CSC 4110

Section 001

Software Engineering

Fall 2017

0128 STATE HALL

T Th 05:30 P.M. – 06:45 P.M.

Instructor:
Prof. Vaclav Rajlich
Office location: 5057 Woodward Ave; Suite 14200.5
Phone: 313-577-5423
Email: rajlich@wayne.edu
Office Hours: T Th 04:45 PM – 05:15 PM (cancelled on Tue Sep 26, Oct 24, Nov 21)

Teaching assistants:
Yibin Wang: grading Midterm 1, Final
Office location: 5057 Woodward, room 2210
Phone: (313) 577-2678
Email: yibin.wang@wayne.edu
Office Hours: Th 2:15 P.M. – 3:15 P.M.

Zhenyu Ning: Grading Midterm 2 and 3, quizzes
Office location: 5057 Woodward, room 2210
Phone: (313) 505-7207
fz0556@wayne.edu
Office hours: Th 4 – 5PM

Course Description:
> Software life cycle; software requirement analysis; software system design; software implementation and testing; software maintenance; team programming; ethics and programmers.

Credit Hours:
3 Credit Hours

Prequisite:
CSC 2200 and CSC 2201, each with grade of C or better

Co-requisites:
CSC 4111 (1 Credit hour)

Textbook:
"Software Engineering: The Current Practice", V. Rajlich, CRC Press, 2012
Slides available from http://www.cs.wayne.edu/~vip/slides-se.html

Computer Programs:

        Microsoft Visual Studio 2015
        Qt 5 (GUI framework)
        CMake (Multi-Platform build system)
        StarUML (Drawing UML diagrams)
        Tortoise SVN (Version Control System)

Course contents:

Date		
31-Aug	syllabus	
5-Sep		ch 1
7-Sep		ch 3
12-Sep		ch 4
14-Sep		ch 2
19-Sep		ch 5
21-Sep		ch 6
26-Sep	Mid 1	
28-Sep		ch 6
3-Oct		ch 7
5-Oct		ch 8
10-Oct		ch 9
12-Oct		ch 10
17-Oct		ch 10
19-Oct		ch 17
24-Oct	Mid 2	
26-Oct		ch 11, 12
31-Oct		ch 12
2-Nov		ch 18
7-Nov		ch 13
9-Nov		ch 13
14-Nov		ch 14
16-Nov		ch 14
21-Nov	Mid 3	
23-Nov	no class	
28-Nov		ch 15
30-Nov		ch 16
5-Dec		topics
7-Dec	last class	review
12-Dec	study day	
14-Dec	Final	

Laboratory:

The lab (CSC4111) complements the lectures and gives students a grip on practical aspects of software engineering. This lab is NOT intended as an introductory programming course. A good working knowledge of C++ is required. Students must attend their scheduled lab sessions.

Assessment:

Midterm 1	10%
Midterm 2	20%
Midterm 3	20%
Quizzes (at every lecture)	20%
Final (open book)	30%

Grading system:

over 93%	A
over 90%	A-
over 87%	B+
over 83%	B
over 80%	B-
over 77%	C+
over 73%	C
over 70%	C-
over 67%	D+
over 63%	D
over 60%	D-
below 60%	fail

Grade Incomplete (I) will not be given.

Grading Policies:

1. The lab section is associated with the lecture, both are graded separately. If you fail one section you need to repeat only the failed part.
2. Make-up examinations for exams will not be given. If you have a compelling and documented reason for not being able to attend the exam, you must make the alternative arrangements before the examination.
3. All students are requested to access their Wayne State e-mail account regularly. You may be contacted when important matters arise. If you have any questions about the course or need assistance, please contact the instructor and/or the TA in person during office hours or by e-mail at any time

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.

ABET Criterion 3: Student Outcomes
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:

CSC 4110 Course learning Objectives	**Student Outcomes**	**Assessment Method**
1. Describe the need for a professional approach to software	b	Exam

development and evolution.		
2. Describe the software life cycle and give examples of software process models.	b,c	Exam
3. Produce software code of acceptable quality.	c,l,k	Exam
4. Distinguish between various forms of evolutionary software development, including agile development.	c,l,k	Exam
5. Identify professional ethics in software development.	e,g,h	Exam
6. Apply accepted software engineering techniques to system development and apply appropriate metrics.	c,l,k	Exam

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.
- **Othe**r 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:
There will be no in-completes given for the course.
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. Visitwww.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.

Other issues
- Foods and drinks are not allowed during the lecture or lab hours.

- Cell phones and other two-way communication devices: Students are expected to turn off their devices or turn them to the silent mode when they come to the lecture or to the lab. If a device is used in any way in the lab, you will receive a verbal warning first and then you will be asked to leave immediately.