



PROGRAM SHEET

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

(BSCS)

Catalog 2008-2010

ENROLLMENT SERVICES

| UNIVERSITY CORE CURRICULUM | | 44 SCH |
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| SSK 1211 | Strategic Learning for University Success (<i>Pre-requisite: Successful completion of at least three Language Center level I courses</i>) | 2 SCH |
| SSK 1212 | Research and Communication Skills (<i>Pre-requisite: Successful completion of SSK1211 and all Language Center level II courses</i>) | 2 SCH |
| SSK 1213 | Critical Thinking and Analysis (<i>Pre-requisite: SSK 1212 & ENG1301</i>) | 2 SCH |
| ARB 1310 / ARB 1320 | Arabic for Academic Purposes / Arabic for Communication Purposes (NOT FOR STUDENTS WITH MOROCCAN BACCALAUREAT) | 3 SCH |
| FRN 2310 / FRN 3310 | French for Academic Purposes II / Advanced French Writing and Speaking Skills | 3 SCH |
| CSC 1401 | Computer Programming | 4 SCH |
| COM 1301 | Communication Through Speaking (<i>Pre-requisite or Co-requisite: SSK 1213, ENG 1301</i>) | 3 SCH |
| ENG 1301 | English Composition I (<i>Pre-requisite: Pass all Language Center Modules</i>) | 3 SCH |
| ENG 2303 | Technical Writing (<i>Pre-requisites: Successful completion of all SSK courses, ENG 1301 and COM 1301</i>) | 3 SCH |
| HIS 1301/ HIS1302(Arb/Frn) or HIS 2301 or PSC2301 | History of the Arab World in English (<i>Pre-requisite: ENG 1301, SSK 1212</i>) or History of the Arab World in Arabic , equivalent to HIS 1301, (<i>Pre-requisite: SSK1213</i>) or Contemporary World History (<i>Pre-requisite: ENG 1301</i>) or Comparative Political Systems (<i>Pre-requisite: ENG 1301</i>) | 3 SCH |
| HUM 3302 / HUM 3303 LIT 2301 or LIT 2304 or LIT 2305 | Introduction to the Study of Islamic Civilization in English (<i>Pre-requisite: Junior Classification</i>) or Introduction to the Study of Islamic Civilization in Arabic , (<i>Pre-requisite: Junior Classification</i>) or Major Works of World Literature (equivalent to ARB 2305/LIT 2305) (<i>Pre-requisite: Sophomore Classification and ENG 1301</i>), or Introduction to Arabic Literature (equivalent to ARB 2304), or Introduction to World Literature in Arabic (equivalent to ARB 2305/LIT 2301) (<i>Pre-requisite: Sophomore Classification</i>) | 3 SCH |
| HUM 3305 or HUM 3306 or PHI 2301 or PHI 2302 | Science and Society (<i>Pre-requisite: Junior Classification</i>) or Comparative Religion (<i>Pre-requisite: Junior Classification</i>) or Philosophical Thought (<i>Pre-requisite: ENG 1301</i>), or Philosophical Thought (<i>Pre-requisite: ENG 1301</i>) or History of Ideas | 3 SCH |
| MTH 1303 | Differential and Integral Calculus (<i>Pre-requisites: Working knowledge of algebra, trigonometry and analytical geometry.</i>) | 3 SCH |
| CHE 1401, BIO1401/1402 | General Chemistry I, Principles of Biology or Environmental Biology | 4 SCH |
| GEO 1301 or PSY 1301 or SOC 1301 or SSC 1310 | Introduction to Sociology, Or Introduction to Anthropology, Or Introduction to Geography, Or Introduction to Psychology | 3 SCH |

| SCHOOL CORE | 36 SCH |
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| CSC 2302 | Data Structures (<i>Pre-requisites: CSC1401 & MTH 1304 (required for BCSC program & recommended for the programs)</i>) | 3 SCH |
| CSC 3324 | Software Engineering I (<i>Pre-requisites: CSC2302</i>) | 3 SCH |
| CSC 3326 | Database Systems (<i>Pre-requisites: CSC3324</i>) | 3 SCH |
| EGR 2302 | Engineering Economics (<i>Pre-requisites: MTH1303</i>) | 3 SCH |
| EGR 3331 | Digital Design (<i>Co-requisites: PHY1402</i>) | 3 SCH |
| EGR 4300 | Internship (May be combined with EGR 4402 for 7 SCH.) | 3 SCH |
| EGR 4402* | Capstone Design (<i>Pre-requisites: To be taken during the last regular semester of enrollment.</i>) | 4 SCH |
| MTH 2301 | Multivariable Calculus (<i>Pre-requisite: MTH1303</i>) | 3 SCH |
| MTH 3301 | Engineering Probability and Statistics (<i>Pre-requisite: MTH2301</i>) | 3 SCH |
| PHY 1401 | Physics I (<i>Pre-requisite: MTH1303</i>) | 4 SCH |
| PHY 1402 | Physics II (<i>Pre-requisite: PHY1401</i>) | 4 SCH |

* May be combined with internship 7 SCH

| COMPUTER SCIENCE MAJOR | 30 SCH |
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| Required courses: | | 21 SCH |
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| MTH1304 | Discrete Mathematics for Engineers | 3 SCH |
| CSC 2303 | Advanced Programming/Object-Oriented Programming (<i>Pre-requisite: CSC 2302</i>) | 3 SCH |
| CSC 2304 | Computer Architecture (<i>Pre-requisites: CSC 2302 and EGR 3331</i>) | 3 SCH |
| CSC 3315 | Languages and Compilers (<i>Pre-requisite: CSC 2303</i>) | 3 SCH |
| CSC 3323 | Analysis of Algorithms (<i>Pre-requisite: CSC 2303</i>) | 3 SCH |
| CSC 3351 | Operating Systems (<i>Pre-requisites: CSC 2303 and CSC 2304</i>) | 3 SCH |
| CSC 3352 | Computer Communications (<i>Pre-requisites: CSC 2303 and CSC 2304</i>) | 3 SCH |

In addition choose three from the following:**9 SCH**

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| CSC 3309 | Artificial Intelligence (<i>Pre-requisites: CSC 2303 and Junior Classification</i>) | 3 SCH |
| CSC 3325 | Software Engineering II (<i>Pre-requisite: CSC 3324</i>) | 3 SCH |
| CSC 3327 | Internet Technologies (<i>Pre-requisite : CSC 3326</i>) | 3 SCH |
| CSC 3328 | Embedded Systems (<i>Pre-requisite : CSC 3351</i>) | 3 SCH |
| CSC 3341 | Computer Graphics (<i>Pre-requisite : CSC 2302</i>) | 3 SCH |
| CSC 3353 | Computer Networks (<i>Pre-requisite: CSC 3352</i>) | 3 SCH |
| CSC 3354 | Distributed Systems (<i>Pre-requisites: CSC 3351 and CSC 3352</i>) | 3 SCH |
| CSC 3355 | Computer Security (<i>Pre-requisites: CSC 2303 and Senior Classification</i>) | 3 SCH |

MINORS**15-19 SCH****GENERAL ENGINEERING****17-18 SCH****Required courses:****8 SCH**

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| CHE 1402 | General Chemistry II (<i>Pre-requisite : CHE 1401</i>) | 4 SCH |
| EGR 2402 | Electrical Circuits (<i>Pre-requisites :PHY 1402 & MTH 2304</i>) | 4 SCH |

In addition, select three courses of the following:**9-10 SCH**

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| EGR 3304 | Materials Science (<i>Pre-requisite :CHE 1402 and PHY 1402</i>) | 3 SCH |
| EGR 3306 | Engineering Instrumentation (<i>Pre-requisite : EGR 2402</i>) | 3 SCH |
| EGR 3308 | Thermal Engineering (<i>Pre-requisite : PHY 1402</i>) | 3 SCH |
| EGR 3402 | Statics and Dynamics (<i>Pre-requisite : MTH 2301 and PHY 1401</i>) | 4 SCH |

BUSINESS ADMINISTRATION**15 SCH****Required Courses :****9 SCH**

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| ACC 2301 | Accounting Principles I I (<i>Pre-requisite: MTH 1303, or MTH 1304</i>) | 3 SCH |
| FIN 3301 | Business and Corporate Finance (<i>Pre-requisite : ACC 2301 and EGR 2302</i>) | 3 SCH |
| MGT 3301 | Principles of Management (<i>Pre-requisite : ACC 2301 and EGR 2302</i>) | 3 SCH |

In addition, students must choose two out of the following courses:**6 SCH**

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| ACC 2302 | Accounting Principles II(<i>Pre-requisite: ACC 2301</i>) | 3 SCH |
| MGT 3303 | Operations Management (<i>Pre-requisites: MGT 3301 and either GBU 3401 or MTH 3301</i>) | 3 SCH |
| GBU4308 | Net-Economics and E-Business (<i>Pre-requisite: Senior standing</i>) | 3 SCH |
| GBU 3401 | Advanced Quantitative Methods in Business(<i>Pre-requisites : junior Standing and GBU 3301; or MTH 3301</i>) | 3 SCH |
| MGT 3302 | Entrepreneurship (<i>Pre-requisites : MGT 3301 & MKT 3301 & FIN 3301</i>) | 3 SCH |
| Mkt 3301 | Principles of Marketing(<i>Pre-requisites : ACC 2301 and EGR 2302</i>) | 3 SCH |
| Mkt 4304 | Marketing Research(<i>Pre-requisites : MKT 3301 and one of the following: GBU 3401, SSC 2401, MTH3301</i>) | 3 SCH |
| MIS 3302 | Managing the Information Resource(<i>Pre-requisites : MGT 3301 and MIS 3301 or Special Permission</i>) | 3 SCH |
| MKT4305 | Marketing Management (<i>Pre-requisites : MGT 3301 & MKT 3302 or MKT 3303</i>) | 3 SCH |
| MGT 4311 | E-Marketing (<i>Pre-requisite : senior standing</i>) | 3 SCH |

HUMAN RESOURCE DEVELOPMENT**18 SCH****Required courses:****9 SCH**

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| HRD 2300 | Introduction to Human Resources Development | 3 SCH |
| HRD 2301 OR HRD 3302 * | Business Environment and Ethics for HRD or Ethics in Professional Contexts (<i>Pre-requisite: Junior Classification</i>) | 3 SCH |
| HRD 3301 | Human Capital Management | 3 SCH |

In addition students must complete any three courses from the list below**9 SCH**

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| HRD 3303 | Training & Development (<i>Pre-requisite: HRD2300</i>) | 3 SCH |
| HRD 3304 | Strategic HRD (<i>Pre-requisites: HRD 2300 and 3301</i>) | 3 SCH |
| HRD 3305 | Issues in the Human and Social Development (<i>Pre-requisites: HRD 2300</i>) | 3 SCH |
| HRD 3399 | Special Topics in HRD (<i>Pre-requisite: Junior Classification</i>) | 3 SCH |

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| HRD 4301 | Program and Project Management (<i>Pre-requisite: HRD 2300</i>) | 3 SCH |
| HRD 4302 | Needs Assessment and Org Effectiveness (<i>Pre-requisites: HRD 2300 and 3301</i>) | 3 SCH |
| HRD 4303 | Leadership and Management Development (<i>Pre-requisites: PSY 3302 or MGT4304</i>) | 3 SCH |
| HRD 4304 | Consulting for HRD(<i>Pre-requisites: HRD 2300 and HRD 3302 or permission of the instructor</i>) | 3 SCH |
| HRD 4305 | Human Resources Development in Public Administration(<i> Pre-requisites: HRD 2300 and HRD 3301</i>) | 3 SCH |
| HRD 4306 | Organizational Development and Change(<i> Pre-requisites: HRD 2300 and HRD 3301</i>) | 3 SCH |

COMMUNICATION STUDIES

Students selecting the Minor in Communication Studies must complete 18 - 19 SCH from the following courses.

Required courses: **12 SCH**

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| COM 1302 | Introduction to Mass Communication (<i>Pre-requisites: SSK 1213& ENG 1301</i>) | 3 SCH |
| COM 2301 | Professional Communication(<i>Pre-requisite: COM 1301</i>) | 3 SCH |
| COM 2303 | International Communication (<i>Pre-requisite: COM 1302 or special permission</i>) | 3 SCH |
| COM 3326 | Visual Communication (<i>Pre-requisite: COM 2301</i>) | 3 SCH |

In addition, students must complete any two or three of the following courses: **6 -7 SCH**

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| COM 2304 | Introduction to Video and Film Production(<i> Pre-requisite: SSK 1213</i>) | 3 SCH |
| COM 3301 | Public Relations Communication (<i>Pre-requisites : COM1302 & pre or co-requisite COM 2326</i>) | 3 SCH |
| COM 3310 | Promotional Communication(<i> Pre-requisite: COM1302 & pre or co-requisite COM 2326</i>) | 3 SCH |
| COM 2320 | Communication Theories (<i>Pre-requisite COM 1302</i>) | 3 SCH |
| COM 3321 | Mass Media and Society (<i>Pre-requisites: COM 1302 and SOC 1301 or SSC 1310</i>) | 3 SCH |
| COM 3322 | Writing for the Media in English (<i>Pre-requisite: Junior classification, ENG 1302, COM 1302</i>) | 3 SCH |
| COM 3323 | Writing for the Media in French (<i>Pre-requisites: Junior classification, COM 1302, FRN 3310</i>) | 3 SCH |
| COM 3324 | Writing for the Media in Arabic (<i>Pre-requisites: Junior classification, COM 1302, ARB 1320</i>) | 3 SCH |
| COM 3425 | Technical Communication (<i>Pre-requisites: COM 2301 and COM 3326</i>) | 4 SCH |
| COM 3327 | Persuasion (<i>Pre-requisite: Junior classification</i>) | 3 SCH |
| COM 3328 | Mass Media Text Analysis (<i>Pre-requisites: COM 3320</i>) | 3 SCH |
| COM 3329 | Screen Studies (<i>Pre-requisites: Junior classification & COM 1302</i>) | 3 SCH |
| COM 3330 | Organizational Communication (<i>Pre-requisites: Junior classification & COM 2301</i>) | 3 SCH |
| COM 3399 | Special Topics in Communication (<i>Pre-requisites: Junior classification</i>) | 3 SCH |
| COM 4302 | Advanced Video and Film Production (<i>Pre-requisites: Junior classification & COM 2304</i>) | 3 SCH |
| COM 4304 | Media and Development (<i>Pre-requisites: Senior Classification</i>) | 3 SCH |

INTERNATIONAL STUDIES **18 SCH**

1- Required courses: **6 SCH**

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| INS 3301 | Theories & Models of International Relations (<i>Pre-requisite : PSC 2301</i>) | 3 SCH |
| PSC 2301* | Comparative Political Systems (<i>Pre-requisite: ENG 1301</i>) | 3 SCH |

In addition students may choose three courses from the following: **9 SCH**

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| GEO 1301 | Introduction to Geography | 3 SCH |
| ECO 2310 ** | Introduction to International Economics | 3 SCH |
| HIS 3301 | Twentieth Century International History (<i>Pre-requisite : HIS 1301 or HIS 2301</i>) | 3 SCH |
| INS 3302 | International Law & Organizations (<i>Pre-requisite : INS 3301</i>) | 3 SCH |

****NOTE:** ECO 2310 is only open to students who are not taking ECO 2301 and ECO 2302 in fulfillment of some other degree requirement

2- **3 SCH**

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| One optional course from within the International Studies field or area concentrations | 3 SCH |
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***NOTE:** Students minoring in International Studies must take PSC 2301 as part of the minor. They may take HIS 1301, HIS 1302, or HIS 2301 to fulfill the UCC requirement.

BSCSC students may receive a second minor, in mathematics, by completing a total of 5 courses selected from the list: MTH 1304, 1303, 2301, 2303, 2304, 3301.

ELECTIVES **9 SCH**

Three electives will be chosen from university undergraduate courses in collaboration with, and with approval of, the academic advisor and academic coordinator. The following courses are not acceptable as BSCSC electives: CHE1400, CSC1400, MTH1388, GBU 3301, MTH1301, and PHY1400. Graduate courses in the major may be taken as electives after special permission from the Dean.

TOTAL **138-139 SCH**

NB/ The combined BS/MS program allows qualified CSC students to pass directly from the BS to the MS in Computer Science/ Computer Networks/ Software Engineering (for more details refer to the catalog).