

## UMBC UGC New Course Request: CMSC396 – Undergraduate Teaching Fellowship

Date Submitted: 2/14/2020

Proposed Effective Date: 8/23/2020

	Name	Email	Phone	Dept
Dept Chair or UPD	Jeremy Dixon	jdixon@umbc.edu	5-8866	CSEE
Other Contact	Mohamed Younis	younis@umbc.edu	5-3969	CSEE

### COURSE INFORMATION:

Course Number(s)	CMSC396
Formal Title	Undergraduate Teaching Fellowship
Transcript Title (≤30c)	Undergrad Teaching Fellowship
Recommended Course Preparation	
Prerequisite <small>NOTE: Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.</small>	MATH 150 and CMSC 201 with an overall 3.0 GPA or higher
# of Credits <u>Must adhere to the UMBC Credit Hour Policy</u>	1-3 (one credit per approximately three hours of work per week during the semester)
Repeatable for additional credit?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Max. Total Credits	9 <small>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.</small>
Grading Method(s)	<input type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input checked="" type="checkbox"/> Pass-Fail

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

This service-learning course is designed for undergraduate teaching fellows 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. Teaching fellows are expected to participate in a weekly meeting emphasizing professionalism, teaching diverse student populations, and teaching computer science. 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 fellow and permission of the instructor are required. A maximum of nine credits of CMSC 396 is allowed.

### RATIONALE FOR NEW COURSE:

- Why is there a need for this course at this time?  
Many other departments at UMBC have a similar course that grants credits to their undergraduate teaching assistants (UTA) such as BIOL 396, CHEM 396, and ECON 396. We have many UTAs who would benefit from this course. **Please review the course descriptions and expectations of BIOL 396, CHEM 396, and ECON 396.**
- 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.
- 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 Fellowship

### Prerequisites:

MATH 150 and CMSC 201 with an overall 3.0 GPA or higher.

### Instructor:

TBD

### Course Description:

This service-learning course is designed for undergraduate teaching fellows 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. Teaching fellows are expected to participate in a weekly meeting emphasizing professionalism, teaching diverse student populations, and teaching computer science. 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 fellow and permission of the instructor are required. A maximum of nine 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 fellowship, 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 Fellows 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 ADA 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](https://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](mailto: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.