



TEACHER INFORMATION

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ASSISTANT INFORMATION

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COURSE INFORMATION

Course Title: Software Specification and Design

Catalog Prefix & Number: CIS 453

Semester Credit Hours: 3

Catalogue Description: Software engineering process models; Software requirements analysis, including object-oriented methodology; Behavioral and nonbehavioral requirements; Development of specification documents; Unified Modeling Language; High-level design and software architecture. Team projects.

Additional Course Description: Software Ethics; Design Patterns

PREREQUISITES

CIS351 – Data Structures or CSE382 – Algorithms & Data Structures

Additional Skills That Will Help

- Strong background in Computer Science
- Good experience/understanding of programs written in C++ or Java
- Good programming experience in C and C++
- Comfortable with Java/C++ development environments
- Learn new tools (required for programming assignments) – on your own.

COURSE DESCRIPTION

This course is part 1 of a 2-part course. The software process is far too important to limit to a single semester, so it takes place over 2 semesters. The software development process, according to the waterfall model, consists of the following primary activities:

1. Requirements Definition
2. Software Design,
3. Implementation
4. Testing
5. Integration
6. Maintenance

CIS453 will focus on 1 and 2 above, while CIS454 will focus on the remaining. Activities.,

Course Objectives: The learning objectives include:

- Understand the importance of a process in software
- Understand the various activities in the process
- Understand the tools that will help make the process repeatable and robust

Class Meeting Days & Times: Monday and Wednesday, 3:45, Shemin Auditorium

Office Hours: Monday/Wednesday 1-2pm. CST 4-230

TEXTBOOK AND ADDITIONAL MATERIALS

Software Engineering, (10th Edition), Ian Sommerville, Pearson, ISBN: 978-0133943030
Systems Analysis and Design: An Object-Oriented Approach with UML (6th Edition), by A. Dennis, B.H. Wixom, and D. Tegarden, Pub: Wiley, ISBN: 978-1119561217

Slides and additional reading materials will be made available on Blackboard.

Course Requirements: Attend class. Follow up lectures with recommended reading material. Specific reading assignments will not be made, but you are expected to read the book as we cover the material.

Grading Policy: The grading policy is outlined below. **There will be no extra credit available.**

Table 1 Grading Policy

Activity	Percent of Final Grade	Comments
Individual Assignments	20	
Team Assignments	20	
Team Term Project	10	
Midterm	20	Administered Live/Online
Final	20	Administered Live/Online
Class Participation	10	In-class assignments, pop quizzes, surveys, attendance
Total	100	

Exam Deliverance

The midterm and final for this course will be delivered online via Blackboard. It is expected that students will be in the classroom when taking the exam.

Syracuse University Grading Chart

Grade	Range	Points Per Credit
A	92-100	4.0
A-	90-91.5	3.666
B+	87-89.5	3.333
B	82-86.5	3.0
B-	80-81.5	2.666
C+	77-79.5	2.333
C	72-76.5	2.0
C-	70-71.5	1.666
D	60-69.5	1.0
F	<59.5	0.0

COMMUNICATION POLICY:

Online discussion and questions will be handled through the Blackboard discussion board , not via email. A best effort attempt will be made to respond to posts within 48 hours on weekdays during normal working hours.

Students are encouraged to respond as well, but be careful not to provide answers to Programming Assignments!

To ensure a timely response, you SHOULD NOT wait to ask questions until the night before a submission deadline or until the day of the deadline. How to ask a question on the discussion board?

- First read slides, notes, book chapters, or assignment description/handout
- Check if there is any ongoing thread related to your question
- Describe the problem clearly, using the right terms
- Use #hashtags (#lecture2, #assignment3, #mid-term, etc.), if it is available on the discussion board
- Add any other relevant information, if necessary

When to Email? For issues (e.g., grading, TA help sessions), you should email a TA and CCed the instructor. For other issues related to the course (e.g., scheduling one-on-one meetings, containing sensitive information), you should email the instructor. You must use your official university email address. All emails should have the prefix “[CIS 657]” (without the quotes) in the subject line. Complying with this requirement will enable the instructor/TAs to process emails faster. A best effort attempt will be made to respond to emails within 48 hours on weekdays during normal working hours. You are required to check your SU email and the Blackboard Announcements on a regular basis for updates..

No meetings will be accepted/scheduled on the day when a programming assignment is due or on the day of the exam. No questions on the discussion board will be answered on the day when a programming assignment is due or on the day of the exam. For any programming assignment, it is highly recommended that you Start Early, Plan Carefully

IMPORTANT DATES:

Please refer to <https://www.syracuse.edu/academics/calendars/academic-year/> for specific dates. You are responsible for knowing and abiding by the registration dates and deadlines.

COURSE POLICIES AND PROCEDURES:

Attendance

Regular attendance is expected of all students. Attendance will weigh into the difference between a “+” and “-” grade.

Academic Dishonesty

I expect students to fulfill their academic obligations through honest and independent effort (i.e. no cheating or plagiarism). Academic dishonesty is considered a serious offense subject to strong disciplinary actions, including being dropped from the course with a grade of “F.”

Student Conduct

Students must conduct themselves so other students are not distracted from the pursuit of learning. Discourteous or unseemly behavior will not be tolerated. Faculty members, staff and other students are to be treated with courtesy and respect. If unacceptable behavior occurs, the student may be asked to leave the classroom and may be subject to disciplinary action up to and including being dropped from the class with a grade of “F.”

Class Assignments

All assignments must be turned in before or on the indicated due date.

- Assignments are due at midnight on the due date. A 6 hour grace period always applies. That means if you want to pull an all-nighter and hand your assignment in by 6am the next day, that is acceptable
- Assignments handed in by midnight the following day will receive a 5 point penalty (NO grace period!)
- Assignments handed in by midnight the next day (i.e. 2 days late) will receive a 10 point penalty (NO grace period)
- Assignments handed in beyond 2 days will not be accepted, unless previously agreed upon by the instructor. This agreement MUST be made 2 days PRIOR to the original deadline. That is, you cannot wait until the last minute and expect an extension.

UNIVERSITY-WIDE POLICIES

Academic Integrity

Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted Page 6 of 8 in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. Syracuse University students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level.

Using websites that charge fees or require uploading of course material (e.g. Chegg, Course Hero) to obtain exam solutions or assignments completed by others and present the work as your own violates academic integrity expectations in this course. Such actions are subject to penalty, such as a reduction in grade or removal from this course.

University Attendance Policy (including Absence Notification)

Attendance in classes is expected in all courses at Syracuse University. It is a federal requirement that faculty promptly notify the university of students who do not attend or cease to attend any class. Faculty will use Early-Semester Progress Reports and Mid-Semester Progress Reports in Orange SUccess to alert the Registrar and Financial Aid Office on non-attendance. For more information visit: Faculty: <http://registrar.syr.edu/faculty-staff/non-attendance/> Students: <http://registrar.syr.edu/students/non-attendance/> Students may contact their home school/college Dean's Office or the Case Management staff in Dean of Students Office when they are absent from class for an extended period of time (48 hours or more). The Case Management staff will require documentation for the absence and will utilize Orange SUccess to send notifications to faculty to verify that documentation has been received for the stated absence. Barnes Center at the Arch (Health, Counseling, etc.) staff will not provide medical excuse notes for students. When Barnes Center staff determine it is medically necessary to remove a student from classes, they will coordinate with the case management staff to provide absence notification to faculty through Orange Success. For absences lasting less than 48 hours, students are encouraged to discuss academic arrangements directly with their faculty. Additional information may be found at: <http://studentassistance.syr.edu/our-services/absencenotifications.html>

Diversity and Disability

Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. There may be aspects of the instruction or design of this course that result in barriers to your inclusion and full participation in this course. I invite any student to meet with me to discuss strategies and/or accommodations (academic adjustments) that may be essential to your success and to collaborate with the Office of Disability Services (ODS) in this process. If you would like to discuss disability-accommodations or register with ODS, please visit their website at <http://disabilityservices.syr.edu>. Please call (315) 443-4498 or email disabilityservices@syr.edu for more detailed information. ODS is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic

accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible to begin this process. Page 7 of 8

Discrimination or Harassment

The University does not discriminate and prohibits harassment or discrimination related to any protected category including creed, ethnicity, citizenship, sexual orientation, national origin, sex, gender, pregnancy, disability, marital status, age, race, color, veteran status, military status, religion, sexual orientation, domestic violence status, genetic information, gender identity, gender expression or perceived gender. Any complaint of discrimination or harassment related to any of these protected bases should be reported to Sheila Johnson-Willis, the University's Chief Equal Opportunity & Title IX Officer. She is responsible for coordinating compliance efforts under various laws including Titles VI, VII, IX and Section 504 of the Rehabilitation Act. She can be contacted at Equal Opportunity, Inclusion, and Resolution Services, 005 Steele Hall, Syracuse University, Syracuse, NY 13244-1120; by email: titleix@syr.edu; or by telephone: 315-443-0211. Federal and state law, and University policy prohibit discrimination and harassment based on sex or gender (including sexual harassment, sexual assault, domestic/dating violence, stalking, sexual exploitation, and retaliation). If a student has been harassed or assaulted, they can obtain confidential counseling support, 24-hours a day, 7 days a week, from the Sexual and Relationship Violence Response Team at the Counseling Center (315-443-4715, 200 Walnut Place, Syracuse, New York 13244-5040). Incidents of sexual violence or harassment can be reported non-confidentially to the University's Title IX Officer (Sheila Johnson Willis, 315-443-0211, titleix@syr.edu, 005 Steele Hall). Reports to law enforcement can be made to the University's Department of Public Safety (315-443-2224, 005 Sims Hall), the Syracuse Police Department (511 South State Street, Syracuse, New York, 911 in case of emergency or 315-435-3016 to speak with the Abused Persons Unit), or the State Police (844-845-7269). I will seek to keep information you share with me private to the greatest extent possible, but as a professor I have mandatory reporting responsibilities to share information regarding sexual misconduct, harassment, and crimes I learn about to help make our campus a safer place for all.

Additional University Policies

Students should review SU's policies regarding: Religious Observances Policy(<https://policies.syr.edu/policies/university-governance-ethicsintegrity-and-legal-compliance/religious-observances-policy/>), Orange SUccess (<http://orangesuccess.syr.edu/getting-started-2/>), and other Academic Rules (<http://coursecatalog.syr.edu/content.php?catoid=17&navoid=2249>).