

odule	Software Systems Design and Development
Semester(s)	3
Responsible	Prof. Dr. oec. Erhard Alde www.wi.hs-wismar.de/~alde ++49 3841 753 7618
Lecturer	Prof. Dr. oec. Erhard Alde
Language	English
Curriculum	Core module in the degree programme Master of Business Systems
Type of teaching	Private studies according to study notes including literature research using textbooks or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learning Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Workload	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Credit points	5
Prerequisites	Understanding of software systems and experience in software using, Experience in Project Management, Knowledge of business application systems
Module objectives	<p>Knowledge: Students gain competencies in using principles, methods and techniques of Software Engineering in the field of Business Systems.</p> <p>Skills: Students are able to use instrumental skills (especially the competence to participate in the design and development projects), systemic skills (especially the competence to manage design and development projects) and communicative skills, focused on the work in interdisciplinary teams.</p> <p>Competencies: Focus is on achieving the following competencies:</p> <ul style="list-style-type: none"> • Independent justification of systems design applied to business information systems • Capability for participating in the design of software development and software implementation projects • Capability for applying current design methodologies and tools
Content	<p>The following main issues are addressed:</p> <ul style="list-style-type: none"> • Work packages of system development • Software Management • Quality Management, Capability Maturity Model Integration (CMMI) • Application of the Unified Modeling Language (UML) and the Business Process Model and Notation (BPMN) in systems development projects <p>Content and Techniques will be related to participants' experience and workplaces. Thus, different aspects of Software Systems Design and Development will be discussed for real-world situations and processes.</p>
Examination	Review of case study, oral presentation and or written exam. Assessment details will be provided at the beginning of the semester.
Reading list	<p>No single textbook exists that covers all the topics addressed in this module. Following the requirements of the European Qualification Framework (EQF) students will be encouraged to elaborate knowledge on their own by running a literature research on the topics addressed in the lecture notes or the set of slides. Sources are current editions of:</p> <ul style="list-style-type: none"> • Allweyer, Thomas: BPMN 2.0, Introduction to the Standard for Business Process Modeling, Books on Demand • Miles, Russ and Hamilton, Kim: Learning UML 2.0, O'REILLY • Silver, Bruce: A Levels-Based Methodology for BPMN Process Modeling and Improvement, Cody-Cassidy Press • Sommerville, Ian: Software Engineering, Pearson Education International Edition <p>More references will be given in the Learning Management System Stud.IP</p>
Notes	Topics are related to ERP Systems, Business Processes Management, or Project Management.