



RTU Course "Computer Technologies in Telecommunications"

13104 Telekomunikāciju tīklu katedra

General data

Code	RAE202
Course title	Computer Technologies in Telecommunications
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Undergraduate Studies
Course type	Academic
Field of study	Electronics and Telecommunications
Responsible instructor	Tālis Celmiņš
Academic staff	Armands Pundurs
Volume of the course: parts and credits points	1 part, 3.0 Credit Points, 4.5 ECTS credits
Language of instruction	LV, EN, RU
Possibility of distance learning	Not planned
Abstract	Global information transmission networks. Open systems. Concept of interworking. Control systems. Distributive and centralized control. Real-time execution. Processing and distribution of information. Network management. Maintenance. Designing. SDL. Databases. Datamodels, Data structures. Specifications. Relation DB. Statistical modelling.
Goals and objectives of the course in terms of competences and skills	To master the following knowledge: <ul style="list-style-type: none"> •subject-related terminology •international standardization organizations ISO •telecommunication management systems •ways of microprocessor usage •computer structure •database usage To acquire the following skills: <ul style="list-style-type: none"> •to choose and use ISO recommendations •to carry out tasks with UML software •to generate database and sort data
Structure and tasks of independent studies	Independent work has been intended for: <ul style="list-style-type: none"> •studying lecture notes •carrying out tasks to develop certain skills •elaborating the term paper, the subject of which is related to database forming and data sorting.
Recommended literature	1.DTT materiāli OURTUSā 2.Iekārtu vadības elektroniskie elementi un mezglī. Greivulis J, Raņķis I.Rīga, Avots,288 lpp. 3.Ciparsignālu komutācijas sistēmas J.LočmelisRīga-1998. WEB izmantojamie materiāli. 4. http://www.cs.rtu.lv/Pubs/Zagurskis/Archit_2a.pdf 5. http://www.datasheetarchive.com/search.php?q=HS-80C85RH 6. http://www.cs.rtu.lv/Pubs/Zagurskis/Apparat_sist_progr_a.pdf 7. http://www.pctechguide.com/index.htm 8. http://www.web.kursi.lv/databases/sql2.php Programmatūras un apraksti. 9. http://www.ni.com/academic/circuits.htm
Course prerequisites	Basic programming. Boolean algebra, logical calculus

Course outline

Theme	Hours
International Standardization Organizations.	4
Telecommunication management system units.	8
Telecommunication management system elements.	10
Computer elements. Periphery.	6
UML language. Applications.	8
Databases. Relational DBMS. Applications.	12

Learning outcomes and assessment

Learning outcomes	Assessment methods
Students are able to use subject-related terminology.	Practical classes.
Students are able to demonstrate their knowledge about international standardization organizations (ISO).	Practical classes.
Students are able to demonstrate their understanding of telecommunications management system.	Test, exam.
Students are able to demonstrate their understanding of microprocessor applications.	Test, exam.
Students are able to demonstrate their understanding of UML.	Practical classes with software.

Students are able to demonstrate their understanding of database applications.	Practical classes. Term paper.
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Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	3.0	4.5	2.0	1.0	0.0		*	