

## FIȘA DISCIPLINEI

### 1. Date despre program

1.1 Instituția de învățământ superior	Universitatea de Vest Timisoara
1.2 Facultatea / Departamentul	Facultatea de Arte si Design
1.3 Departamentul	Departamentul Design și Arte Aplicate
1.4 Domeniul de studii	Arte vizuale
1.5 Ciclul de studii	Masterat
1.6 Programul de studii / Calificarea	Game Art / Digital artist for video games

### 2. Date despre disciplină

2.1 Denumirea disciplinei	3D Character Creation II (FADMGA 1202)						
2.2 Titularul activităților de curs	Lect. univ. dr. Bunii Alexandru						
2.3 Titularul activităților de seminar	Lect. univ. dr. Bunii Alexandru						
2.4 Anul de studiu	I	2.5 Semestrul	2	2.6 Tipul de evaluare	E	2.7 Regimul disciplinei	DSi, DO

### 3. Timpul total estimat (ore pe semestru al activităților didactice)

3.1 Număr de ore pe săptămână	4	din care: 3.2 curs	2	3.3 seminar/laborator	2
3.4 Total ore din planul de învățământ	5 6	din care: 3.5 curs	2 8	3.6 seminar/laborator	28
Distribuția fondului de timp:					ore
Studiul după manual, suport de curs, bibliografie și notițe					15
Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate / pe teren					30
Pregătire seminare / laboratoare, teme, referate, portofolii și eseuri					30
Tutoriat					10
Examinări					9
Alte activități					
3.7 Total ore studiu individual	94				
3.8 Total ore pe semestru	150				
3.9 Numărul de credite	6				

### 4. Precondiții (acolo unde este cazul)

4.1 de curriculum	<ul style="list-style-type: none"> <li>Completion of the other mandatory subjects related to the field of design</li> </ul>
4.2 de competențe	<ul style="list-style-type: none"> <li>It is considered that the students have, from previous stages of schooling, terminological notions and skills in artistic drawing, artistic anatomy and computer-aided graphics.</li> </ul>

## 5. Condiții (acolo unde este cazul)

5.1 de desfășurare a cursului	<ul style="list-style-type: none"> <li>• Course attendance: min. 60%</li> <li>• Video Projector/Interactive WhiteBoard, Internet Access</li> <li>• Google Classroom, Google Meet</li> </ul>
5.2 de desfășurare a seminarului / laboratorului	<ul style="list-style-type: none"> <li>• Laboratory attendance: min. 60%</li> <li>• Video Projector/Interactive WhiteBoard, Internet Access</li> <li>• Google Classroom, Google Meet</li> </ul>

## 6. Obiectivele disciplinei - rezultate așteptate ale învățării la formarea cărora contribuie parcurgerea și promovarea disciplinei

Cunoștințe	<ul style="list-style-type: none"> <li>• The Graduate has specialized knowledge of the process of digital painting and applying a type of texture to a 2D, 3D image</li> <li>• The Graduate researches information to develop new ideas and concepts for the design of a particular production.</li> </ul>
Abilități	<ul style="list-style-type: none"> <li>• The Graduate applies a variety of visual techniques to design graphic material and combine graphic elements to convey concepts and ideas.</li> </ul>
Responsabilitate și autonomie	

## 7. Conținuturi

7.1 Curs	Metode de predare	Observații
Presentation of digital tools and character and gaming assets production processes – obtaining unwrapped texture maps – UV unwrap representation/rendering methods optimization – full LOD system	<p>Interactive teaching, visual support and tutorial. Lecture, through image projections and debates (Case Study)</p> <ul style="list-style-type: none"> <li>• development of presentation skills</li> </ul> <p>A special place is given to practical works during which corrections and discussions with the students are constantly carried out. The course will be taught permanently using a very rich documentary material, exemplifying with personal works and works from the school archive, magazine</p>	<p>The course is correlated, in order to meet the established objectives, the lecture will be interactive</p> <ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=uH Q4WCU1WQc">https://www.youtube.com/watch?v=uH Q4WCU1WQc</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=8R yn7qm3CvI">https://www.youtube.com/watch?v=8R yn7qm3CvI</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=7k Hi2OLAK2k">https://www.youtube.com/watch?v=7k Hi2OLAK2k</a> (youtube)</li> </ul> <p>Reference: Wolf J.P. Mark., <i>The Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming</i>, Ed. ABC-CLIO, Santa Barbara, 2021</p> <p>Teaching activities are conducted exclusively <b>face to face</b></p>

	collections and specialty books.	Videoconferencing platform used: Google Meet (link available from Google Classroom – code found in the timetable)
Presentation of digitaltools and character animation processes and gaming assets - character rigging for concept art	<p>Interactive teaching, visual support and tutorial. Lecture, through image projections and debates (Case Study)</p> <ul style="list-style-type: none"> <li>• development of presentation skills</li> <li>• weak / unclear points</li> </ul> <p>A special place is given to practical works during which corrections and discussions with the students are constantly carried out. The course will be taught permanently using a very rich documentary material, exemplifying with personal works and works from the school archive, magazine collections and specialty books.</p>	<p>The course is correlated, in order to meet the established objectives, the lecture will be interactive</p> <ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=M5FEsrbsb_M&amp;feature=emb_logo">https://www.youtube.com/watch?v=M5FEsrbsb_M&amp;feature=emb_logo</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=R0PDCp0QF1o">https://www.youtube.com/watch?v=R0PDCp0QF1o</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=mbfNlw2yjVc">https://www.youtube.com/watch?v=mbfNlw2yjVc</a> (youtube)</li> </ul> <p>Reference:</p> <ul style="list-style-type: none"> <li>• <a href="https://sundaysundae.co/unity-vs-unreal/">https://sundaysundae.co/unity-vs-unreal/</a></li> <li>• <a href="https://www.youtube.com/watch?v=kGm_xhu42tU">https://www.youtube.com/watch?v=kGm_xhu42tU</a></li> <li>• <a href="https://www.youtube.com/watch?v=mZcLKcyHWDs">https://www.youtube.com/watch?v=mZcLKcyHWDs</a></li> </ul> <p>Free or cheap software:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.unrealengine.com/en-US/">https://www.unrealengine.com/en-US/</a> (free, non-commercial)</li> <li>• <a href="https://store.unity.com/#plans-individual">https://store.unity.com/#plans-individual</a> (free, non-commercial)</li> <li>• <a href="https://www.blender.org/">https://www.blender.org/</a> (free)</li> <li>• <a href="https://www.maxon.net/en-us/">https://www.maxon.net/en-us/</a> (educational licence, free)</li> <li>• <a href="https://cascadeur.com/">https://cascadeur.com/</a> (free)</li> <li>• <a href="https://armorpaint.org/">https://armorpaint.org/</a> (16 euro)</li> <li>• <a href="https://www.substance3d.com/subscribe/">https://www.substance3d.com/subscribe/</a> (educational licence, free)</li> <li>• <a href="http://boundingboxsoftware.com/materialize/">http://boundingboxsoftware.com/materialize/</a> (free)</li> <li>• <a href="https://store.pixologic.com/zbrush-academic-license.html">https://store.pixologic.com/zbrush-academic-license.html</a> (educational licence, free)</li> <li>• <a href="https://3dcoat.com/community/academic-program/">https://3dcoat.com/community/academic-program/</a> (educational licence, free)</li> <li>• <a href="https://alicevision.org/">https://alicevision.org/</a> (free)</li> </ul> <p>Teaching activities are conducted exclusively <b>face to face</b></p> <p>Videoconferencing platform used: Google Meet (link available from Google Classroom – code found in the timetable)</p>
<p>Bibliografie:</p> <ul style="list-style-type: none"> <li>• Bunii, Alexandru., <i>Sculptare digitală</i>: <a href="https://youtu.be/c-os6f3xhsu">https://youtu.be/c-os6f3xhsu</a></li> </ul>		

- Bunii, Alexandru., *Retopologie și pictură (texturare)*: [https://youtu.be/\\_sdjj9jzt\\_a](https://youtu.be/_sdjj9jzt_a)
- Bunii, Alexandru., *Export texturi*: [https://youtu.be/y7eau\\_29zbs](https://youtu.be/y7eau_29zbs)
- Bunii, Alexandru., *Exemplificare randare*: <https://youtu.be/bhgrmipi9we>
- Ahearn, Luke., *3D game textures*, Ed. CRC Press, Boca Raton, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- Crawford, Chris., *on Game Design*, Pearson Education, Indianapolis, 2003
- Dobrilova, Teodora., *How Much Is the Gaming Industry Worth in 2020?* (<https://techjury.net/blog/gaming-industry-worth/>)
- Cohen, D. S., *Producing games*, Ed. Focal Press, New York, 2010. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- Giesen, Rolf., Khan, Anna., *Acting and Character Animation: The Art of Animated Films, Acting and Visualizing*, CRC Press, New York, 2017
- Millington, Ian., *Artificial intelligence for games*, Ed. CRC Press, Boca Raton, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- Montola, Markus., *Pervasive Games: Theory and Design*, Ed. Morgan Kaufmann, Burlington, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- O'hailey, Tina., *Rig it Right! Maya Animation Rigging Concepts (Computers and People) 2nd Edition*, CRC Press, New York, 2018
- Porges, Seth., *How The Original 'Prince Of Persia' Changed Video Game Animation* (<https://www.forbes.com/sites/sethporges/2017/12/19/how-the-original-prince-of-persia-changed-video-gameanimation/#736302813f6d>)
- Steed, Anthony., Oliveira, Manuel Fradinho., *Networked Graphics Building Networked Games and Virtual Environments*, Ed. Morgan Kaufmann, Burlington, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- Tickoo, Sham., *Autodesk Maya 2017 A Comprehensive Guide*, Purdue University Northwest, 2017
- Tickoo, Sham., *MAXON CINEMA 4D R18 Studio: A Tutorial Approach*, Purdue University Northwest, 2017
- Wolf J.P. Mark., *The Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming*, Ed. ABC-CLIO, Santa Barbara, 2021 ([https://books.google.ro/books?id=fc0vEAAAQBAJ&dq=A+History+from+PONG+to+Playstation+and+Beyond&source=gbs\\_navlinks\\_s](https://books.google.ro/books?id=fc0vEAAAQBAJ&dq=A+History+from+PONG+to+Playstation+and+Beyond&source=gbs_navlinks_s))

7.2 Seminar / laborator	Metode de predare	Observații
<p>Assignment: GAME CHARACTER RIGGING. A 3D humanoid stock model will be used to create the rigging for a game character or a concept art character considering the following criteria:</p> <ul style="list-style-type: none"> <li>• Using a work templates.</li> <li>• Creating a</li> </ul>	<ul style="list-style-type: none"> <li>• independent documentation</li> <li>• time management of task preparation</li> <li>• practicing the ability to solve the practical task</li> </ul> <p>Presentation - Visual support. Guidance and individual correction during the development of the projects.</p>	<p>Tutorial:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=BrRzeMY-aQI">https://www.youtube.com/watch?v=BrRzeMY-aQI</a> (photogrammetry to UE4)</li> <li>• <a href="https://www.youtube.com/watch?v=INJje8Hae7I">https://www.youtube.com/watch?v=INJje8Hae7I</a> (photogrammetry Meshroom)</li> <li>• <a href="https://www.youtube.com/watch?v=nblqNp7XoWU">https://www.youtube.com/watch?v=nblqNp7XoWU</a> (rigging UE4)</li> <li>• <a href="https://www.youtube.com/watch?v=knbZ_g8Hgvk&amp;list=PLZlv_N0_O1gb2ZoKzTApbv3LvhaXJ9elg">https://www.youtube.com/watch?v=knbZ_g8Hgvk&amp;list=PLZlv_N0_O1gb2ZoKzTApbv3LvhaXJ9elg</a> + <a href="https://www.unrealengine.com/en-US/blog/animation-and-rigging-toolkit-">https://www.unrealengine.com/en-US/blog/animation-and-rigging-toolkit-</a></li> </ul>

<p>skeleton overlaid over dimensions and proportions of the stock 3D model.</p> <ul style="list-style-type: none"> <li>Alignment to the amplitude of the examples presented.</li> </ul> <p>Project requirements:</p> <ul style="list-style-type: none"> <li>Creation of 3 dynamic positions based on the examples presented 4p</li> <li>Graphic presentation, format 50/70 cm, where the following will be found: 6p</li> <li>- unfolded in 3x2 image collage strips; Termen de predare:</li> </ul> <p>At the end of the semester, the graphic presentation will be presented.</p>	<p>A special place is given to practical works during which corrections and discussions with the students are constantly carried out. The seminar will be taught permanently using a very rich documentary material, exemplifying with personal works and works from the school archive, magazine collections and specialty books. Analysis, dialogue, corrections</p>	<p><a href="#">arrives-on-the-marketplace</a> (Maya rigging tool for UE4)</p> <ul style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=gWayxuYmjdY">https://www.youtube.com/watch?v=gWayxuYmjdY</a> (Maya humanik plugin)</li> <li><a href="https://www.youtube.com/watch?v=JXXqLVCGDfA">https://www.youtube.com/watch?v=JXXqLVCGDfA</a> (rigging Cinema 4D using IKMAX)</li> <li><a href="https://www.youtube.com/watch?v=ieQY_Ox2Jcs">https://www.youtube.com/watch?v=ieQY_Ox2Jcs</a> (cinema 4D rigging)</li> <li><a href="https://www.youtube.com/watch?v=6MLiml3ePXo">https://www.youtube.com/watch?v=6MLiml3ePXo</a> (retopology)</li> </ul> <p>Case studies – personal projects posted and presented on Google Classroom, Google Meet and YouTube channel of the Design and Applied Arts Department (<a href="https://www.youtube.com/channel/UCIMVx-Bd2nkR1Db4w_qzB7w">https://www.youtube.com/channel/UCIMVx-Bd2nkR1Db4w_qzB7w</a>)</p> <p>Teaching activities are conducted exclusively <b>face to face</b> Videoconferencing platform used: Google Meet (link available from Google Classroom – code found in the timetable)</p>
<p>Bibliografie:</p> <ul style="list-style-type: none"> <li><a href="https://www.youtube.com/c/PolyToots/playlists">https://www.youtube.com/c/PolyToots/playlists</a></li> <li>Bunii, Alexandru., <i>Democratizing creativity</i>, pag.7 <a href="https://www.ceeol.com/search/article-detail?id=922674">https://www.ceeol.com/search/article-detail?id=922674</a></li> <li>Bunii, Alexandru., <i>Democratizing creativity II</i>, pag.43 <a href="https://www.ceeol.com/search/article-detail?id=924535">https://www.ceeol.com/search/article-detail?id=924535</a></li> <li>Ahearn, Luke., <i>3D game textures</i>, Ed. CRC Press, Boca Raton, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)</li> <li>Crawford, Chris., <i>on Game Design</i>, Pearson Education, Indianapolis, 2003</li> <li>Dobrilova, Teodora., <i>How Much Is the Gaming Industry Worth in 2020?</i> (<a href="https://techjury.net/blog/gaming-industry-worth/">https://techjury.net/blog/gaming-industry-worth/</a>)</li> <li>Cohen, D. S., <i>Producing games</i>, Ed. Focal Press, New York, 2010. (BIBLIOTECA Eugen Todoran – UVT Timisoara)</li> </ul>		

- Giesen, Rolf., Khan, Anna., *Acting and Character Animation: The Art of Animated Films, Acting and Visualizing*, CRC Press, New York, 2017
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- Montola, Markus., *Pervasive Games: Theory and Design*, Ed. Morgan Kaufmann, Burlington, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)
- O'hailley, Tina., *Rig it Right! Maya Animation Rigging Concepts (Computers and People) 2nd Edition*, CRC Press, New York, 2018
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- Tickoo, Sham., *Autodesk Maya 2017 A Comprehensive Guide*, Purdue University Northwest, 2017
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- Wolf J.P. Mark., *The Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming*, Ed. ABC-CLIO, Santa Barbara, 2021 ([https://books.google.ro/books?id=fc0vEAAQBAJ&dq=A+History+from+PONG+to+Playstation+and+Beyond&source=gbs\\_navlinks\\_s](https://books.google.ro/books?id=fc0vEAAQBAJ&dq=A+History+from+PONG+to+Playstation+and+Beyond&source=gbs_navlinks_s))

## 8. Coroborarea conținuturilor disciplinei cu așteptările reprezentanților comunității epistemice, asociațiilor profesionale și angajatori reprezentativi din domeniul aferent programului

Conținutul cursului va fi în concordanță cu nomenclatorul de meserii – COR – oferind studenților abilitatea de a se angaja la finalizarea studiilor pe unul dintre posturile existente. Astfel studentul va fi capabil să acopere cerințele existente pe piața de muncă în diversele domenii, sau va putea continua activitatea de cercetare prin etapele superioare de studiu.

## 9. Evaluare

Tip activitate	9.1 Criterii de evaluare	9.2 Metode de evaluare	9.3 Pondere din nota finală
9.4 Curs	Use of specialized terminology, assimilation and understanding of the concepts presented in the course (correct understanding and application, not memorization).	Attendance at course activities - minimum 60% attendance. Examination – solving a practical task with the course and bibliography at your disposal.	50%
9.5 Seminar / laborator	Originality in the application of	Attendance at laboratory activities - minimum 60% of	50%

	assimilated notions and fitting into the theme	attendance. Testing continues throughout the semester. Completion of semester assignments, examination - solving a design project with theoretical notions and practical skills at your disposal.	
9.6 Standard minim de performanță			
<p>Solving a real/hypothetical problem at work in real time, under conditions of qualified assistance, respecting the norms of professional ethics.</p> <p>To access the final exam (examination form E, C or V), the student must attend at least 60% of the laboratory/seminar hours. Also, the student must solve at least 50% of the volume of tasks drawn by the practical applications.</p> <p>An extra assignment is given to increase the grade.</p>			

Data completării  
03.03.2023

Titular de disciplină

Data avizării în departament

Director de departament