

## MATRIX of existing Master course (Georgian Technical University)

Name of compulsory chair	year	Semester	Number of ECTS	Number of elective chairs	List of available elective chairs	Short description	Relation between the contents and RETHINK's theme
<b>Environmental Design</b>							
	<b>1<sup>st</sup> year</b>	<b>1 semester</b>					
-Business Communication (English) -Business Communication (French) -Business Communication (German)			5				
Management of Entrepreneurship and Innovation Technologies			5				
City coloristic			5			Providing information about and analysing issues of city colouristic; development of professional skills necessary for the assessment of separate objects of the town (for reconstruction buildings, as well as for building in the process of reconstruction) or complexes colouristic; Mastering techniques of integrating a new facility in the existing environment in terms of harmonious colouristic.	
Design Planning Basics			5			The purpose of the course is to study the design of the urban environment and principles, techniques and methods of planning of this environment.	
Organization of urban space design			5			The goal of the training course is to prepare graduate students in relevant disciplines, to introduce specifics of the organization of the design of urban environment, functional properties of its technical means - shapes, colors, textures and material types, application methods, advanced solution methods, their psycho-emotional impact on consumers and others.	

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						To facilitate develop a professional vision on the basis of designing objects of varying complexity and functionality and to promote mastering skills for independently performing the design equipment of these elements.	
Ergonomics			5			The goal of the course is: To teach students the interior and environment design (furniture, household items, personal goods, electrical equipment, etc.) by taking ergonomic characteristics of people of different age and gender into account (body size, range of joint motion, muscle strength, psychology, physiology, hygiene etc.).	
<b>Total</b>			<b>30</b>				
	<b>1<sup>st</sup> year</b>	<b>2 semester</b>					
Technical Translation Theory and Practice (English) Technical Translation Theory and Practice (French) Technical Translation Theory and Practice (German)			5				
<b>Graduate Research Project / Prospectus</b>			5			Graduate Research	
Technical aesthetics and artistic construction			5			To prepare the student in the appropriate discipline, to introduce the essence of artistic constructions, regularities of its development, design principles and methods, compliance of core requirements of technical aesthetics to creative principles of artistic construction, etc. To develop necessary skills for the creation of useful, comfortable and beautiful product with a new face and type. To develop skills necessary for perceiving useful and beautiful, utilitarian and aesthetic as a whole.	
Design Planning Basics and Methods 1			6			The goal of the course is study principles and techniques of design planning, as well as analysis, design, presentation and defence of designing objects and elements.	
Small architectural			3			The goal of the course is to prepare graduate students in the relevant discipline, to	

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forms						introduce the students to the basics of planning small architectural forms, functional characteristics of their technical means - shape, color, textures and material types, application methods, modern solution methods, their psycho-emotional impact on consumers, etc.	
Artificial lighting of city and buildings			3			To introduce MA degree-seeking architects to the principles and major issues of designing outdoor advertising. which in the future will help them to solve creative and professional objectives.	
Outdoor Advertising Design			3			To introduce MA degree-seeking architects to principles and major issues of designing outdoor advertising, which in the future will help them to solve creative and professional objectives.	
<b>Total</b>			<b>30</b>				
	2 <sup>nd</sup> year	1 semester					
<b>Theoretical / experimental Research / Colloquium</b>			10			Research / Colloquium	
Design Planning Basics and Methods 2			5			The goal of the course is study principles and techniques of design planning, as well as analysis, design, presentation and defence of designing objects and elements.	
Composition and coloristic in park and garden design			6			The course is designed to teach to graduates students basic compositional and coloristic characteristics of preparing the park design and application forms, methods, places and means. To develop ability for its composite solution and correct selection-use according to the purpose of greenery object.	
Art of Photography and Video			5			The aim of the activity is the use of photo and video equipment in the work so that MA students are able: to obtain, analyze and use photos and video materials together with other materials of perspective work. To setup the camera in a way to place the object in the most sharp and profitable perspective Computer (digital) processing, adjustment, montage of footage. Correct determination of both natural and artificial lighting and creating the most advantageous footage.	
1.Amenity of territory			4			The course is designed to prepare graduate students in the relevant discipline, to introduce them to the basics of landscaping, functional properties of its technical means - shapes, colours, patterns and material types, application methods, advanced solution methods, their psycho-emotional impact on consumers and others.	

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2.City Transport Design						The training course aims to prepare graduate students in the relevant discipline, to introduce them to the basics of public transport design, functional properties of its technical means - shapes, colours, textures and material types, application methods, advanced solution methods, their psycho-emotional impact on consumers and others. To develop professional vision based on designing various transport and skills to independently undertake its design.	
<b>Total</b>			<b>30</b>				
	<b>2<sup>nd</sup> year</b>	<b>2 semester</b>					
<b>Master thesis completion and defense</b>			30			Master thesis completion and defense	
<b>Total</b>			<b>30</b>				
<b>Total for Master course:</b>	<b>2 years</b>	<b>4 semesters</b>	<b>120</b>				

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<b>Ecology Engineering</b>							
	<b>1<sup>st</sup> year</b>	<b>1 semester</b>					
-Business Communication (English) -Business Communication (French) -Business		5	5				

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Communication (German) Business Communication (Russian)							
management of industrial and technological innovations		5	5			Give a support for future developing for student's professional activities.	
Basis of processing Scientific-technical information		8	8			Student will study how to search information sources, to elaborate scientific-research or teaching branch issues and to master in analysis. Possibility of planning experimental or methodological work with the use of information found. Knowledge of completion of scientific-research works and document approval forms.	
Mathematical processing of Science-research results		4	4			The goal of the course of study is to teach student forms and methods of presentation of obtained results during research of problem issues facing him/her, to represent a relation between results and parameters acting on engineering process in graphic form and by empiric formulas, to learn forms and methods of establishment of functional relation between parameters.	
Bases of Management of Natural Resources		8	8			Student will study problems of rational management of nature resources and will elaborate main stages of their solution, as well as prospects of rational management of nature resources, national resource saving and rational use.	
<b>Total</b>			<b>30</b>				
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Technical Translation Theory and Practice (English) Technical Translation Theory and Practice (French) Technical Translation Theory and Practice (German) Technical Translation Theory and Practice (Russian)		5	5				
Basis of Ecological Law		5	5			Student will study principles of ecological law, which consists of nature protection laws: "On environmental protection", "On water protection", "On air protection", "On soils". These laws regulate legal relations between governmental institutions and private persons/legal entities, determine use of water and mineral resources, customer rights and responsibilities, also air protection from harmful anthropogenic impact.	
Organized of Ecological Monitoring		6	6			Student will study key role of ecosystem, ecological state of environmental facilities, public environmental monitoring for protection of human health, its arrangement and possibility of its conduction, drawing up a working programs. Involvement of society in accomplishment of assigned tasks. Disposition of points of observations on environmental facilities for solution of matters of priority, assessment and response of current situation on the basis of analysis interpretation.	
Technologies of protection atmosphere air conditioning		4	4			Student will study ecological state of ecosystem, environmental facilities, elaboration and application of newest engineering processes, systems and circuits of purification of industrial emitted aerosols from harmful components for protection of human health by means of up-to-date technique.	
Social Ecology and Ecological Safety			5			Student will study modern ecological problems, which are referred to social, economic and political aspects, causes of their occurrence, modern social and ecological state, ways and prospects of their solution, mechanisms of interaction of social-political and ecological aspects of environmental problems, content and regional aspects of sustainable development, mutual relation between sustainable development and safety, and systematic-synergetic nature of safety.	

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		5					
Master research project/prospectus		5	5				
<b>Total</b>			<b>30</b>				
	2 <sup>nd</sup> year	1 semester					
<b>Theoretical / experimental Research / Colloquium</b>		10	10			Research / Colloquium	
Ecological Management of Industries		6	6			Student will study industrial process control systems, organizational-methodological principles of environmental management of enterprises. Ecological policy of enterprises. Ecological management structure and main directions of ecological activity of enterprises. Environmental management system as tool of management of ecological state.	
Ecological – Economic Efficiency Measures for Protection of Natural Resources		8	8			Student will study the importance of rational use and protection of natural resources from the standpoint of management of natural resources, practical calculations of economic damage caused by pollution of environmental facilities and determination of ecological and economic efficiency.	
Technologies of protection Hydrosphere		6	6			Student will study the quality of natural water reservoirs, as well as elaboration of various kinds of internal-drainage circuits, water rotation cycles and engineering process diagrams on the basis of current and prospective methods of industrial waste water treatment for protection of human health.	
<b>Total</b>			<b>30</b>				
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