COURSE DESCRIPTION
Fall 2016

CSCI-P 565 – Software Engineering I

Class Number: 13258
Term: Fall 2016 – August 22nd to December 16th
Meeting Time: 7:15pm to 8:30pm on Tuesdays and Thursdays
Meeting Location: Fine Arts (FA) 102
Course Website: Canvas (https://canvas.iu.edu)
Instructor: Adeel Bhutta
Office Phone: N/A
Office Location: Lindley Hall, L201D
Email: aabhatta@indiana.edu
Office Hours: Tuesdays and Thursdays from 4:00pm to 5:00pm or by appointment

Course Description
3 Credit Hours: Analysis, design and implementation of software systems. Requirements specification: data and process modeling. Software design methodologies. Software quality assurance: testing and verification. Software development processes. Credit not given for both CSCI-P 565 and CSCI-P 465.

Pre-requisite Course(s): CSCI-C 343, B 461 previously or B 561 concurrently

Required Textbook and Reference Books
There is no required textbook for this course. The following textbook is highly recommended:


The following books can also be used for reference:


Important Dates
• Semester Starts: August 22nd
• Labor Day: September 5th
• Withdrawal Deadline (with W grade): October 23rd
• Fall Break: October 7th - 9th
• Thanksgiving Recess: November 20th - 27th
• Semester Ends: December 10th
• Final Exams: Thursday, December 15th (7:15pm-9:15pm)
Grading Scheme

- Project: 45%
- Presentations (2): 10%
- Class Discussion / Participation: 5%
- Quizzes: 5%
- Assignments: 15%
- Final Exam: 20%

Class Communication
This is a face to face class and the primary medium of communication will be lectures. We will also use Canvas to post important class-related information and messages. **It is the responsibility of the student to check their IU emails and Canvas website regularly.**

Class Project
The class project for this course is **REQUIRED**. This group project will include several modules and will require presentations. The project will provide an opportunity to create a real application/system using techniques learned in class! More details can be found on Canvas.

Class Attendance
Attendance is extremely important and has direct correlation with your understanding of the subject as well as the final grade. Students are expected to attend all classes. **Roll call will be taken on random basis.** If a student is absent, it is the responsibility of the student to obtain lecture notes from Canvas or other colleagues. The student is responsible for all material covered during the lecture period.

Late Policy
No late submissions will be allowed for this course. **Any course module submitted after the deadline will not receive any credit.** If you have a University-approved excuse (which includes illness or injury, family emergencies, university approved curricular and extracurricular activities, and religious holidays), please contact the instructor / associate instructor immediately.

Class Teaching Assistants and Associate Instructors
The contact information and office hours for AIs and/or TAs is provided on Canvas.

Email Communication with the Instructor and AIs
Communicate with your instructor or AIs using the e-mail address given above in the syllabus. Allow 24 hours for a reply. The response time during the weekend may be longer than 24 hours.

Individual Work, Research and Plagiarism
All course assignments, discussions, quizzes or exams are assigned for individual work. No group work is permitted unless specifically allowed. Students are encouraged to engage in discussion or use other resources (such as research papers, library books or internet articles) but must write their own answers and provide references to the resources used. **At any time, student must not reproduce code/answers from other resources (as is or cosmetic changes) and the answers must not be shared.** Any plagiarism (even partial work) or cheating on home works, assignments, quizzes, projects and exams is **NOT acceptable and will result in an immediate failure for the class**

**Disclaimer:** The instructor reserves the right to make any changes to the syllabus any time during the term.
## Class Schedule and Weekly outline

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>Topics</th>
<th>Project</th>
<th>Assignment / Quiz</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Week of 08/22</td>
<td>Introduction The Product and the Process</td>
<td>Project Planning and Organization Skills Assessment Survey</td>
<td>Assignment1 / Quiz1</td>
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<td>2</td>
<td>Week of 08/29</td>
<td>Process Models (Traditional and Agile)</td>
<td>Assignment2 / Quiz2</td>
<td></td>
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<tr>
<td>3</td>
<td>Week of 09/05</td>
<td>Project Planning and Organization</td>
<td>Assignment3</td>
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<tr>
<td>4</td>
<td>Week of 09/12</td>
<td>Software Engineering Practice Requirement Engineering</td>
<td>Assignment4</td>
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<tr>
<td>5</td>
<td>Week of 09/19</td>
<td>Requirements Modeling &amp; Analysis Methods</td>
<td>Assignment5</td>
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<tr>
<td>6</td>
<td>Week of 09/26</td>
<td>Project Group Presentations</td>
<td>Assignment6 (Bonus)</td>
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<td>7</td>
<td>Week of 10/03</td>
<td>Elements of Software Design Architectural Designs</td>
<td>Assignment7</td>
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<td>8</td>
<td>Week of 10/10</td>
<td>WebApps &amp; Mobile Apps Designs Component Level Design</td>
<td>Assignment8</td>
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<td>9</td>
<td>Week of 10/17</td>
<td>UI Design, Patterns-based Design</td>
<td>Assignment9</td>
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<td>10</td>
<td>Week of 10/24</td>
<td>Testing Strategies Testing Methods for Traditional Apps</td>
<td>Assignment10</td>
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<td>11</td>
<td>Week of 10/31</td>
<td>Testing Methods for OO, Web and Mobile Apps, Software Quality</td>
<td>Assignment11</td>
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<td>12</td>
<td>Week of 11/07</td>
<td>Project Status / Peer Assessment Software Quality Assurance, Software Configuration Management</td>
<td>Assignment12</td>
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<td>13</td>
<td>Week of 11/14</td>
<td>Employer Panel Discussion Emerging Trends in SE</td>
<td>Assignment13</td>
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<td>14</td>
<td>Week of 11/28</td>
<td>Guest Lecture (Design Patterns) Agile Project Management with Kanban (Eric Brechner Presentation)</td>
<td>Assignment14</td>
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<td>15</td>
<td>Week of 12/05</td>
<td>Project Group Presentations</td>
<td>Assignment15 (Bonus)</td>
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<td>16</td>
<td>Week of 12/12</td>
<td>Final Exam (Thu, 12/15/2016)</td>
<td>Assignment16 (Bonus)</td>
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**Note:** This course outline was last updated on 12/02/2016 and will be updated on weekly basis.