

CS187 Science Gateway Seminar I Fall 2013 Syllabus

Class room & time: W-2-123, Tue & Thu 11AM-11:50AM

Instructor: Dr. Nurit Haspel (617) 287-6414. E-mail: nurith@cs.umb.edu or nurit.haspel@umb.edu

Office hours: S-3-071, Tue & Thu 2:30PM-4PM, or by appointment

Class website: <http://www.cs.umb.edu/~nurith/cs187>

Peer Mentors

- Nicholas Rosato (Nicholas.rosato001@umb.edu)
- Anthony Reid (AnthonyReid99@gmail.com)

They can be found at the Unix Lab, by appointment.

Course Description

This is the first course of a two-semester sequence, two credits each semester. Successful completion of the sequence will fulfill the students First-Year Seminar requirement. Course content during the first semester will focus on understanding various facets of Computer Science (CS) and how it relates to our lives. Students will be introduced to different concepts of CS, read articles where technology is an issue, and discuss important matters in written work and orally, both individually and in small groups. Students will become increasingly familiar with and experienced in scientific discourse, the scientific method and scientific communication.

Objectives

This Freshman Seminar Course, in the College of Science and Mathematics, is organized along a theme of inquiry-based learning for students and faculty. Each participant has a role in understanding topics that are prevalent in the scientific community along with developing new information that might form the basic science investments of the future. Students will be co-developers of this freshman seminar series that will be based primarily on inquiry-based science education. Desired outcomes will focus on students developing discovery skills, becoming self-driven learners, learning to work in groups, and being successful at the university. This course will maximize students' potential for success in the university and the scientific community. Grading will be based on class participation, written papers, and examination.

This course is an important component of the Freshman Success Community (FSC) program. Both the seminar and the FSC are important new initiatives that we are undertaking to enhance the experience and academic success of new freshmen entering the College of Science and Mathematics. As a participant in these initiatives you will have the opportunity to become much more familiar with your fellow students, your faculty, and the resources available to you at UMass Boston. Transition from high school to university is often a big challenge.

These new initiatives will allow you to form a partnership, with us and with your fellow students, to help you succeed as university science majors. We want to help you to start thinking now about how to progress towards a timely graduation, and to prepare to achieve your post-graduation goals.

We will focus on discussion of topics with broad societal impact that have important scientific underpinnings. Using this approach, you will become increasingly familiar with experienced in scientific discourse, the scientific method, and important new scientific findings. Using this

scientific framework, the course will address all of the objectives of the UMass Boston First Year Seminar Program:

- Critical reading
- Critical thinking
- Clear writing
- Academic self-assessment
- Collaborative learning
- Information technology
- Oral presentation. Students will be organized into groups, and work collaboratively on assignments associated with various topics.

Covered Materials

The class will run as a sequence. Several topics will be covered – including, but not limited to:

- What is computer science? A short survey and basic definitions.
- Introduction to algorithms and programming languages, basic problem solving skills.
- Computer building in theory and practice.
- Applications of Computer Science to other areas in science and technology – especially biology, math, physics and medicine.

In addition to discussion of science topics, class time will also include presentations from a variety of guest speakers who can describe UMass Boston resources for student success. Lectures and demonstrations will be given by the instructor, peer mentors, invited speakers, and student presentations. A detailed weekly schedule will be updated as the semester progresses. 1-2 classes per semester will be an open discussion, where the students will raise specific issues they encounter during their studies, and the instruction team will try to address them.

Grading

- Individual investigation of an assigned topic of Computer Science (1st half of the semester):
 - Writing assignment: Each student will write a 3-page essay reporting the findings of the investigation. Page format: 11 points, single-spaced, 1-inch top/bottom/left/right margin – 30% of the final grade.
 - Oral presentations: Each student is required to give a 15-minute presentation about his or her Investigation: Team investigation of an assigned topic of Computer Science (2nd half of the semester) - 15% of the final grade.
- Team work:
 - Writing assignment: Each team will write a 5-page essay reporting the findings of the investigation. Page format: 11 points, single-spaced, 1-inch top/bottom/left/right margin – 30% of the final grade.
 - Oral presentation: Each group needs to deliver a 20-minute presentation reporting their Investigation – 15% of the final grade.
- Class attendance: 10%. Absence from class will have to be for a good reason (illness, emergency) and documented to avoid grade reduction. Students are highly encouraged to actively participate in class.

Number to letter grade conversion

$P > 90$	A
$90 \geq P > 85$	A-
$85 \geq P > 80$	B+
$80 \geq P > 75$	B
$75 \geq P > 70$	B-
$70 \geq P > 65$	C+
$65 \geq P > 60$	C
$60 \geq P > 55$	C-
$55 \geq P > 50$	D+
$50 \geq P > 45$	D
$45 \geq P \geq 40$	D-
$40 > P$	F

Late Homework and Makeup Policies

Unless a good reason and its supporting evidence are given, e.g., due to illness, emergency, important events:

- No makeup is acceptable for students missing a homework assignment or an exam.
- Homework may be submitted late only by permission from the instructor. Late submission without permission will cost 10 points of the homework score per late day.

Accommodations

Section 504 of the Americans with Disabilities Act of 1990 offers guidelines for curriculum modifications and adaptations for students with documented disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center for Disability Services, M-1-401, (617-287-7430). The student must present these recommendations and discuss them with each professor within a reasonable period, preferably by the end of Drop/Add period.

Student Conduct

Students are required to adhere to the University Policy on Academic Standards and Cheating, to the University Statement on Plagiarism and the Documentation of Written Work, and to the Code of Student Conduct as delineated in the catalog of Undergraduate Programs, pp. 44-45, and 48-52. The Code is available online at: http://www.umb.edu/student_services/student_rights/code_conduct.html

Additional information

My emails to the class will be sent from the WISER system so make sure that your email address is set up correctly with WISER. You should visit the website regularly for other

information including latest announcements about the class. The WISER system has your UMB e-mail address (usually `firstname.lastname001@umb.edu`). Make sure you check this address regularly and/or redirect it to another e-mail address you use more frequently. No excuses regarding infrequent use of this e-mail address will be accepted.