電気通信大学　平成16年度シラバス

授業科目名	ソフトウェアンジニアリング		
英文授業科目名	Software Engineering		
開講年度	2004年度	開講年次	
開講学期	後学期	開講コース・課程	博士前期・後期課程
授業の方法		単位数	2
科目区分	情報システム学研究科-情報システム設計学専攻-専門科目		
開講学科・専攻	情報システム設計学専攻		
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【講義の狙い，目標】

The course is aimed at understanding state-of-the-art in Software Engineering (SE)、 which may help students in their own software project development and realization. The course lays a foundation for using approaches and techniques to develop a high-quality software in an effective manner、 and also guides students in acquiring and maturing SE discipline.
Upon completion the course students should be able:

- to understand concepts、 principles、 and techniques of software engineering、
- to use in practice the principles of Object-Oriented Analysis and Design (OOAD)、
- to express and document their software designs in UML、
- to apply basic principles of software project management.

【内容】

1. Introduction: SoftWare Engineering BOdy of Knowledge (SWEBOK).
2. Software process; software process modeling and UML basics.
3. Requirements engineering and use-cases.
4. Object-oriented analysis and design.
5. Distributed architectures and web applications: modeling and design with UML.

6.
Learning objects vs software objects and components for e_Learn domain.
7.
Service Oriented Architecture: design of Web Services for e_Learning.

【教科書，参考書】

Books:
1. Jim Arlow UML and the Unified Process、 Addison Wesley; 2002、 ISBN 0 201 77060 1
2. Jim Conallen Building Web Applications with UML、 2nd Edition、 Addison Wesley; 2002、 ISBN: 0 201 73038 3
3. Paul Reed Developing Applications with Java and UML、 Addison Wesley; 2002、 ISBN 0 201 70252 5
A number of URIs pointing to resources on the Internet will be provided on the course web page.
4. E. Armstrong et al. The Java Web Services Tutorial, Sun Microsystems, Dec. 2003, http://java.sun.com/webservices/dpwnloads/webservicestutorial.html

【予備知識】

Experience in an object-oriented design and/or object-oriented programming language would be helpful but not required.

【演習】

Students should take an individual software project, provide it's vision and perform it consecutively in course.
the available UML tool should be acquired and mastered in order to carry out modeling and code engineering and re-engineering.

【成績評価】

Individual project up to 65-70% if incremental versions constantly, time and again presented on course web site, discussed with classmates and finally accomplished successfully;
- mid term test (about 10%);
- final exam-presentation (about 25%).

【その他】