

Software Engineering and Project Management

INFO-F-307

Ragnild Van Der Straeten

2013-2014

ULB

Software Engineering and Project Management

Organisation of the course

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Université Virtuelle: INFO-F-307

Professional Software Engineering

- work independently
- study state-of-the-art
- understand, focus, analyse
- specify, design, make choices, implement
- write, report, present
- **quality-driven**

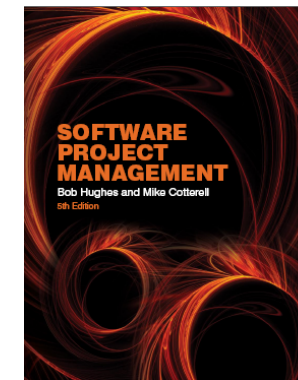
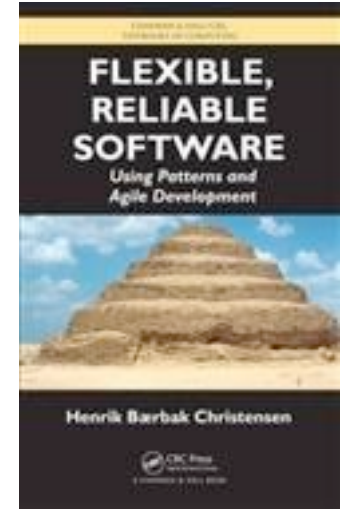
Criteria

- team work
- individual contributions
- application of the methodology
- customer satisfaction
- on time deliverables
- code documentation / naming conventions
- tests
- application of patterns
- architecture
- ...

Quality in Software Engineering and Project Management

References

- Course is based on a few books:
 - Henrik Baerbak Christensen. *Flexible, Reliable Software (Using Patterns and Agile Development)*, CRC Press 2010.
 - Eric Braude and Michael E. Bernstein. *Software Engineering Modern Approaches*. Wiley 2011
 - Bob Hughes and Mike Cotterell. *Software Project Management*. McGraw-Hill 2009
 - E. Gamma and R. Helm and R. Johnson and J. Vlissides, *Design Patterns: Elements of Reusable Object-Oriented Software*, Addison Wesley, 1994.
 - Kent Beck. *Extreme Programming Explained*, Second Edition, Addison Wesley, 2004.



Course Overview

- Theme 1: Software Processes
 - Introduction to Software Engineering (1)
 - Software Processes: focus on XP (1)
 - Reliability, Flexibility and Maintainability (2)
 - Configuration Management (homework)
- Theme 2: Project Management (3, 6)
 - Organization, Tools and Risk Management
 - Estimation, Scheduling and Planning
- Theme 3: Program Design
 - TDD, Systematic Testing (7)
 - Towards Strategy Pattern (8)
 - Refactoring and Integration (8, 9)
 - Test stubs (9)
 - Towards Abstract Factory (10)
 - Pattern Fragility (11)
 - Design Pattern Catalog (12)
- Seminars by people from industry

week/date/hour	subject
1/19-09-2013/10h - 12h	Intro/software processes
2/26-09-2013 /10h - 12h	software processes/PM
3/03-10-2013 /10h - 12h	PM
4/10-10-2013 /10h - 12h	intro project, no theory
5/17-10-2013 /10h - 12h	no theory
6/24-10-2013 /8h - 12h	PM/PD
7/31-10-2013 /10h - 12h	PD
8/07-11-2013 /10h - 12h	PD
9/14-11-2013 /10h - 12h	PD
10/21-11-2013 /10h - 12h	project
11/28-11-2013 /10h - 12h	PD
12/05-12-2013 /10h - 12h	seminar
13/12-12-2013 /10h - 12h	seminar

Course Material

- All material on UV:
 - slides and book (Transparents)
 - reading material (Documents supplémentaires)
 - homework (Travail à domicile)
 - exercises (Exercices)
 - PROJECT ASSIGNMENT

Project

- group work (5 to 6 people)
- goal:
 - develop a web application
 - using best practices of eXtreme Programming methodology
 - with iterations of two weeks.
- output:
 - running system (source code), tests, documentation
- iteration:
 - current version of source code
 - updated version of user stories, time charts, architectural overview, design, ...

Organisation

- **What do you need to do before September 30???**
 - compose a group of 2 people
 - send an email to infof307@lit.ulb.ac.be with the names of the team members BEFORE 30/09/2013 4PM. After that date, no modifications are allowed anymore!!! Persons that presents themselves after that date will be appointed to a group by myself!!!!
 - project manager will be appointed by me!

Calendar Project

Semaine	Actions	Date
3	Échéance pour la composition des groupes	30 septembre
4	Séance d'introduction au projet	10 octobre
5	No classes	
6	No classes	
7	Gestion du projet (Itération 1)	29 octobre
8	No classes	
9	Échéance (It. 1) + Gestion du projet (It. 2)	13 novembre 11 novembre
10	Discussion du code (It. 1) + Démonstration (It. 1)	21 novembre
11	Échéance (It. 2) + Gestion du projet (It. 3)	27 novembre 25 novembre
22	Démonstration (It. 2) + Discussion du code (It. 2)	à convenir
23	Échéance (It. 3) + Gestion du projet (It. 4)	19 février 17 février
24	Démonstration (It. 3) + Discussion du code (It. 3)	à convenir
26	Échéance (It. 4)	12 mars
28 ou 29	Évaluation du projet	à convenir

Organisation

- Exam
 - project
 - project work
 - defence of project
 - individual evaluation
 - quotation: 15/20 for project and 5/20 for oral exam
- No second session for projects!!!
- Consequence: if you have less than 5/20 for the project part, a second session is superfluous!!

Active Learning

- Why?
 - improved learning process
 - better understanding
- How?
 - questions
 - ticket to leave
 - think/pair/share
 - readings
 - homework
 -

Miscellanea

- Communication
 - through UV: check the “Annonces”!!!
- Assistants:
 - Mohammed Youssef
myoussef@ulb.ac.be
 - Jean-Sébastien Lérat
Jean-Sebastien.Lerat@ulb.ac.be

Structure of the Slides

- For each part of the course
 - learning goals
 - roadmap (table of content)
 - for each item in the roadmap
 - [roadmap]
 - content

Icons used



from the respective book

definition



interactive learning



should be known