

WAYNE STATE  
UNIVERSITY

COLLEGE OF ENGINEERING

Computer Science Department

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**CSC 4111 Sec 002**  
**Software Engineering Lab**  
**Fall 2017**  
**314 STAT**  
**Th 07:00PM - 08:40PM**

**Instructor:**

Name: Zhenyu Ning

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**Office Hours: Th 1:30 PM – 2:30 PM**

**Course Description:**

*Mandatory 1.5 hours' closed lab; lecture materials and hands-on exercises which complement CSC 4110. Material Fee as indicated in the Schedule of Classes.*

**Credit Hours:**

*1 credit*

**Prerequisite: CSC 2200 and CSC 2201, both with a grade of C or better**

**Co-requisites: CSC 4110**

**Text(s) Book:**

*"Software Engineering: The Current Practice", V. Rajlich, CRC Press, 2012*

**Computer Programs:**

Microsoft Visual Studio 2015 Community or higher edition (get it free from DreamSpark, <http://apps.eng.wayne.edu/MPStudents/Login.aspx>)

Qt 5 (GUI framework)

CMake (Multi-Platform build system)

StarUML (Drawing UML diagrams)

Tortoise SVN (Version Control System)

**Course contents:**

*The lab will consist of assignments (HW), projects, and occasionally a 30-45 minutes lecture. Details about the homework and projects will be posted on Blackboard or the SVN repository.*

## **Laboratory**

*The lab complements the Introduction to Software Engineering course (CSC4110) and gives students a grip on practical aspects of software engineering focusing on software evolutions. This lab is NOT intended as an introductory programming course. A good working knowledge of C++ is required. Attendance is also required.*

## **ABET (Computing Accreditation Commission)**

**Program Educational Objectives** – Program educational objectives are broad statements that describe what graduates are expected to attain within a few years of graduation. Program educational objectives are based on the needs of the program’s constituencies.

### **BSCS Program Educational Objectives:**

The main objective of the Bachelor of Science in Computer Science (BSCS) program is to provide an outstanding curriculum and learning environment, so that, following completion of the program BSCS:

1. Students will be able to apply the principles of computer science, mathematics, and scientific investigation to solve real-world problems appropriate to the discipline.
2. Students will have lifelong learning skills, which will allow them to successfully adapt to evolving technologies throughout their professional careers.
3. Students are sufficiently prepared for employment and advanced studies, and will have significant experiences with complex software development for real-world problems.
4. Students will have sufficient teamwork, communication, and interpersonal skills to enable them to work with others effectively in their professional careers.
5. Students can function ethically and responsibly, and are conscious of ethical, social, global, legal, security and professional issues related to computing.

**Student Outcomes** – Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program.

<b>ABET Criterion 3: Student Outcomes</b>
a. An ability to apply knowledge of computing and mathematics appropriate to the discipline.
b. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
c. An ability to design, implement and evaluate a realistic computer-based system, process, component, or program to meet desired needs.
d. An ability to function effectively on teams to accomplish a common goal.

e. An understanding of professional, ethical, legal, security, and social issues and responsibilities.
f. An ability to communicate effectively with a range of audiences.
g. An ability to analyze the local and global impact of computing on individuals, organizations and society.
h. Recognition of the need for, and an ability to engage in, continuing professional development.
i. An ability to use current techniques, skills, and tools necessary for computing practices.
j. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
k. An ability to apply design and development principles in the construction of software systems of varying complexity.

**Course Learning Objectives:**

*The course learning objectives are skills and abilities students should have acquired by the end of the course. These outcomes are defined in the terms of the ABET Accreditation Criterion 3 student outcomes which are relevant to this course.*

Upon successful completion of this class, the student will be able to:

<b>CSC 4111 Course learning Objectives</b>	<b>Student Outcomes</b>	<b>Assessment Method</b>
1. Summarize and apply software configuration-management techniques and tools.	l,k	HW, Project
2. Enhance existing realistic software by adding new features to it.	c,l,k	HW, Project
3. Collaborate with peers working in a software development team.	d	HW, Project
4. Practice software engineering techniques to system development and apply appropriate metrics.	c,l,k	HW, Project

**Assessment:**

The course and the lab will be graded separately, so at the end you will have two independent grades.

Assignment 1	8 %
Assignment 2	8 %
Assignment 3	8 %
Assignment 4	8 %
Assignment 5	8 %
Change Request 1	15 %
Change Request 2	15 %
Change Request 3	20 %
Lab attendance	10%

**Grading Scale:**

over 92%	A
over 90%	A-

over 87%	B+
over 82%	B
over 80%	B-
over 77%	C+
over 72%	C
over 70%	C-
over 67%	D+
over 62%	D
over 60%	D-
below 60%	fail

Grade Incomplete (I) will not be given.

### **Grading Policies:**

The lab assignments and the projects must be submitted before they are due (you will have 1 - 3 full weeks for each assignment or project). Late lab assignments and projects are graded on 50% basis (late less than 24 hours). If a lab assignment or a project is late more than 24 hours, it is graded 0. If you have a compelling and documented reason for not being able to meet the deadline, you must notify the instructor with documents before the due date.

We expect all students to have the highest level of academic honesty and work individually. We strongly encourage you to discuss with the instructor(s) any problems that you might have in the course work. For most of your assignments/projects, we may use MOSS (<http://theory.stanford.edu/~aiken/moss/>) to detect first, then judge the results manually. If we find two or more assignments/projects, which appear to be copied from each other, or from previous semesters, the grade will be 0. In addition, a more severe disciplinary action may be taken in accordance to WSU's policy on cheating and plagiarism.

If you know you will be missing a class to attend an academic conference (or for some other legitimate reason), it is your responsibility to notify the instructor with documentation in advance to avoid losing credit for attendance.

### **Religious Holidays:**

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

### **Student Disabilities Services:**

- If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216

(Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

- Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student's accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

### **Academic Dishonesty - Plagiarism and Cheating:**

Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (<http://www.doso.wayne.edu/student-conduct-services.html>). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- **Cheating:** Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student's test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- **Fabrication:** Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
- **Plagiarism:** To take and use another's words or ideas as one's own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- **Other** forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student's access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

### **Course Drops and Withdrawals:**

In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at:

<http://reg.wayne.edu/pdf-policies/students.pdf>

### **Student Services:**

- The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit [www.success.wayne.edu](http://www.success.wayne.edu) for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).
- The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit <http://clasweb.clas.wayne.edu/> writing to obtain information on tutors, appointments, and the type of help they can provide.

### **Class Recordings:**

Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.