Course: CIS 4298.001
Course Title: Software Engineering
Time: M 10:00 – 10:50, F 10:00 – 11:50, W 11:00 – 12:50
Place: MF TL 1B W CC 200
Instructor: Paul Wolfgang
Instructor Office: CC 1041
Instructor Phone: 215-204-5155
Office Hours: MWF 3:00 – 5:00
Or By Appointment.
Feel free to drop in
Try to verify that I will be in my office before making a length trip to see me.
I sometimes have other commitments that take me away from my office, even during office hours.

Course Web Page: www.cis.temple.edu/~wolfgang and Blackboard
Prerequisites: C or better in:
CIS 3223 Data Structures and Algorithms
CIS 3207 Introduction to Systems Programming and Operating Systems

Textbooks:
Essentials of Software Engineering
Frank Tsui and Orlando Karam
Jones and Bartlett
Sudbury, MA

Object-Oriented Design & Patterns
Cay Horstmann
John Wiley & Sons.

Introduction to the Personal Software Process
Watts S. Humphrey
SEI Series in Software Engineering
Addison-Wesley
ISBN 0-201-54809-7

Course Description: This course presents the general principles that serve as the foundation of software engineering. The student is introduced to the broader context of system analysis, learns how total system requirements are analyzed and how decisions are made to allocate various functions among hardware, software, and people. The software lifecycle is examined. The course presents some professional issues, including accountability of the software engineer in complex
systems and legal issues and laws that relate to software. Introduces database concepts and graphical user interfaces.

**Course Goals:**
This is an introduction to software development techniques that stresses development life cycles, the confirmation of requirements, on-time performance, and the construction of software that will be well tested and efficiently maintained.

Individual software development and personal time management are introduced through the Software Engineering Institute's (SEI) Personal Software Process.

Object oriented analysis and design are emphasized along with the Unified Modeling Language (UML) and the Unified Software Development Process (USDP).

Small teams (4-5) will be organized to develop systems that incorporate the concepts introduced in the class. The techniques will be applied to real world projects in 4339.

This is a writing intensive course, and at least two writing assignments will be completed.

The first assignment will address the Personal Software Process lessons applied in the course and how the techniques will apply to future software projects.

The second assignment will be to complete a combined functional specification (requirements) and design document (technical). This document will be developed by the team.

A midterm exams will also be in an essay format.

**Course Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Mid-Term Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Labs</td>
<td>20%</td>
</tr>
<tr>
<td>PSP Paper</td>
<td>20%</td>
</tr>
<tr>
<td>Other Writing Assignments</td>
<td>10%</td>
</tr>
<tr>
<td>Team Project</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance</td>
<td>10%</td>
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</tbody>
</table>

**Lab Grading:**

There will be two types of lab assignments: Initially you will be given 6 programming assignments. The primary purpose of these assignments is for you to practice following a defined development process and to collect personal process data. The labs are due one week after they are assigned. Labs must be on time and complete to receive full credit. Late submission will result in a reduced lab grade. All labs must be completed by Monday, March 16 to receive credit for the lab assignments.

**PSP Paper:**

The purpose of the PSP Paper is to demonstrate that you understand the process data you collected during the labs. Therefore, you cannot possibly write a PSP paper without doing the labs and collecting the data. The PSP Paper will be graded based on its contents – a grading rubric will be distributed when the paper is assigned.
**Exam Dates:**
- Mid-term: Friday, Oct. 23
- PSP Paper due: Monday, Nov. 2

**Attendance Policy:** Attendance is required and will count as 10% of your grade. Arriving late for class counts as ½ absence. Absence will be excused if notice is received in advance.

### Weekly Topic Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Monday Lectures 10:00-10:50</th>
<th>Friday Lectures 10:00-12:50</th>
<th>Wednesday Lab 11-12:50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug 31</td>
<td>Introduction Introduction to PSP Humphrey Ch 1 &amp; 2</td>
<td>Tsui Chapter 1 Horstmann Chapter 1</td>
<td>Lab 1</td>
</tr>
<tr>
<td>2</td>
<td>Sep 7</td>
<td>Labor Day</td>
<td>Tsui Chapter 2 Horstmann Chapter 2</td>
<td>Lab 2</td>
</tr>
<tr>
<td>3</td>
<td>Sep 14</td>
<td>Humphrey Ch 5 &amp; 6</td>
<td>Tsui Chapter 3 Horstmann Chapter 3</td>
<td>Lab 3</td>
</tr>
<tr>
<td>4</td>
<td>Sep 21</td>
<td>Humphrey Ch 11</td>
<td>Tsui Chapter 4 Horstmann Chapter 4</td>
<td>Lab 4</td>
</tr>
<tr>
<td>5</td>
<td>Sep 28</td>
<td>Humphrey Ch 7 &amp; 8</td>
<td>Tsui Chapter 5 Horstmann Chapter 9</td>
<td>Lab 5</td>
</tr>
<tr>
<td>6</td>
<td>Oct 5</td>
<td>Humphrey Ch 9</td>
<td>Tsui Chapter 6 Horstmann Chapter 5</td>
<td>Lab 6</td>
</tr>
<tr>
<td>7</td>
<td>Oct 12</td>
<td>Review for Midterm</td>
<td>MID TERM EXAM</td>
<td>Lab Makup All Labs due for Credit PSP Paper Assigned</td>
</tr>
<tr>
<td>8</td>
<td>Oct 19</td>
<td>Team Assignments</td>
<td>Tsui Chapter 7 Horstmann Chapter 6</td>
<td>Team Project</td>
</tr>
<tr>
<td>9</td>
<td>Oct 26</td>
<td>Team Presentations</td>
<td>Tsui Chapter 8 Horstmann Chapter 10</td>
<td>Team Project</td>
</tr>
<tr>
<td>10</td>
<td>Nov 2</td>
<td>Team Presentations PSP Paper Due</td>
<td>Tsui Chapter 9 Horstmann Chapter 7</td>
<td>Team Project</td>
</tr>
<tr>
<td>11</td>
<td>Nov 9</td>
<td>Team Presentations</td>
<td>Tsui Chapter 10 “Head-First” Design Patterns</td>
<td>Team Project</td>
</tr>
<tr>
<td>12</td>
<td>Nov 16</td>
<td>Team Presentations</td>
<td>Tsui Chapter 11 “Head-First” Design Patterns</td>
<td>Team Project</td>
</tr>
<tr>
<td>13</td>
<td>Nov 23</td>
<td>Team Presentations</td>
<td>Thanksgiving</td>
<td>Tsui Chapter 12 Horstmann Chapter 7*</td>
</tr>
<tr>
<td>14</td>
<td>Nov 30</td>
<td>Team Presentations</td>
<td>Horstmann Chapter 8</td>
<td>Team Project</td>
</tr>
<tr>
<td>15</td>
<td>Dec 7</td>
<td>Team Presentations Final Presentation Dry- Run</td>
<td>Study Day</td>
<td>Team Project (last day of classes)</td>
</tr>
</tbody>
</table>

Dec 14 Final Exam Week
Final Project Presentations Friday, Dec. 18, 8:00am
Other Important Information

Disability Disclosure
Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible. Contact Disability Resources and Services at 215-204-1280 in 100 Ritter Annex to coordinate reasonable accommodations for students with documented disabilities.

Academic Freedom
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has a policy on Student and Faculty and Academic Rights and Responsibilities (Policy #03.70.02) which can be accessed through the following link:
http://policies.temple.edu/getdoc.asp?policy_no=03.70.02

Academic Honesty
Academic cheating (such as plagiarism, copying during an exam, copying homework, stealing files and passwords, etc.) is strictly prohibited in this course. The penalty for the first offense will normally be an F in the course. A subsequent offense (in this or any other course) may also be referred to the University Disciplinary Committee.

No collusion what-so-ever during an exam will be tolerated. In particular, no talking or other sharing of information (for example during open book exams) is permitted. Keep your eyes on YOUR paper.

IGNORANCE OF ACCEPTABLE GUIDELINES OF CONDUCT IS NO EXCUSE.

http://policies.temple.edu/getdoc.asp?policy_no=03.70.12

Dates to Remember
First Day Of Class: Monday, August 31, 2009
Last Day to Drop: Monday, September 14, 2009
Last Day to Withdraw: Monday, November 2, 2009

NOTE: You can only withdraw from a course once. You can only withdraw from a total of five courses.