

3.0 credits	30.0 h	2q
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Teacher(s) :	Mens Kim ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Inline resources:	<p>> http://www.uclouvain.be/en-cours-2014-lingi2359</p> <p>et/ou > http://moodleucl.uclouvain.be/course/view.php?id=4633</p>
Main themes :	<p>Current topics of software engineering such as:</p> <ul style="list-style-type: none"> -- modeling, analysing, and improving software processes, -- reusing software products and processes, -- engineering secure applications, -- designing and analysing software architectures, -- domain-specific architectures, -- agent-oriented software, -- software testing, -- software engineering environments, -- formal methods, -- knowledge-based software engineering, -- software reengineering, -- software engineering techniques for specific types of systems: open systems, web services, reactive systems, real-time systems, safety-critical systems, mobile systems, ubiquitous systems, hybrid systems, etc.
Aims :	<p>Given the learning outcomes of the "Master in Computer Science and Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes:</p> <ul style="list-style-type: none"> -- INFO1.1-3 -- INFO3.1, INFO3.2 -- INFO5.3-6 -- INFO6.1, INFO6.3, INFO6.4 <p>Given the learning outcomes of the "Master [120] in Computer Science" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes:</p> <ul style="list-style-type: none"> -- SINF1.M3 -- SINF3.1, SINF3.2 -- SINF5.3-6 -- SINF6.1, SINF6.3, SINF6.4 <p>Students completing successfully this course will be able to</p> <ul style="list-style-type: none"> -- Understand and explain recent results from software engineering research. --

	<p>Assess the current state of the art in specific areas, and discuss open issues.</p> <p>--</p> <p>Interrelate current issues of software engineering.</p> <p>Students will have developed skills and operational methodology. In particular, they have developed their ability to</p> <p>--</p> <p>self study (search for relevant material, assimilate/understand, evaluate/compare, summarise/illustrate)</p> <p>--</p> <p>explain to others using efficient modern supports (slides, ...)</p> <p>--</p> <p>participate actively to discussions in a research group</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods :	<p>Each student (either individually or in pairs) will need to make a presentation of 1 to 2 hours to the other students.</p> <p>He or she will also have to produce two different reports each of about 10 pages.</p> <p>In one report, the student will act as a reporter and provide a personal summary of the topic presented by another (group of) student(s). In the other report, the student will act as an as an illustrator and show an interesting example of the topic presented by another (group of) student(s).</p> <p>The final score will be a weighted average based :</p> <p>--</p> <p>on the quality of the presentation,</p> <p>--</p> <p>on the degree of participation to the other sessions,</p> <p>--</p> <p>on the quality of the two reports on topics presented by other students.</p>
Teaching methods :	<p>Each student will play 3 different roles (in different sessions) :</p> <p>--</p> <p>presenter at one session where he or she will present a topic in depth;</p> <p>--</p> <p>reporter for another session;</p> <p>--</p> <p>illustrator for yet another session.</p> <p>The last two roles involve the writing of an individual report.</p> <p>Furthermore, the students will participate actively in the discussions at each session.</p>
Content :	<p>The selected topic of the seminar may vary from one year to another, for example architectural and design patterns, or a survey of historically important and novel programming languages.</p>
Bibliography :	<p>References</p> <p>Students will rely on seminal or recent books, papers and web articles. For example, when the selected theme for the course would be 'architectural and design patterns', the following books, combined with webpages explaining specific design patterns, could be used as reference material :</p> <p>--</p> <p>D. Schmidt, M. Stal, H. Rohnert and F. Buschmann. Pattern-Oriented Software Architecture: Patterns for Concurrent and Networked Objects. Wiley, 2001.</p> <p>--</p> <p>F. Buschmann, R. Meunier, H. Rohnert, P. Sommerlad and M. Stal. Pattern-Oriented Software Architecture: A System of Patterns. Wiley, 1996.</p> <p>--</p> <p>E. Gamma, R. Helm, R. Johnson, J. Vlissides, Design Patterns: Elements of Reusable Object- Oriented Software. Addison-Wesley, 1995.</p> <p>Support</p> <p>All other relevant and practical information related to the course will be accessible on-line (see on-line resources). The same platform will also be the preferred means of communication between the teacher(s) and the students.</p>
Other infos :	<p>Background:</p> <p>--</p> <p>LINGI2255 or LSINF2255 : know and have experimented techniques and concepts associated with software development of large-size applications</p>
Cycle and year of study :	<p>> Master [120] in Computer Science</p> <p>> Master [120] in Computer Science and Engineering</p>
Faculty or entity in charge:	<p>INFO</p>