

Department of Computer & Information Science - College of Engineering - UMass Dartmouth
Requirements for Bachelor of Science in Computer Science with a Concentration in Artificial Intelligence* (updated: 2/17/2021 jm)

Student Name: _____
 Student ID: _____

Date: _____
 Advisor: _____

CIS Core Courses (Grade of "C" or better) - 44 Credits	
_____	CIS 180 - Object-Oriented Programming I (4)
_____	CIS 181 - Object-Oriented Programming II (4) (Pre: CIS 180)
_____	CIS 190 - Introduction to Procedural Programming (4) (Pre: CIS 180)
_____	CIS 272 - Introduction to Computing Systems (4) (Co: CIS 190, MTH 181)
_____	CIS 273 - Computer Organization and Design (3) (Pre: CIS 272)
_____	CIS 280 - Software Specification and Design (4) (Pre: CIS 181)
_____	CIS 360 - Algorithms and Data Structures (4) (Pre: CIS 181, CIS 190, MTH 181)
_____	CIS 361 - Models of Computation (3) (Pre: CIS 181, MTH 182)
_____	CIS 370 - Design of Operating Systems (4) (Pre: CIS 272)
_____	CIS 481 - Parallel and Distributed Software Systems (3) (Pre: CIS 280, CIS 370)
_____	CIS 498 - Software Engineering Project I (4) (Pre: CIS 280, CIS 362)
_____	CIS 499 - Software Engineering Project II (3) (Pre: CIS 498) - USC 5A + 5B

Mathematics Requirements - 17 Credits	
_____	MTH 153 (or MTH 151) - Calculus I (4) - USC 1D
_____	MTH 154 (or MTH 152) - Calculus II (4) (Pre: MTH 153 or 151)
_____	MTH 181 - Discrete Structures I (3)
_____	MTH 182 - Discrete Structures II (3) (Pre: MTH 181)
_____	MTH 331 - Probability (3) (Pre: MTH 154 or 152)

Science/Quantitative Requirements - Minimum 14 Credits	
_____	PHY 113 - BIO 121/131 - CHM 151/161 (4) (Circle one)
_____	PHY 114 - BIO 122/132 - CHM 152/162 (4) (Must be continuation of above)
_____	_____ Science Elective (Must satisfy USC 2A if CHM Track) (3)
_____	CIS 362 - Empirical Methods for Computer Science (3) (Pre: CIS 280)

CIS Elective, 4 courses required, (Grade of "C" or better) - Minimum 12 Credits	
_____	Required Course
_____	CIS 412 – Artificial Intelligence (3) (Pre: CIS 360)
_____	Choose Two Electives
_____	CIS 430 - Data Mining and Knowledge Discovery (3) (Pre: CIS 360)
_____	CIS 465 - Topics in Computer Vision (3) (Pre: CIS 360)
_____	CIS 466 - Mobile Robotics (3) (Pre: CIS 360)
_____	CIS 490 - Machine Learning (3) (Pre: CIS 360)
_____	One Additional Course
_____	Any CIS 400 level course not currently being used to meet another requirement _____ (3)

English Requirements/Foundations for Engagement - 9 Credits	
_____	ENL 101 - Critical Writing and Reading I (3) - USC 1A
_____	ENL 102 - Critical Writing and Reading II (3) (Pre: ENL 101) - USC 1B
_____	ENL 266 - Technical Communications (3) (Pre: ENL 102) - USC 1C

Ethics and Social Responsibility/Science in the Engaged Community - 3 Credits	
_____	CIS 381 - Social and Ethical Aspects of Computing (3) - USC 2B

University Studies** - 18 Credits	
_____	EGR 111 (3) - USC 1E (Transfer student: CIS 200 level or above, or equivalent _____)
_____	_____ Literature (3) - Choose from USC 3A
_____	_____ Visual and Performing Arts (3) - Choose from USC 3B
_____	_____ Human Questions and Contexts (3) - Choose from USC 4A
_____	_____ Nature of US Society (3) - Choose from USC 4B
_____	_____ Nature of the Global Society (3) - Choose from USC 4C

Free Elective – 3 credits	
_____	_____ (3)

Comment Box	
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*A minimum 2.00 GPA in the major, a minimum 2.00 cumulative GPA, and a minimum 120 earned credits to graduate.
 **USC -University Studies Cluster; A preapproved list can be found at: <http://www.umassd.edu/universitystudies/approvedcourses/>
 Note: Any CIS core course or technical elective that is a prerequisite to another CIS course, must be passed with a grade of C or better in order to satisfy the prerequisite.