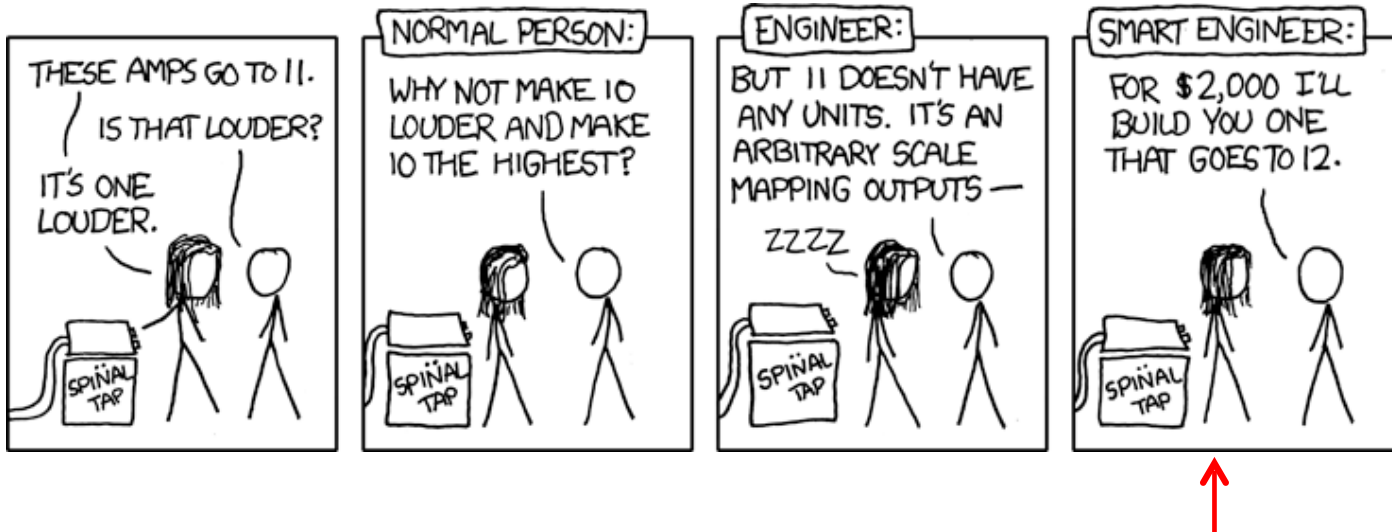


**J Paul Gibson**

**[www-public.int-evry.fr/~gibson/Teaching/CSC7336/](http://www-public.int-evry.fr/~gibson/Teaching/CSC7336/)**



The **primary objective** is to provide additional (**advanced/smart**) software engineering skills that may be of use to you in your future projects.

The **secondary objective** is to reinforce your mastery of software engineering fundamentals.

The teaching approach is primarily PBL.

You will be given a project that asks you to demonstrate understanding of the advanced concepts, and ability to use them in solving a real-world problem.

You will have an exam that asks you to demonstrate a critical analysis of the interaction between these concepts.

# CSC7336: Overview

<http://www-public.int-evry.fr/~gibson/Teaching/CSC7336/>



Teaching-CSC7336 for Dr J. Paul Gibson, INformatique (INF), Telecom SudParis, France.

## Advanced Software Engineering for Smart Devices

The material will be uploaded dynamically: the teaching approach is based on PBL and much of the learning will be through interaction/group work during the assigned lecturing time. (Please check the website for updates before every lecture.)

### Assessment

The assessment will involve :

project work - deadline Friday 9th February (noon) pdf  
written exam (DATE TO BE DECIDED) Example Exam Questions,

Each will be marked out of 20. The weighting between each will be decided based upon performance in each. 75% of the final mark will be based on the best mark from either the project or the exam. The remaining 25% will be based on the mark in the other assessment.

### Useful Links

[html](#) JVM Monitor Integrated with Eclipse

### Sessions

Sessions are a mix of problem-based learning, group project work, directed practicals, interactive lectures and traditional lectures. There is no preset format - the lecturer organises the style and content of each session depending on the needs of the class.

#### Session 1: Wednesday 8th November (9h45, B08) - Introducing Aspects

##### Lecture Slides

Introduction To CSC7336 slides, questionnaire pdf

A problem with aspects pdf, [SegmentOverlap](#) Java project to import into Eclipse

##### Additional reading material

pdf *Aspect-oriented programming*, Gregor Kiczales, John Lamping, Anurag Mendhekar, Chris Maeda, Cristina Lopes, Jean-Marc Loingtier and John Irwin, published at ECOOP'97.

pdf *An overview of ASPECTJ*, Gregor Kiczales, Erik Hilsdale, Jim Hugunin, Mik Kersten, Jeffrey Palm, and William Griswold, published in Commun. ACM 44, 10 (October 2001).

pdf *The paradoxical success of aspect-oriented programming*, Friedrich Steimann, published at OOPSLA'06.

# Your Learning Objectives?



You have to meet my **learning objectives**

But I can also match these to your **learning objectives**

However, we do need to **assess** what you have learned

## **Prerequisites:**

- Foundations of software engineering,
- Foundational mathematics,
- Object oriented Programming

# Things We Will/May

Aspects - AOP and AOD - *how do we distribute development increments?*

Reflection - *how do we do self-aware?*

Foundations to AI - *how do we do smart?*

Distributed Algorithms - *how to cope with the major challenges?*

Big Data - Analysis techniques and Training Expert Systems

Parallel (multi-threaded) Programming -

Cloud Services - Google, Amazon, IBM

App/Game Design - rapid prototyping

Simulation modelling

Developing for Android / Developing for iOS

Different programming languages (like Wyvern, Prolog, Clojure, Ruby, ... )

.... Do you have any ideas/requests???



**Please complete the questionnaire**

