UMBC UGC New Course Request: <u>CMSC396 – Undergraduate Teaching Assistantship</u>

Date Submitted: 11/1/2019   Proposed Effective Date: 1/1/2020

	Name	Email	Phone	Dept
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COURSE INFORMATION:

Course Number(s)	CMSC396
Formal Title	Undergraduate Teaching Assistantship
Transcript Title (≤30c)	Undergrad Teaching Assistant
Recommended Course Preparation	
Prerequisite **NOTE:** Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	MATH 150 and CMSC 201 with a 3.0 GPA or higher and a "B" or better in the course for which the student will be a teaching assistant.
# of Credits Must adhere to the <u>UMBC Credit Hour Policy</u>	1-3 (one credit per approximately three hours of work per week during the semester)
Repeatable for additional credit?	☒ Yes ☐ No
Max. Total Credits	8 This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.
Grading Method(s)	☐ Reg (A-F) ☐ Audit ☒ Pass-Fail

PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences.):

This service-learning course is designed for undergraduate teaching assistants in computer science courses. Activities can include assisting with in-class learning exercises, leading lab sessions, development and grading of class content and assignments, learning new pedagogical developments in computer science, holding office hours, and conducting review sessions. This course cannot count towards requirements of the major or minor programs of the Computer Science/Electrical Engineering Department. Successful completion of the course for which they will be a teaching assistant and permission of the instructor are required. A maximum of eight credits of CMSC 396 is allowed.

RATIONALE FOR NEW COURSE:

a) Why is there a need for this course at this time?
   Almost all other departments at UMBC have a similar course that grants credits to their undergraduate teaching assistants (UTA). We have many UTAs who would benefit from this course.
b) How often is the course likely to be taught?
   We will offer it every semester there is demand for it. Most likely, this will be Fall, Spring, and Summer.
c) How does this course fit into your department's curriculum?
   It will not count towards any major or minor programs in the Computer Science/Electrical Engineering department. It will be used primarily for two purposes: 1. To indicate departmental service on the student's transcripts and 2. To provide additional upper-level credits to meet GEP requirements.
d) What primary student population will the course serve?
   This course will primarily serve Sophomores, Juniors, and Seniors in the CMSC department.

e) Why is the course offered at the level (ie. 100, 200, 300, or 400 level) chosen?
The material builds on concepts from prior courses. Additionally, students are expected to provide thoughtful explanation to students in a variety of ways. The UTA will be expected to grade, evaluate, and constructively criticize students in the course being assisted.

f) Explain the appropriateness of the recommended course preparation(s) and prerequisite(s).
This course requires different skills depending on the UTA experience. The prerequisite will be a minimum of a 3.0 GPA or higher and the student must have completed the course that they will be a UTA for.

g) Explain the reasoning behind the P/F or regular grading method
Students can take this course for a Pass/Fail only.

h) Provide a justification for the repeatability of the course.
Students often work as UTAs for multiple semesters, therefore, they should be able to earn multiple credits for this effort.

ATTACH COURSE SYLLABUS (mandatory):

CMSC 396: Undergraduate Teaching Assistantship

Prerequisites:

MATH 150 and CMSC 201 with a 3.0 GPA or higher and a "B" or better in the course for which the student will be a teaching assistant.

Instructor:

TBD

Course Description:

This service-learning course is designed for undergraduate teaching assistants in computer science courses. Activities can include assisting with in-class learning exercises, leading lab sessions, development and grading of class content and assignments, learning new pedagogical developments in computer science, holding office hours, and conducting review sessions. This course cannot count towards requirements of the major or minor programs of the Computer Science/Electrical Engineering Department. Successful completion of the course for which they will be a teaching assistant and permission of the instructor are required. A maximum of eight credits of CMSC 396 is allowed.

Credits:

One credit: approximately 30 hours over the semester assisting students and instructors (~3 hours week)
Two credits: approximately 60 hours over the semester assisting students and instructors (~6 hours per week)
Three credits: approximately 120 hours over the semester assisting students and instructors (~9 hours per week)

Learning Outcomes:

At the end of the undergraduate teaching assistantship, the student will:
- Illustrate enhanced understanding of the course material through evaluation, tutoring, and grading of course-based submissions.
- Demonstrate knowledge of the basic theories and general practices for effectively assisting within the classroom or lab environment.
- Identify diverse communities and individuals and critically reflect upon the importance of respect for diversity.
- Compare the roles and responsibilities of an education and a student by examining ethical standards (specifically academic integrity) within the field of computer science and education.

Readings:

Porter, L., Lee, C., Simon, B., & Guzdial, M. (2017). Preparing Tomorrow's Faculty to Address Challenges in Teaching Computer Science. Communications of the ACM, 60(5), 25–27. https://doi-org.proxy-bc.researchport.umd.edu/10.1145/3068791

Sentance, S. and Csizmadia, A. (2017). Computing in the curriculum: Challenges and Strategies from a Teacher's Perspective. Education and Information Technologies 22(2), p. 469-495.

Lewis, M., Blank, D., Bruce, K. and Osera, P-M. (2016). Uncommon Teaching Languages. In Proceedings of the 47th ACM Technical Symposium on Computing Science Education (SIGCSE '16). ACM, New York, NY, USA, 492-493.

Battistella, P., & von Wangenheim, C. G. (2016). Games for Teaching Computing in Higher Education–A Systematic Review. IEEE Technology and Engineering Education, 9(1), 8-30.

Course Topics:

Undergraduate Teaching Assistants may participate by:
- Providing input to course materials including generating problem sets, projects, homework assignments, labs, or other assignments as needed.
- Examining research related to developments in computer science and education.
- Assessing student needs and providing feedback to students in the form of grading, office hours, tutoring, or written (or electronic) responses to student questions.
- Participating in weekly discussions with faculty and other UTAs (and graduate teaching assistants as necessary).
- Leading review sessions for exams or quizzes.
- Proctoring or administering exams, make-up exams, or other assignments.
- Monitoring student submissions keeping academic integrity in-mind.
- Providing meaningful, thoughtful, unbiased, and constructive feedback to everyone.
- Acting in a professional manner.

Academic Integrity:

Academic integrity is an important value at UMBC. By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal.

More information can be found at:
https://academicconduct.umbc.edu/

Student Disability Services:

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADAAA of 2009, and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow students to have equal access and inclusion in all courses, programs, and activities at the University.

If you have a documented disability and need to request academic accommodations for access to your courses, please refer to the SDS website at sds.umbc.edu for registration information and to begin the process, or alternatively you may visit the SDS office in the Math/Psychology Building, Room 212. For questions or concerns, you may contact us through email at disAbility@umbc.edu or phone (410) 455-2459.

If you require accommodations for this class, make an appointment to meet with your instructor to discuss your SDS-approved accommodations.

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October 28, 2019

Dear UGC,

Below is a summary of the 7 changes that the Department of Computer Science and Electrical Engineering (CSEE) is proposing regarding the Computer Science program (CMSC).

Our goal is to have all of these go into effect in January 2020.

Thank you,

Jeremy Dixon
Undergraduate Program Director – Computer Science
CSEE
UMBC

Num	Name of Change	Change Type	Course Number	Description of Change	Related Files
1	New Study Track - AI/ML	Program Change	XXX	New Study Track	Program_Change_AI-ML.docx Program_Change_CMSC AI Track Details.docx
2	Change to CMSC Tracks	Program Change	XXX	Change requirements for CMSC students who complete multiple tracks.	Program_Change_CMSC_Tracks.docx
3	Change to CMSC Natural Science Requirement	Program Change	XXX	Change natural science requirements for CMSC majors. Going from 12 credits (sequence of BIO1/BIO2 or CHEM1/CHEM2 or PHYS1/PHYS2 + 4 additional credits) to 10-12 credits (sequence of BIO1/BIO2 or CHEM1/CHEM2 or PHYS1/PHYS2 + one lab science to include SCI100 or CHEM102L or PHYS122L or GES286) Additionally, students who transfer from a school with a lab science will have met this lab requirement.	Program_Change_CMSC_Natural_Science_Change.doc x
4	Malware Analysis	New Course	CMSC 491 to CMSC 449	New Course - converting CMSC 491 to CMSC 449	NewCourse_CMSC449_-_Malware_Analysis.docx NewCourse_CMSC449_-_Malware_Analysis_Syllabus.pdf
5	Introduction to Data Science	New Course	CMSC 491 to CMSC 462	New Course - converting CMSC 491 to CMSC 462	NewCourse_CMSC462_-_Intro_to_Data_Science.doc NewCourse_CMSC462_-_Intro_to_Data_Science_Syllabus.doc
6	Undergraduate Teaching Assistantship	New Course	CMSC 496	New Course	NewCourse_CMSC396_-_Undergraduate_Teaching_Assistantship.docx NewCourse_CMSC396_-_Undergraduate_Teaching_Assistantship_Syllabus.docx
7	Design and Analysis of Algorithms	Course Change	CMSC 441	Modify prerequisites and at least one of the following: (STAT 355, CMPE 320, or STAT 451) all with a grade of C or better.	Course_Change_CMSC441_Prerequisites.docx