Major Check-Off Form: Computer Science - BS Requirements

Students who have declared their major 09/01/02 or later

Name (Please Print): _____ Student Number: _____

Expected Graduation Date: _____ _____
Month **Year**

- C average (2.0) required in courses fulfilling the CS majors and certificate.
- At least four 300, 400 or 600 level Computer Science or Mathematics courses must be taken at UMass/Boston.
- No requirement for the CS major (BA or BS or Certificate) may be taken P/F.

Required Computer Science Courses:

**Students who declared the major prior to 1/27/03 may replace CS/IT285L/485 with another computer science elective from the list below

☐	CS110 Introduction to Computing (4cr.) **-OR-**	☐	CS/IT115L Introduction to Java – Part 2 (3cr.)
☐	CS210L Intermediate Comp Data Structure (4cr.)	☐	CS240 Programming in C (3cr.)
☐	CS241/341 Computer Architecture & Organization (3cr.)	☐	**CS/IT285L/485 Social Issues in Computer Science (3cr.)
☐	CS310 Advance Data Structures & Algorithm (3cr.)	☐	CS410 Introduction to Software Engineering (3cr.)
☐	CS420 Introduction to Theory of Computation (3cr.)	☐	CS444 Introduction to Operating System (3cr.)
☐	CS450 Structure of Higher Level Languages (3cr.)	☐	CS451 Compilers (3cr.)

Required Mathematics Courses:

☐	MATH140 Calculus I (4cr.)	☐	MATH141 Calculus II (4cr.)
☐	MATH260 Linear Algebra (3cr.)	☐	CS/MATH320L Applied Discrete Math (3cr.)
☐	MATH345 Probability & Statistics I (3cr.)		

Required Science Courses

☐	PHYSIC113 Physics I (4cr.)	**-Co-req.-**	☐	PHYSIC181(LAB) (2cr.)
☐	PHYSIC114 Physics II (4cr.)	**-Co-req.-**	☐	PHYSIC182 (LAB) (2cr.)
☐	One Science Elective			

Two Computer Science Electives:

☐	CS411 Competitive Programming (3cr.)	☐	CS430 Database Management Systems (3cr.)
☐	CS436 Database Application Development (3cr.)	☐	CS437 Database-Backed Web Sites Services (3cr.)
☐	CS438 Applied Machine Learning (3cr.)	☐	CS443 Mobile Applications (3cr.)
☐	CS446 Introduction to Internetworking (3cr.)	☐	CS447 Introduction to Multimedia Systems (3cr.)
☐	CS449 Introduction to Computer Security (3cr.)	☐	CS460 Graphics (3cr.)
☐	CS461 Computer Games Programming (3cr.)	☐	CS470 Introduction to Artificial Intelligence (3cr.)
☐	Other CS: _____	☐	Other CS: _____

Many graduate courses can be used as theoretical or applied electives.
CS478 – Independent Study Course (must complete form at the back)

DEPARTMENT USE: Date: _____	**(STAFF) Hold lifted by: Date:** _____
Advisor (Print name): _____	☐ **AC** ☐ **GG** ☐ **Other:** _____
Advisor Signature: _____	**Register:** ☐ **GG** ☐ **AC** **Date:** _____

Last edited October 14, 2015

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Students who have declared their major 09/01/02 or later

SCIENCE REQUIREMENT FOR THE BS PROGRAM (No science elective may be taken pass/fail)

All BS students must take PHYSIC113 and PHYSIC114

Anthropology: 105, 313, 317, 412, 413, 432

Biology, Chemistry and Physics: Any course that counts for a major in the department can be used as a science elective in Computer Science.

Earth and Geographic Sciences: The following courses may be used: 115, 120L, 225, 226, 260, 265, 295, 302, 312, 360, 370, 380, 381, 385, and 400 level

Engineering: Any course numbered 200 or higher can be used.

Environmental Studies: The following courses may be used: L111, L120, L226, L260.

Psychology: The following courses may be used: 409, 466, 469, 475.

Computer Science Course Pre/Co-Requisites

CS110	Appropriate scores on the Math Placement Test or MATH115 with a grade of B or better in the previous semester. Note: Students with grades lower than B in the pre-requisite course will be dropped from the class.
CS/IT114L	Appropriate scores on the Math Placement Test or MATH 115 with a grade of B or better in the previous semester. Note: Students with grades lower than B in the pre-requisite course will be dropped from the class.
CS/IT115L	CS/IT114L
CS210L	CS110 or CS/IT115L or permission of the department
CS240	CS110 or CS/IT115L and Co-requisite with CS210L
CS241/341	CS240
CS/IT285L	No pre/co-requisites required
CS310	CS210 and CS240 and MATH140
CS320L	CS110 or CS115L and MATH260 or permission of instructor
CS410	CS310, CS320L and any 400 level Computer Science course
CS411	CS310 and CS320L
CS420	CS320L
CS430	CS240 and CS310 or permission of the instructor
CS436	CS310 and CS430
CS437	CS310 and CS430 or permission of the instructor
CS438	CS310
CS443	CS310
CS444	CS310 and CS341
CS446	CS310 and CS341 and Co-requisite with CS444
CS447	CS310 and CS341
CS449	CS310 and CS341
CS450	CS310 and CS320L
CS451	CS310 and CS420 or CS622
CS460	MATH260 and CS310
CS461	CS310
CS470	CS310 and CS320L
MATH140	MATH130 with a grade B or better in the previous semester or the appropriate scores on the ALEKS System
MATH141	MATH140 with grade of C- or better or MATH145 with grade of C- or better
MATH260	MATH140 or permission of instructor
MATH345	MATH141
PHYSIC113	Co-Requisite with MATH140 and, for PHYSICS majors PHYSIC181
PHYSIC181	Co-Requisite withPHYSIC107 or PHYSIC113
PHYSIC114	PHYSIC113 or permission of instructor and Co-Requisite with MATH141 and, for PHYSICS majors PHYSIC182
PHYSIC182	Co-Requisite with PHYSIC108 or PHYSIC114

CS478 – Independent Study

To register for CS478, fill out the form below and have the instructor sign below. Bring this form to Gemma Galecia (S-3-132) for course enrollment

Supervisor: _____

Select the semester and fill in the year you will be taking the course: How many credits?

Semester: ☐ Spring ☐ Summer ☐ Fall Year: _____ ☐ 1 ☐ 2 ☐ 3

Do you intend to use this Independent Study as an elective for the major? ☐ Yes ☐ No

Topic for the course: _____

_____

Brief description of required activity:

_____

_____