



RTU Course "Telecommunications Marketing"

13104 Telekomunikāciju tīklu katedra

General data

Code	RAE419
Course title	Telecommunications Marketing
Course status in the programme	Compulsory/Courses of Limited Choice; Courses of Free Choice
Course level	Post-graduate Studies
Course type	Professional
Field of study	Electronics and Telecommunications
Responsible instructor	Andris Virtmanis
Volume of the course: parts and credits points	1 part, 2.0 Credit Points, 3.0 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Maximum auditorium capacity	75
Maximum number of students per semester	75
Abstract	<p>The introduction of the course covers overview of electronic communications network and service technologies and challenges they offer in conditions of network, service and terminal equipment convergence leading towards development of next generation networks and services. Further the course describes electronic communication service markets, outlines their characteristics and comparable deliverables in conditions of market liberalization and competition. Core participants of market ("players") and their contradictory interests are identified. Further the course explains the regulatory environment and rules governing the sector by analyzing legal, economic and technical aspects of regulation. The role of regulation in European economic area and the regulatory framework and its development for electronic communications during last decade are considered.</p> <p>Following conditions and requirements for entrance of undertakings in electronic communications market, rights and obligations of undertakings, conditions of obtaining usage rights for scarce resources – radio frequencies and numbering as well as requirements for their effective usage and supervision are discovered.</p> <p>Next the conditions for competition in electronic communications markets, principle of asymmetric regulation in the sector, market analysis, its procedures and resulting specific remedies to be applied to undertakings are considered. Further in the course cost and tariff setting principles for electronic communications services, main cost models, principles of inter-operator payments as well as conditions for tariff regulation are considered. Separately regulatory measures for interconnection tariff and international roaming tariff regulation are outlined. Next the conditions for interconnection of electronic communications networks, order of network interconnection, procedures and regulatory requirements for network interconnection are explained. In access regulation, specific attention is dedicated to next generation access network regulation. Also the concept of universal service in electronic communications is considered as well as influence of universal service policy on electronic communication market and market participants. The course finishes with the overview of challenges and consequences of regulation of next generation networks and services.</p>
Goals and objectives of the course in terms of competences and skills	<p>The main goal of the course is theoretical and practical preparation of master students for start-up of innovative entrepreneurship in electronic communications sector. The necessary basic knowledge for registering electronic communications entrepreneurs, for obtaining and exploring usage rights of scarce resources (radio frequencies and numbers), for concluding network and equipment interconnection agreements and for preparing the information necessary for regulatory authorities is obtained. Also the overview on inter-operator payment principles and cost models applied by regulators as well as the concept of universal service in telecommunications are provided</p>
Structure and tasks of independent studies	<p>During the course the following assignments should be acquired: Registration of undertakings as an electronic communications network or service provider; obtaining of usage rights of numbers; obtaining of usage rights of radiofrequencies; analysis of requirements of interconnection and access reference offers; preparation of information for regular submission to regulatory authorities. The scenarios with hyperlinks to necessary web-sites are provided.</p>

Recommended literature	<p>1.M.Maier. Optical Switching Networks. Cambridge University Press, 2008. 324 p. 2.R.Wood. Next-Generation Network Services. Cisco Systems, Inc., 2006. 600 p. 3.L.Goleniewski. Telecommunications Essentials. 2nd ed. Addison-Wesley, 2007. 865 p. 4.Ed. H.Intven. Telecommunications Regulation Handbook, infoDev. The World Bank, 2000. 320 p. 5.H.Brands, E.T.Leo. The Law and Regulation of Telecommunications Carriers. Artech House, Inc., 1999. 735 p. 6.J.K.Shaw. Telecommunications deregulation and the information economy. 2nd ed. Artech House, Inc., 2001. 543 p. 7.R.Hallows. Service Management in Computing and Telecommunications. Artech House, Inc., 1995 121 p. 8.S.C. Strother. Telecommunications cost management. Artech House, Inc., 2002. 323 p. 9.F.Ghys, M.Mampaey, M.Smouts, A.Vaaraniemi. 3G multimedia network services, accounting and user profiles. Artech House, Inc., 2003. 318 p. 10.J.A.Manner.Spectrum Wars. The Policy and Technology Debate. Artech House, Inc., 2003. 186 p. 11.K.G.Strouse. Marketing Telecommunications Services: New Approaches for a Changing Environment. Artech House, Inc., 1999. 365 p. 12.J.Jordana, D.Levi-Faur (eds.) The Politics of Regulation. Institutions and Regulatory Reforms for the Age of Governance. Edward Elgar Publishing, Ltd., 2004. 335 p. 13.Journal of Telecommunications Management. Vol.3, Henry Stewart Publications, UK, 2010. 14.http://www.sprk.gov.lv 15.http://www.esd.lv 16.http://www.irg.eu 17.http://www.erg.eu.int 18.http://www.itu.int 19.http://ec.europa.eu/information_society 20.http://www.cept.org 21.http://www.etsi.org/WebSite/homepage.aspx</p>
Course prerequisites	Basic knowledge about core and access network technologies, network architecture, signalling systems, capabilities of technologies for provision of different services, network interoperability requirements, technical requirements, standards, computer technology applications in telecommunications, intelligent networks, network management and support, next generation networks and services.

Course outline

Theme	Hours
Introduction. Goals, content and scope of the discipline. Specification of lectures, test work and exam.	2
Electronic communications networks, dominating network technologies, next generation networks.	2
Development of technologies for provision of telecommunication services. Electronic communication services.	2
Participants of electronic communication market, their interests and relations. Market segmentation.	2
Regulation of electronic communications. Regulation models. European regulatory frameworks.	2
Licensing in telecommunications. Types of licences. Rights and obligations of undertakings.	2
Scarce resources. Global and national numbering plans. Administration of numbers.	2
Planning and supervision of radio frequencies. Effective use of spectrum, spectrum monitoring.	2
Role of competition. Ex ante and ex post regulation. Service and infrastructure competition. Ladder of investment.	2
Asymmetrical regulation. Wholesale and retail services. Definition and analysis of relevant markets.	2
Significant market power (SMP) of undertakings. Specific obligations applied to undertakings with SMP.	2
Interconnection of telecommunications networks. Access services, their classification and regulation. Access obligations	2
Universal service in telecommunications. Application of universal service obligations.	2
Principles of tariff setting for electronic communication services. Regulation of service tariffs. Cost allocation.	2
Principles and order of inter-operator payments. Actual remuneration models between operators.	2
Regulation of next generation networks and services. Regulatory risks and challenges. Summary.	2

Learning outcomes and assessment

Learning outcomes	Assessment methods
Students are able to assess and analyze situation in electronic communications market.	Assessment test during the exam.
Students are able to register undertakings for entrepreneurship in electronic communications and are able of preparing the information to be provided to regulatory authority on a regular basis.	Written test after demonstration of real applications.
Students are able to assess the necessity to numbering resources for commercial use and to apply for usage rights of this resource.	Written test after demonstration of real applications.
Students are able to assess the necessity of radio frequency resources for commercial use and to apply for usage rights of this resource and for installation of radio equipment.	Written test after demonstration of real applications.
Students are able to assess conditions for interconnection of public electronic communications networks and to analyze interconnection, shared use of equipment, unbundled access to the local loop and bit-stream access reference offers for concluding those agreements.	Assessment test during exam.
Students are able to analyze application of European regulatory framework in electronic communications and to evaluate development of regulatory requirements for next generation network technologies and services.	Assessment test during the exam.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests			Tests (free choice)		
			Lectures	Practical	Lab.	Test	Exam	Work	Test	Exam	Work
1.	2.0	3.0	2.0	0.0	0.0		*			*	