17-602 Syllabus

17-602 Course Syllabus – TBD

**Course Title:** Introduction to the Personal Software Process  
**Meeting Times:** TBD  
**Classroom:** TBD

**Course Description:**

The Personal Software Process: A Practitioner's Start-Up Kit course introduces the highest-leverage metrics, specifically the ones associated with improving time estimation and reducing defects. You will watch 14 lectures, do 9 programming problems, four reports, and read selected chapters from Watts Humphrey's book(s). Your course work will help you to immediately apply Personal Software Process (PSP) principles to your daily work. You will also be introduced to some time management techniques and what follows after PSP if you are interested in using these concepts on teams.

PSP is intended for practicing software engineers and their managers. The measures introduced can serve as the basis for software development process improvement in the organization as well as helping individuals. If you go on to take a more comprehensive course in the PSP through the Software Engineering Institute or other SEI-authorized PSP trainers, you will be able to concentrate more completely on advanced metrics.

Completion of this course does not result in SEI certification if this is important to you.

**Textbooks and Readings:**

**Course Text (You only need one)**


[https://www.sei.cmu.edu/watts/collection.cfm](https://www.sei.cmu.edu/watts/collection.cfm)

**Prerequisites:**

Students are expected to be familiar with programming in at least one programming language.

**Course Objectives:**
By successfully completing the Practitioner’s Starter Kit, you will achieve these objectives:

- You will reduce overall defect rates
- You will spend more time at the front end of the development cycle
- You will eliminate or nearly eliminate compile and test defects
- You will be able to more accurately estimate the time it takes to build software

**Instructor:**
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**Overall evaluation of Course Assignments:**

Your instructor reviews your homework assignments for the following elements:

1. Check if the data presented is within "reasonable" bounds for the current assignment. Reasonable bounds is dependent upon each case depending upon the assignment and the tools being used by you to develop the assignment.
2. Identify any spikes or unusual patterns in the data which may be an indication of incorrect application of the process, a simple typo or incorrectly stated assumptions.
3. Collate data submitted by multiple students in order to come up with a common set of numbers reflecting the data of the entire class.
4. Assignments will be marked as either, PASS, PASS but, or Resubmit.
   a. PASS - Means everything is good and you can proceed. Scored as a zero.
   b. PASS but - Means you did pretty well, but there are some minor things to review and in the long run these might great problems. Scored as a 0.5 (zero point 5)
   c. Resubmit - You made an error that will cause many issues later on so it must be corrected before your proceed. Scored as a 1 (One)
5. Object of course is to complete all assignments with the minimum score possible. i.e. a total score of zero at the end means you got a perfect score.

A passing grade indicates that you have successfully demonstrated an understanding of the lecture material. If you assignments show that you are experiencing comprehension difficulty, you will receive an email that details what areas in the homework assignments you need to review and submit again.

**How To Succeed: A Few Tips**

*Ask for assistance*
If anything is not clear, let your instructor know. If you’re not sure how to answer a question, give it your best shot, but accompany your answer with a note explaining the points that you
found difficult or confusing. Don't be hesitant; thoughtful questions show that you are thinking about the material.

Make the most of the Chatroom, BBoard, and E-mail
Chatroom transcripts will be posted on the Website, so, if you miss a chat session, you can check to see if any questions you had were already answered.

One step at a time
Each assignment you complete is a major step toward completing the course. By the time you get to the final lecture, you've come a long way. Approach that last step with confidence.

Topics covered

- PSP levels beginning at level 0 and proceeding through level 2.1 - 9 assignments to make this progression
- Use of a new tool to help capture your data and help make the data available for analysis
- Concepts of process data collection, analysis and improvement
- Time management and concentration techniques
- What follows after PSP and the body of knowledge surrounding "statistical" software development
Assignments should be submitted by 11:50 pm ET on the date due. Submissions for the assignments are a backup copy of your Dashboard data saved as a zip file. Use the C setting to save a backup as a zip file and submit that.

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Introduction to the PSP’07</th>
<th>Readings from Humphrey 05</th>
<th>Assignment</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18   May</td>
<td>Intro to the PSP</td>
<td>Chapters 1.2 &amp; 3</td>
<td>Familiarize yourself with the course materials</td>
<td>Install PSP Dashboard Basic Instructions</td>
<td>25 May</td>
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<tr>
<td></td>
<td></td>
<td>Lecture 1</td>
<td></td>
<td>Read Chapters 1 &amp; 2</td>
<td>Using PSP 0, Program 1B</td>
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<td>2</td>
<td>20   May</td>
<td>The Dashboard Tool</td>
<td>Read tutorial onprocessdash.com</td>
<td></td>
<td>Using PSP 0.1, Program 2A, p.753, and Reports R1 and R2</td>
<td>28 May</td>
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<tr>
<td>3</td>
<td>27   May</td>
<td>Collecting Data</td>
<td>Skim collection reading</td>
<td></td>
<td>Using PSP 0.1, Program 2B Data Collection</td>
<td>4 June</td>
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<tr>
<td>4</td>
<td>1    June</td>
<td>The Planning Process</td>
<td>Chapter 4 &amp; 5</td>
<td></td>
<td>Interim Report (R3)</td>
<td>8 June</td>
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<td>5</td>
<td>3    June</td>
<td>Current Software Size Estimation Methods</td>
<td>Chapter 6 Skim reading: Estimation comparison</td>
<td></td>
<td>Using PSP 1.0, Program 3B &amp; Program 4B (Combine requirements into a single assignment)</td>
<td>11 June</td>
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<tr>
<td>6</td>
<td>8    June</td>
<td>The PROBE Size Estimation Method</td>
<td>See scanned copy of chapter 6 from 05</td>
<td></td>
<td>Using PSP 1.0, Program 5B</td>
<td>15 June</td>
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<tr>
<td>7</td>
<td>10   June</td>
<td>Design and Code Reviews</td>
<td>Chapter 12, 13, &amp; 14</td>
<td></td>
<td>Using PSP 1.1, Program 6B</td>
<td>18 June</td>
</tr>
<tr>
<td>8</td>
<td>15   June</td>
<td>Software Quality Management</td>
<td>Chapter 16, 17, 18 &amp; 19</td>
<td>Chapter 8</td>
<td>Using PSP 2.0, Program 7B</td>
<td>22 June</td>
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<tr>
<td>9</td>
<td>17   June</td>
<td>Process Definition</td>
<td>Chapter 11 Managing your time Chapter 7</td>
<td></td>
<td>Write a PIP For your current personal development process.</td>
<td>25 June</td>
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<tr>
<td>10</td>
<td>22   June</td>
<td>Resource &amp; Schedule Estimating</td>
<td>Managing Commitments Chapter 8 &amp; 9</td>
<td></td>
<td>Using PSP 2.1 Program 8B</td>
<td>29 June</td>
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<tr>
<td>11</td>
<td>24   June</td>
<td>Time Management</td>
<td>See 05 readings -&gt;</td>
<td><a href="http://www.studygs.net/timman.htm">www.studygs.net/timman.htm</a></td>
<td>Develop a complete schedule (submit if you want comments)</td>
<td>Not graded</td>
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<tr>
<td>12</td>
<td>29   June</td>
<td>Pomodoro - Concentration</td>
<td>See 05 readings -&gt;</td>
<td>pomodorotechnique.com/</td>
<td>Using PSP 2.1 Program 10B</td>
<td>1 July</td>
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<tr>
<td>13</td>
<td>1    July</td>
<td>The PSP Body of Knowledge (BOK)</td>
<td>skim.sei.psu003.pdf</td>
<td></td>
<td>Final Report and Additional Questions</td>
<td>6 July</td>
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<td>14</td>
<td>6    July</td>
<td>PSP and TSP</td>
<td>Chapter 20, same as 05</td>
<td>SEI Website on PSP/TSP</td>
<td>All Work done by 6 July</td>
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