Integrated Software Project

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Academic Year 2018-2019

LIÈGE université

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Agenda

- Course Overview
- Learning Activities
- Pedagogical Support
- Evaluation
- Organization
- Projects

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Overview

- Welcome to this course!
- Substantial integrated software project
- Integrated?
  - builds on technical learning outcomes of your bachelor studies
    - ✓ programming (object oriented, algorithmic, data structures, ...)
    - ✓ databases
    - ✓ networks
    - ✓ ...
  - builds on technical learning outcomes of this year
    - ✓ software engineering
      - ‣ 5 seminars organized
    - ✓ project management
      - ‣ 2 seminars organized
    - ✓ operating systems
    - ✓ computer security
    - ✓ machine learning
    - ✓ ...

Overview (2)

- Realistic (for actual users), complex, and incompletely defined project
  - as in real life
- Based on 5 sprints (more details later)
  1. Sprint 0
  2. Sprint 1
  3. Sprint 2
  4. Sprint 3
  5. Sprint 4

Overview (3)

- Project done by Teams of students
  - 4 → 6 students per Team
  - Teams build based on subject preferences
  - please, fill in the registration sheet
    - https://goo.gl/forms/Si0sndyhayl7gM1w2
- Strong practice of project management skills
  - one student per Sprint
    - *Scrum master*

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Learning Activities

- Software Engineering
  - B. Laugraud, B. Donnet
  - 5 seminars
- Software project management
  - J.-L. Binot
  - 2 seminars during the year
- Communication skills
  - P. Tossings
  - written and oral communication
- Team working
  - Véronique Jans, Tiber Manfredini, Kevin Goffart
  - how do we organize ourselves within the group?
  - how do we manage conflicts?

Learning Activities (2)

- New technologies/languages/systems/ methodology/...
    - leave your comfort zone...
    - ... but requires learning curve

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Support

- Course web site
  - https://www.ecampus.ulg.ac.be/
  - slides
    - ✓ administrative details
    - ✓ seminars
  - document templates
  - year organization
  - agenda
  - forum
- Git available
  - http://gitlab.montefiore.ulg.ac.be
- Submission platform
  - http://submit.montefiore.ulg.ac.be

Support (2)

- Coordinators
  - Jean-Louis Binot (jean-louis.binot@skynet.be)
  - Benoit Donnet (benoit.donnet@ulg.ac.be)
  - Guy Leduc (guy.leduc@ulg.ac.be)
  - Laurent Mathy (laurent.mathy@ulg.ac.be)
- Teaching assistants
  - Benjamin Laugraud (blaugraud@ulg.ac.be)
  - Benoît Mattheus (Benoit.Mattheus@uliege.be)

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Evaluation

- No exam!
  - evaluation done throughout the year
- Grade allocation
  - 45% for intermediate review meetings
    - ✓ progress achieved, IT aspects
    - ✓ quality of project management and communication
    - ✓ 10% per meeting
      - ‣ except Sprint 0 meeting that accounts for 5%
  - 10% for project completion report
  - 30% for delivered software and tests
  - 15% for final defense
    - ✓ oral presentation + Q/A's
    - ✓ demonstration

Evaluation (2)

- Normally, the grade is assigned per Team
  - same grade for each member of the Team
- However, in case of "problem(s)", grades can be assigned individually
- No resit allowed!

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- **Organization**
- Projects

Organization

- Monday PM
  - 14h → 18h
  - Room 2/93, B28 (except today, S36/B37)
- Presence at meetings with coaches mandatory
- Presence at seminars and intermediate reviews mandatory
- Each student fills the Google form for his project preference by Wednesday September 26th, 10:00
  - see https://goo.gl/forms/Sv4Om3GqJhnUWl1A2
- The project starts next Monday
  - Teams will be announced by the end of the week

Organization (2)

- Seminars agenda

Month	Day	Schedule	Seminar
September	Monday 17/09	14h → 14h30	Course kick-off
		14h30 → 17h30	Project Management 1
	Monday 24/09	14h → 16h	Software Engineering 1
		16h → 18h	Written Communication
October	Monday 01/10	13h30 → 16h	PSGO 1
	Monday 08/10	14h → 16h	Software Engineering 2
		16h → 18h	Oral Communication
November	Monday 05/11	14h → 16h	Software Engineering 3
	Monday 19/11	14h → 16h	Software Engineering 4
		16h → 18h	Project Management 2
	Monday 26/11	13h30 → 16h	PSGO 2
February	Monday 04/02	14h → 16h	Software Engineering 5
	Monday 11/02	13h30 → 16h	PSGO 3
March	Monday 25/03	13h30 → 16h	PSGO 4

Organization (3)

- Sprints agenda

Phase	Start	End	Content
Sprint 0	01/10	15/10	Review Slides
Sprint 1	15/10	12/11	Project Status Report + Review Slides
Sprint 2	12/11	03/12	Review Slides
Sprint 3	04/02	11/03	Project Status Report + Review Slides
Sprint 4	11/03	29/04	Review Slides

Organization (4)

- Sprints agenda (cont.)
- Be careful
  - project frozen between 04/12 and 04/02
    - ✓ due to exams

Organization (4)

- Reviews/Evaluation agenda

Evaluation	Date	Deadline	Organization
Review 0	Monday 15/10	Thursday 11/10, 23h59	45min/group
Review 1	Monday 12/11	Thursday 08/11, 23h59	45min/group
Review 2	Monday 03/12	Thursday 29/11, 23h59	45min/group
Review 3 (recorded)	Monday 11/03	Thursday 07/03, 23h59	45min/group
Review 4	Monday 29/04	Thursday 25/04, 23h59	45min/group
Final Review & Demo	Monday 13/05	Thursday 09/05, 23h59	review AM demo PM

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Projects

- This year, multiple subjects are available
- You have the opportunity to rank (from best to worst) the subjects
  - please, complete the Google form by Wednesday 26th, 10:00
  - see https://goo.gl/forms/Si0sndyhayl7gM1w2
- Teams will be built according to preferences
  - as far as possible

Projects (2)

- Subject 1
  - *Automated Ridesharing Suggestion System for Covoituliège*
  - in collaboration with the Covoituliège team
    - ✓ see https://covoituliege.ulg.ac.be
- Subject 2
  - *Web Interface for Smart Lighting System Configuration*
  - in collaboration with SmartNodes
    - ✓ see https://www.smartnodes.be
- Subject 3
  - *Innovative System for Collecting Flood-Related Observations*
  - in collaboration with ArGenCo department
    - ✓ see https://www.uee.uliege.be/cms/c_2275476/fr/uee-portail
- Subject 4
  - *Prototyping of End-to-End Next Generation Food Traceability Using Digital Technologies*
  - in collaboration with LevelIT
    - ✓ see https://www.level-it.be