 and PAG 012