SWE 3623 Software System Requirements

Instructor

Professor Rachel L. Foster
Web: http://facultyweb.kennesaw.edu/rfoste42/index.php

E-mail: Use D2L email for all course-related communications
Office Phone: 470-578-2857
Office Location: J-126
Office Hours: Monday & Wednesday (by appointment only)

Email and Classroom Response Times:
I generally check my D2L email once a day, not including weekends or holidays. During the week, I will endeavor to respond to all emails within 48 hours. I will respond to emails received over the weekend (starting Friday at 4 PM) on Monday mornings. Assignments will be returned within 10-14 days.

Course Description
This course covers engineering activities related to the definition and representation of software system requirements. Topics include the elicitation, analysis, specification and validation of software system requirements. Emphasis is on the application of processes and techniques of requirements engineering. Projects focus on current analysis methods and supporting tools for specification, organization, change management, traceability, prototyping, and validating requirements.

Course Objectives
Prerequisite: SWE 3313, CSE 2300

By the end of this course, you should be able to:
1. You will be able to define and apply the process of requirements engineering in the system development life cycle;
2. You will be able to effectively elicit, analyze, specify and validate requirements;
3. You will be able to use current tools to effectively model, specify, and manage software system requirements.

The major topics covered in this course are:
1. Requirement fundamentals: definition of requirements, requirement engineering process, types and characteristic of requirements, requirement management;
2. Eliciting requirements, elicitation techniques;
3. Requirement specification and documentation, standards, specification languages;
4. Requirements validation, reviews, prototyping;
5. System modeling: class diagrams, use case analysis, domain modeling, and introduction to formal specification methods;
6. Analyzing non-functional/performance requirements, traceability;
7. Software process concepts.

**Required Textbook/Supporting Materials**


**D2L Minimum Technology Requirements**

Online learning requires access to computer resources. Generally, basic standards include a computer (either a PC or a Mac) that is less than five years old, equipped with at least Microsoft Office 2007 (including Word, PowerPoint, and Excel) and recent versions of free media players (e.g. RealPlayer, Windows Media Player, QuickTime).

Your internet connection will also be important to your ability to access information. We highly recommend a high-speed internet connection for taking online courses.

**Minimum Technical Skills**

A working knowledge of the D2L Brightspace learning management system is required for participation in this course.

This course will require participants to have average computer literacy. Students should be proficient with the basic functions of standard software packages (e.g., MS Word, MS Excel, MS PowerPoint, and Adobe Reader) and standard players (e.g., QuickTime, Windows Media Player). These programs will need to be accessible to students through home use or other computer access. A list of primers on many of these technologies is available at [https://apps.kennesaw.edu/portal/prod/app_uni_cdoc_publ/documents/](https://apps.kennesaw.edu/portal/prod/app_uni_cdoc_publ/documents/)

**Grading**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage of Final Grade</th>
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<tbody>
<tr>
<td>3 Individual Assignments</td>
<td>30% of final grade (10% each)</td>
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<tr>
<td>5 Team Project Deliverables</td>
<td>40% of final grade (see D2L for details)</td>
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<tr>
<td>Midterm Exam</td>
<td>15% of final grade</td>
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<tr>
<td>Final Exam</td>
<td>15% of final grade</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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**Grade Conversion:** A: (90-100), B: (80-89), C: (70-79), D: (60-69), F: (0-59)

***Detailed grading criteria are available in D2L for Discussions and Assignments.***
Below is an outline of the content and activities in each unit of the course.

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<tr>
<th>Modules</th>
<th>Activities</th>
<th>Dates</th>
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<tr>
<td>Module 1 – Course Overview</td>
<td>Ch 1 in SWE Reqts</td>
<td>Aug 19-25</td>
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<tr>
<td>Module 2 – Introduction to Requirements Engineering (RE) and RE Activities</td>
<td>Ch 1 in Jogger and Ch 2, 3, 4, &amp; 14 (pp 261-265) in SWE Reqts</td>
<td>Aug 26-Sep 08</td>
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<td>Labor Day Holiday</td>
<td>Aug 31-Sep 02</td>
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<tr>
<td>Module 3 – Pre-elicitation</td>
<td>Ch 2 in Jogger and Ch 5 in SWE Reqts</td>
<td>Sep 09-15</td>
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<td>Module 4 – Elicitation</td>
<td>Ch 3 in Jogger and Ch 6 (pp101-106) &amp; 7 in SWE Reqts</td>
<td>Sep 16-29</td>
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<td>Assignment 1</td>
<td>Sep 22</td>
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<td>Deliverable 1</td>
<td>Sep 29</td>
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<td>Module 5 – Analysis</td>
<td>Ch 4 in Jogger and Ch 8, 9, &amp; 16 in SWE Reqts</td>
<td>Sep 30-Oct 13</td>
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<td>Assignment 2</td>
<td>Oct 06</td>
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<td>Deliverable 2</td>
<td>Oct 13</td>
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<td><strong>Midterm Exam</strong></td>
<td>Oct 07-13</td>
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<td>Module 6 – Documenting and Specifying Requirements</td>
<td>Ch 5 in Jogger and Ch 10, 11, 12, 13, &amp; 14 in SWE Reqts</td>
<td>Oct 14-27</td>
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<td>Deliverable 3</td>
<td>Oct 27</td>
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<td>Module 7 – Validation</td>
<td>Ch 6 in Jogger and Ch 15 &amp; 17 in SWE Reqts</td>
<td>Oct 28-Nov 10</td>
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<td>Module 8 – Managing Requirements</td>
<td>Ch 7 in Jogger and Ch 27, 28 (471-479) &amp; 29 in SWE Reqts</td>
<td>Nov 11-17</td>
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<td>Deliverable 4</td>
<td>Nov 17</td>
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<td>Module 9 – Requirements Engineering in Agile Settings</td>
<td>Ch 20 in SWE Reqts</td>
<td>Nov 18-24</td>
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<td>Assignment 3</td>
<td>Nov 24</td>
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<td>Thanksgiving Break</td>
<td>Nov 25-Dec 01</td>
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<td>Deliverable 5</td>
<td>Dec 01</td>
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<td>Team Presentations</td>
<td>Dec 02-09</td>
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<td></td>
<td><strong>Final Exam</strong></td>
<td>Mon, Dec 16 3:30-5:30 PM</td>
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Course Expectations

Expectations/Class Participation

During each week, students are expected to:

• Attend all lectures;
• Check the D2L course website regularly;
• Review weekly materials (PowerPoint slides, website links, etc.);
• Complete and submit assigned quizzes or homework on time.

Homework assignments must be done individually, unless specifically designated as a group/team project. Individual submissions will not be accepted for group/team projects.

Discussion posts will be graded primarily for quality and timeliness. Quality in the discussions is determined by your interpreting material, designing methods and approaches appropriate to IT, and making appropriate judgments for an IT professional; merely agreeing with or repeating material in your discussions is not quality. Timeliness involves posting early and posting often. Posting to the discussion forums at the last hour of the deadline does not give your classmates ample time to respond. The more effort exerted by all to complete readings, meet the due dates and participate in and contribute to the online discussions, the more meaningful and dynamic the learning experience for all.

Communication Rules

In any classroom setting there are communication rules in place that encourage students to respect others and their opinions. In an online environment the do's and don'ts of online communication are referred to as Netiquette. As a student in this course you should:

• Be sensitive and reflective to what others are saying.
• Avoid typing in all capitals because it is difficult to read and is considered the electronic version of 'shouting'.
• Don't flame - These are outbursts of extreme emotion or opinion.
• Don't use offensive language.
• Don't use abbreviations or acronyms unless the entire class knows them.
• Be forgiving. Anyone can make a mistake.
• Keep the dialog collegial and professional, humor is difficult to convey in an online environment.
• Always assume good intent and respond accordingly. If you are unsure of or annoyed by a message, wait 24 hours before responding.

Format for Assignments

Your work should be prepared in a form that can be opened with Microsoft Word. Use a font no smaller than twelve and leave at least a one-inch margin on all four sides of the page.
Please name your file “YourLastName_AssignmentIdentification.xxx”. For example, Foster_Assignment1.docx.

In the upper right corner of the first page of each assignment, put the following information in the order shown below.

Your name
Date submitted
Assignment identification

Here is an example:

Rachel L. Foster
May 30, 2018
Assignment 1

Assignment Submission and Late Assignments

All assignments, projects, reports, etc. must be submitted online in the appropriate D2L submission folder. Submission instructions will be given for each individual assignment in the dropbox tool within D2L. Points will be deducted for not following the submission instructions. Check D2L for due dates. Generally, no submission is allowed outside of D2L unless the student is explicitly instructed to do so by the instructor. Be sure to submit your work well ahead of due date. Excuses like website or computer error will not be accepted after the assignments are closed.

All assignments, homework, projects, etc. are due by the date and time indicated. All due dates are in Eastern Time. Late work will not be accepted without documentation of a university-approved absence. In exceptional cases, the instructor may elect at his or her sole discretion to accept late work. In such cases, a penalty of 15% per calendar day or portion thereof will usually be assessed.

A Note About Collaboration

Collaboration with your classmates in studying and understanding the material is part of the collegiate experience, and is encouraged. Group discussion is allowed and encouraged for the understanding of and studying for a project or assignment.

Collaboration on written assignments is permitted and encouraged, BUT each student must turn in their own original work written in his or her own words. The actual preparation of the assignment should only be done by the individual student. Copying and/or submitting another's work is considered cheating.

Work which was not done solely by the student may result in: a “0” grade for the assignment, a grade of “F” for the course, and referral to the university’s academic honesty committee for further disciplinary action up to and including dismissal from the university. Refer to the student handbook and university policies and procedures for more information.
When work is designated as “group work”, the group of students will collectively be considered an “individual” for the purposes of this policy. Students working in assigned groups will turn in one assignment that is the collaborative effort of the group and must be the original work of the team members. If a group assignment is submitted with material that is not original work, the grade for the entire team will be a ZERO and all members will be subject to this honesty policy. Group members must ensure that work submitted is created by the team members. All portions of the honor code will apply to university courses. All academic honesty violations or alleged violations of the honor code will be reported to the appropriate university offices.

It is very important that you understand the concepts of academic integrity. If any of the above is not clear, or if you are not certain what some of the terms mean, please ask the instructor. A misunderstanding in this area could jeopardize your academic career.

**What is Plagiarism?**

Plagiarism is defined as the practice of taking someone else’s work or ideas and passing them off as one’s own. If you are unaware or uncertain on how to properly cite a particular source, please do not neglect to add the citation – that is considered plagiarism.

If you have questions on how to cite your work, please contact me immediately! For more information, please refer to the “Plagiarism Policy” under the *University Policies* section of this syllabus.

**Turnitin**

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Terms and Conditions of Use posted on the Turnitin.com site.

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**Help Resources**

**Contacts to get Help**

Student Help Desk studenthelpdesk@kennesaw.edu or call 470.578.3555
D2L FAQ’s [click here](#)
D2L Student User’s Guide [click here](#)
UITS Student Training Workshop Schedule [click here](#)

**Additional Resources**

Remote access to Library Resources: [http://library.kennesaw.edu/](http://library.kennesaw.edu/)
University Policies

Academic Honesty

Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section II of the Student Code of Conduct addresses the University’s policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/ falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an “informal” resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct’s minimum one semester suspension requirement.

Plagiarism Policy

No student shall receive, attempt to receive, knowingly give or attempt to give unauthorized assistance in the preparation of any work required to be submitted for credit as part of a course (including examinations, laboratory reports, essays, themes, term papers, etc.). When direct quotations are used, they should be indicated, and when the ideas, theories, data, figures, graphs, programs, electronic based information or illustrations of someone other than the student are incorporated into a paper or used in a project, they should be duly acknowledged.

Honors Learning Experience

Turn any three-credit hour course into an Honors Learning Experience (HLE) by completing an Honors Contract. Meaningful Honors Contracts result when proactive students work with a professor of a course to find ways to deepen or extend learning within a course by extending a course assignment or activity or adding an assignment or other product to the class. An Honors contract should represent approximately 15 hours of work beyond regular course requirements (or about one hour/week of a 15-week semester). For questions contact honors@kennesaw.edu.

For more info, please familiarize yourself with the pathways: https://honors.kennesaw.edu/programs/requirements.php
Disability Statement

Kennesaw State University provides program accessibility and reasonable accommodations for persons defined as disabled under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Kennesaw State University does not deny admission or subject to discrimination in admission any qualified disabled student.

A number of services are available to help students with disabilities with their academic work. In order to make arrangements for special services, students must visit the Office for Student Disability Services and make an appointment to arrange an individual assistance plan. In most cases, certification of disability is required.

Special services are based on
- medical and/or psychological certification of disability,
- eligibility for services by outside agencies, and
- ability to complete tasks required in courses.

ADA Position Statement

Kennesaw State University, a member of the University System of Georgia, does not discriminate on the basis of race, color, religion, age, sex, national origin or disability in employment or provision of services. Kennesaw State University does not discriminate on the basis of disability in the admission or access to, or treatment or employment in, its programs or activities.

The Americans with Disabilities Act (ADA), Public Law 101-336, gives civil rights protections to individuals with disabilities. This statute guarantees equal opportunity for this protected group in the areas of public accommodations, employment, transportation, state and local government services and telecommunications.

The following individuals have been designated by the President of the University to provide assistance and ensure compliance with the ADA. Should you require assistance or have further questions about the ADA, please contact:

- ADA Compliance Officer for Students
  470-578-6443
- ADA Compliance Officer for Facilities
  470-578-6224
- ADA Compliance Officer for Employees
  470-578-6030

For more information, go to: [http://www.kennesaw.edu/stu_dev/dsss](http://www.kennesaw.edu/stu_dev/dsss).