



"CDICAE - Collaboration to Design an Innovative Curriculum for Animation Education - 2017-1-TR01-KA203-046117 " project carried out by Republic of Turkey Ministry of EU Affairs, Education and Youth Programs Center Presidency and Erciyes University Faculty of Fine Arts, Visual Communication Design Department within the scope of the Collaboration for Innovation and Exchange of Good Practices within the framework of Strategic Partnerships for ERASMUS+ Program KA2 Higher Education Programs.



Course Syllabus

(03. 2D Facial Rigging in 3D Virtual Environment Course)

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Course Curriculum 4, (2D FaceRigging in VR)

2D Face Rigging Course in VR Field Spring, 2019 - GRF.SU346

Instructor Information

Instructor
Öğr. Gör. Kürşat SAVAŞ

Email
tgaworks@gmail.com

Office Location and Hours
GSF-No:+90352 207 6666
D:34210, 13:00-17:00, Wednesday

General Information

Description

This course consists of examining the technical aspects of 2D face rigging in 3D Field with VR Field. Students will try to rig 3D face model by using 2D rigging method in virtual Field. They will realize their projects by individual or group work.

Expectations and Targets

At the end of this course, students will be able to produce 2d face rigs for 3d face models in virtual reality Field. The student will gain the technical knowledge and understanding that they can rig 3D face model as 2D in a gripping and interactive Field beyond the physical world and outside the traditional PC Field.

Course Credits (ECTS)	Course Hours	Theoretical	Practical (Hours)
3 Credit	3 hours	2 hours	1 hours
Course Type	Core []	Elective [X]	Minor []

Course Materials

Required Materials

All necessary hardware and software are available for student use in the faculty laboratory. Students must make an appointment to use for hours.

VR cap set (HTC Vive or OculusRift)

Rigleme software and tools (Autodesk Maya 2018 Student version, Autodesk maya plugin MARUI for VR)

Optional Materials

Students can install additional tools or software they want to use on computers, with the approval of the lab assistant. In this case, it is the student's responsibility to declare that he has a software license.

- **MARUI plug-in software, Inst. See. Kürşat SAVAŞ**
- **Autodesk Maya 2018 Student version, Inst. See. Kürşat SAVAŞ**
- **Oculusrift basic drivers, Inst. See. Kürşat SAVAŞ**

Course Schedule

Week	Topic	Reading
1	Understanding VR technology components and vr usage possibilities in the 3D animation industry.	R.1, R.2

Week	Topic	Reading
2	To introduce the software required to use the VR hardware and to prepare the VR device to be used.	R.2
3	Introduction of "Autodesk Maya" and "Marui" plugin in VR Field and preparation of maya interface in VR Field.	
4	"MARUI INTERFACE USE" presentation in VR Field.	
5	Studio Works - Creating 2d face rig in virtual Field "Project Management with preparation phase"	R.6 (page 58-60) R.5 (page 35-38)
6	Studio Studies - Creating 2d face rig in virtual Field "Control objects and feature creation phase"	R.5 (page 116-118) R.6 (page 250)
7	Studio work - Creating 2d face rig in virtual Field "Eye texture assignment and motion binding phase"	R.5 (Chapter 2-8-9) R.6 (page 231-236)
8	Midterm	
9	Midterm	
10	Studio Studies - Creating 2d face rig in virtual Field "Mouth texture assignment and motion binding phase"	R.6 (page 231-236) R.5 (Chapter 2)
11	Studio Studies - Creating 2d face rig in virtual Field "Connecting mouth gesture change command"	R.6 (page 393-418)
12	Studio Studies - Creating 2d face rig in virtual Field "Linking eye gesture change command"	R.6 (page 393-418)
13	Studio Studies - Creating 2d face rig in virtual Field "Master control creation, grouping and naming phase".	R.5 (Chapter 2)
14	Studio Works - Creating 2d face rig in virtual Field "Squashdeformer feature assignment phase"	R.5 (Chapter 6 page 298-301)
15	Studio work - - "The stage of testing the created rigi"	R.6 (Chapter 6)
16	Final examination	
17	Final examination	

Evaluation

Summary of Assessment Methods

The evaluation of this course is based on the comprehension performance of the tools used in the Vr Field and the performance of a face color production: the first performance is the evaluation of the applications that can produce the face color in the Vr Field with the learned tools and it is accepted as a midterm exam. The second performance is to test the face rig they produce individually, which is held in front of the jury, and is considered as the final exam. Exams are measured over 100 points.

Evaluation Plan

Exam	Subject			
Midterm project 1	Using rigging tools	%60		
	Performance of using VR hardware	%40	Midterm % 40	Total %100
Final project 1	Test of Individually Created Face Rig	%60		
	Performance of using VR hardware	%40	Final %60	Total %100

Exam Schedule

Week	Dates	Time	Subject
8	03.04.2019	09:00	Midterm Exam
9	10.04.2019	09:00	Midterm Exam
16	20.05.2019	09:00	Final Exam
17	27.05.2019	09:00	Final Exam

Learning Outputs

Technical and Theoretical Aspects

Students who successfully complete this course:

Will be able to use the vr technology as a new tool in the production of 3d digital content.

Compare the advantages and disadvantages of creating 3d content in the virtual Field compared to the traditional pc Field.

Various practical qualifications, including simple Basic information:

- Autodesk maya, Marui Plugin, Oculus Medium etc. learn their programs so that they can produce 3d content in virtual Fields.
- They learn to create new ways of 2D face rigging in immersive virtual reality Fields with Oculus Rift and HTC Vive headsets.

Additional Information andResources

Articles / Blogs/Video Resources

Students are advised to review the following documents before attending classes.

- R1.** R1_tr_SANAL_GERCEKLIK_VE_UYGULAMA_ALANLARI.pdf
<https://www.researchgate.net/publication/237599951>
 R1_EN_InTech_UnderstandingVirtualRealityTechnology
<https://www.researchgate.net/publication/221911335>
- R2.** EK_1A_TR_Sanal-Gerceklik-Donanim ve Kurulum-Talimatlar Kilavuzu
 EK_1A_EN_Virtual-Reality-Setup-Instructions-and-Troubleshooting-Guide
www.lib.ua.edu/wp-content/uploads/Virtual-Reality-Setup-Instructions-and-Troubleshooting-Guide.pdf
www.marui-plugin.com/documentation/
- R3.** Maya-GENEL_KULLANIM_
R4. Art of Maya
R5. Mastering Autodesk Maya 2016
R6. Autodesk Maya 8 (gettingstarted)

Artists

RebeccaAllen <http://www.rebeccaallen.com/home>

Janet Cardiff & George Bures Miller <http://www.cardiffmiller.com/artworks/inst/forest.html>

Ian Cheng <http://iancheng.com/>

Jeremy Couillard <http://www.jeremycouillard.com/>

Char Davies <http://www.immersence.com/>

Janicza Bravo <http://www.indiewire.com/2017/01/lemon-janicza-bravo-sundance-interview-1201774063/>

Maurice Benayoun <http://benayoun.com/moben/1997/02/12/world-skin-a-photo-safari-in-the-land-of-war/>

Online Resources

VR Experiences

<https://www.oculus.com/experiences/rift>

<https://www.vive.com/us/product-experiences/>

<https://www.transportvr.com/>

<http://www.nytimes.com/marketing/nytvr/>

MaruiPlugin

www.marui-plugin.com/documentation/

(TUTORIALS and SETUP) <https://www.youtube.com/channel/UCQr-JJK4hjUJle-IMnqR0fg>

www.marui-plugin.com/support/

Web 3. www.marui-plugin.com/documentation/ - (TUTORIALS and SETUP)

www.youtube.com/channel/UCQr-JJK4hjUJle-IMnqR0fg

Web 4. www.marui-plugin.com/support/ -

(TUTORIALS and SETUP) www.youtube.com/channel/UCQr-JJK4hjUJle-IMnqR0fg

Autodesk Maya

knowledge.autodesk.com/support/maya/getting-started/caas/simplecontent/content/maya-documentation.html