

DSTU: PERFECT HERITAGE OF HIGH QUALITY NOVATIONS

Today DSTU is the largest scientific and educational center in the South of Russia, successfully combining the fundamental traditions of Russian academic education with advanced technologies and teaching methods. DSTU is a university with long-standing traditions. We are proud of our history and achievements.

DSTU IS YOUR PRAGMATIC CHOICE

- We are the biggest university in the South of Russia
- We offer an extensive range of study programs in all major subject groups
- We provide the close inter-relationship between teaching, research and scholarship
- We are constantly enhancing the existing partnerships and establishing new ones with commercial and public organisations
- Strong support is provided for individual researchers as well as research groups
- More than 175 foreign universities world-wide are our partners
- The great opportunities are open for broadening the experience of our students and staff through participation in sport, music, theatre, the visual arts, and other cultural activities



COURSE AIM AND OBJECTIVES

The aim of this course is to acquire and deepen students' knowledge of computer graphics and animation in architecture. Improvement of skills in working with computer programs 3D graphics and visualization of digital architectural projects. And also to acquire the skills of designing the presentation of an architectural project to the customer.

The course will enhance students' knowledge and understanding in three-dimensional graphics programs. In visualization programs of a digital architectural project. As well as in animation programs.

Students get acquainted with the computer program 3d Max. Corona visualization plugin. And the skills to work with animation on the computer.

REQUIREMENTS

During this course/module, the level of knowledge and skills acquired by students will be measured through a public presentation of their own project in the form of a graphic tablet and an animated video.

During this course/module, the student will make a digital model of his architectural project on a computer. Perform at least 5 architectural visualizations. And also make an animated video of the presentation of his digital architectural project.

The student will also prepare a final presentation in the form of a graphic tablet measuring 1x1.3 meters (the presentation must include visualizations and drawings of the architectural project). It is extremely important to observe the deadlines.

The score for the final work and its presentation is 60% of the final assessment. The remaining 40% of the assessment will be based on classroom activities, including attending classes, completing all stages of the work, and overall participation in each class activity.

Most of the literature and teaching materials for the course are Internet sites, open web sources, video lectures, as well as textbooks, and manuals. Additional reading strongly recommended to expand the professional skills of students and improve their knowledge in communicative tasks.

PROGRAMME LEADER

Pimenova E.V., PhD, Professor

CURRICULUM

Themes	Subthemes	Hours
Unit 1. Basic principles of work in the program of three-dimensional graphics	Practical training	
	1. Installation of the program 3 d max	2
	2. Program interface 3 d max	2
	3. Working with primitives in the program 3 d max	2
	Independent work	
	1. Install program 3d max	2
2. Get acquainted with the methods of work in 3 d max	2	
Unit 2. Three-dimensional modeling of an architectural object	Practical training	
	1. Construction of a three-dimensional architectural object in the program 3 d max	10
	2. Materials. Assigning materials to objects.	2
	3. Light. Light adjustment	2
	4. Camera. Customize viewpoints.	2
	5. Customize the render. Render	2
	Independent work	
	1. Build a three-dimensional architectural object	10
	2. Assign materials to a three-dimensional architectural object	2
	3. Adjust the lights and cameras in the scene	2
4. Customize scene rendering	2	
Unit 3. Post-processing of a three-dimensional model.	Practical training	
	1. Render processing	2
	2. Create an animation	2
	3. Presentation design	2
	4. Graphic tablet design	2
	Independent work	
	1. Make at least 5 renders of a scene	2
	2. Render sequence for animation	2
	3. Create an animation clip of a three-dimensional architectural object	2
	4. Make a presentation	2
5. Prepare your pen tablet	2	

Themes	Subthemes	Hours
Unit 4 Graphics Protection	Final attestation 1. Report and demonstration of the presentation.	2

LEARNING OUTCOMES

Unit 1	Upon successful completion of this unit, the student will be able to: <ul style="list-style-type: none"> Understand the rules of installation and activation of the program Describe the 3d max program interface Define primitive types
Unit 2	Upon successful completion of this unit, the student will be able to: <ul style="list-style-type: none"> Apply the knowledge of the three-dimensional modeling program in practice Explain the rules for creating materials Operate light, camera and render.
Unit 3	Upon successful completion of this unit, the student will be able to: <ul style="list-style-type: none"> Differentiate the knowledge gained and apply it in practice. Check the correctness of the render settings Analyze the designed object for its modeling
Unit 4	Upon successful completion of this unit, the student will be able to: <ul style="list-style-type: none"> Formulate a thought to explain the architectural intent Make a presentation of the project Evaluate the knowledge gained

LEARNING AND TEACHING

Learning Activities	Categories	Hours
Practical activities	Scheduled	32
Independent Study	Scheduled	30
Final attestation	Independent	2
TOTAL:		64

How to apply?



Pre-degree Russian language courses



For more information, please visit
www.donstu.ru/en



Should you have any questions,
please contact us:

 requests@donstu.ru  +7 (908) 516 94 96



ARCHITECTURAL AND INFORMATION MODELLING

COURSE SYLLABUS

B.Sc. programme 07.03.01 Architecture