



COURSE DATASHEET

Semester:	2013/14/2
Course:	Introduction to Telematics Software
Code:	VEMKIR5144K
Responsible department:	Department of Electrical Engineering and Information Systems
Department code:	MIVIR
Responsible instructor:	Dr. István Vassányi

Course objectives:

Involves activities of different levels of specification, prototyping and implementation for communication subsystems; gives standardised methodologies helps for use global methods for large projects and new software engineering processes; uses methods and tools for integration of outputs of different methods by definition of generic interfaces independent of different tools

Course content:

1. Introduction. Communication subsystems and protocols. Formal methods for telecommunication software engineering 2. SDL – formal method for real-time distributed systems. INRES example 3. SDL Types I. 4. MSC for interactions design 5. SDL Types II. 6. MSC and HMSC 7. Methodologies 8. MSC and SDL 9. V&V validation and verification – formal and informal 10. Methods and tools 11. ASN.1 12. Reengineering and reuse with SDL 13. MSC, ASN.1 and SDL 14. Conformance tests, TTCN 15. MSC, ASN.1, TTCN and SDL

Requirements, evaluation and grading:

Grading is based on individual projects working out in a global team project and oral examination. After a half an hour's preparation the examinee gives an oral presentation on the topic for about 20-25 minutes. Fail (1) when the examinee is unable to prove either the definition of the basic notions or the short scheme of things connected with the topic. Pass (2) when the examinee is able to interpret the basic notions of the topic. Satisfactory (3) when the examinee is well - versed in the basic notions of the topic and is able to present their logic connections - with the help of the examiner. Good (4) when the examinee provides a logic, well - structured presentation with all the important facts and connections but he does not know or partly knows the required reading material connected with the topic. Very good (5) when the examinee gives a logic, excellent, well-structured, perfect in details oral presentation that completely reveals the connection of the concepts within the topic.

Required and recommended readings:

• www.virt.vein.hu Tantárgyak – Távközlési szoft. Alapjai I. tantárgy honlapján közzétett segédanyagok, források • www.sdl-forum.org; SDL-Forum konferenciakiadványok , www.etsi.fr ; www.itu.ch; ITU-T recommendations Z.100-Z.110; Z.120; • SDL Formal Object-Oriented language for Communicating Systems, J Ellsberger, D. Hogrefe, A. Sarma. Prentice Hall 1997, ISBN 0-13-6211384-7 • Engineering real-time systems R.Braek, O.Haugen, Prentice Hall 1993. ISBN 0-13-034448-6 • SDL Illustrated Laurent Doldi, Laurent Doldi, 2001. • ASN.1 Communication entre systemes hétérogenes, Olivier Dubuisson, Springer, 1999. , ISBN 2-287-596070-4 • SDL modelisation de protocoles et systemes réactifs, Zoubir Mammeri, Hermes Science, 2000 • <http://www.telenor.com/telektronikk/volumes/index.php>