ETSA05 Ingenjörsprocessen för programvaruutveckling – samhällsaspekter – Software Engineering: Soft Issues

Course program, v. 1.0 15-03-14
Prof. Per Runeson, Dept. Computer Science, Lund University
Study period: LPVT2; Mandatory for D2.

Personnel

Per Runeson, course responsible, lectures, per.runeson@cs.lth.se, 046-222 93 25
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Guest lecturers: Fredrik Edman, LU Innovation, Mateo Davis and Carl-Erik Mols, Sony Mobile

Course literature

Liter-ature	M. Höst, B. Regnell and P. Runeson, Att genomföra examensarbete, kap 5, 7.3.3, Studentlitteratur, 2006-
Techno-logy	A. Basu, Assuring Software Quality with ISO 9126, *IT Management*, pp 28-29, September 2005. H-W Jung, S-G Kim and C-S Chung, Measuring Software Product Quality: A Survey of ISO/IEC 9126, *IEEE Software,* pp 88-92, Sep/Oct 2004.
Law	K. Teska, Software patents 101, *IEEE Spectrum*, p 20, March 2008. B. Hunt, J Bessen, The Software Patent Experiment, *Business Review – Federal Reserve Bank of Philadelphia*, Third Quarter 2004. P. Samuelson, Is Software Patentable? *Communications of the ACM*, 56(11), pp.23–25. Nov 2013 M. Ruffin and C. Ebert, Using Open Source Software in Product Development: A Primer, *IEEE Software*, pp 82-86, Jan/Feb 2004. M. Henley, R. Kemp, Open Source Software; An Introduction, *Computer Law & Security Report*, 24:77-85, 2008.
Business	L. Mulder, The Importance of a Common Project Management Method in the Corporate Environment, *R&D Management*, 27(3):189-196, 1997. J. W. Mullins, What to Do Before You Write a Business Plan, Business Strategy Review. 21(4), pp.92–93, 2010 Venture Cup, Guide till en vinnande affärsidé www.venturecup.se
Ethics	A. Rashid, J. Weckert, and R. Lucas. Software engineering ethics in a digital world. *Computer*, 42(6):34–41, 2009. B. Berenbach and M. Broy. Professional and ethical dilemmas in software engineering. *Computer*, 42(1):74–80, 2009. L. Hatton and M. van Genuchten, When Software Crosses a Line, *IEEE Software,* pp 29-31, Jan/Feb 2016. D. Spinellis, Developer, Debug Thyself, *IEEE Software,* pp 3-5, Jan/Feb 2016. K. A. Olsen, The $100,000 Keying Error*, IEEE Computer*, pp 106–108, April 2008.

Information

Course information is available at http://cs.lth.se/etsa05/

Content

Lectures: The lectures give an introduction to societal issues on software: technology, business, ethics and law.

Group essay: An essay is written jointly be a project team of four students, where the whole team is responsible for the result. The essay shall be original work by the team.
Seminar tasks: Seminars provide training and reflection around topics that will be documented in the group essay.

Submissions

All submissions shall be delivered via e-mail to etsa05@cs.lth.se. The title field MUST contain the ID of the seminar (*Sem1, Sem2, Sem3, Sem4, Sem5, Sem6, outline* or *essay*) and your student ID (e.g. *dt08mn9*). All submitted documents shall be in pdf format. *No other formats are accepted.*

Schedule

Week 12 21-24/3	Technology	22/3 Lecture 1a: Introduction, quality attributes, accessibility (Per Runeson)	Basu 2005 Jung et al 2004 Mulder, 1997
Week 13 28/3-1/4		29/3 Lecture 1b: Technology and business. Reading and writing academic papers (Per Runeson) 31/3 Seminar 1: Quality attributes and accessibility Essay: form groups and choose topic	Höst 2006
Week 14 4-8/4	Ethics	5/4 Lecture 2: Technology and ethics (Per Runeson) 7/4 Seminar 2: Ethical technology assessment Essay: Outline and literature list (**April 10**)	Rashid, 2009 Berenbach, 2009 Hatton & Genuchten 2016 Spinelis, 2016 Olsen, 2008
Week 15 11-15/4	Law& business	12/4 Lecture 3: Open source software (Mateo Davis and Carl-Erik Mols) 14/4 Seminar 3: Open source software	Ruffin & Ebert, 2004 Henlye & Kemp 2008
Week16 18-22/4		19/4 Lecture 4: Patent and copyright (Fredrik Edman, LU innovation) 21/4 Seminar 4: Patent and copyright	Teska 2008 Hunt & Bessen, 2004 Samuelson, 2013 www.prv.se
Week 17 25-29/4	Business	26/4 Lecture 5: Innovation (Per Runeson) 28/4 Seminar 5: Peer review of essay Essay: Final delivery for peer review (**April 26**)	
Week 18 2-4/5		3-4/5 Seminar 6: Write business plan and review another	Mullins 2010 www.venturecup.se
W 19	Synth		
Week 20 16-20/5		19/5 Seminar 7: Report on group essay (orally – **May 19**) and in writing - **May 27**)	

Assessment

The course is assessed through active participation in seminars and in writing and presentation of the group essay. Coming more than 10 minutes late to a seminar is a fail. Grade pass requires reported results on seminars 1-7 and accepted group paper. The final grade (3,4,5) is based on the quality of the group essay and an equal contribution to the essay. Essays not passing the first assessment may be updated, but does only give grade 3.
The essays are scored on a scale 1-5 on each of the following 9 (sub-)characteristics:

- System description
- Content – quality attributes, accessibility, business, ethics, law
- Form – language, academic style, references

The sum of scores 41-45 give grade 5, 36-40 grade 4, 30-35 grade 3.