

## 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 III (FADMGA 2103)						
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	II	2.5 Semestrul	1	2.6 Tipul de evaluare	E	2.7 Regimul disciplinei	DA, 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 3D object reproduction using 3D printing technologies.</li> <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 is able to express concepts of space, landscape, object, vehicle using the processes and principles of 2D and 3D animation,</li> <li>• The Graduate analyzes recent trends, developments and innovations in modern visualization and modeling technologies in the virtual environment.</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 uses specialized graphics tools that enable digital editing, modeling, rendering, and graphic compositing. These tools are based on the mathematical representation of three-dimensional objects.</li> <li>• The Graduate applies a variety of visual techniques to design graphic material and combine graphic elements to convey concepts and ideas.</li> <li>• The Graduate develops new artistic concepts and creative ideas;</li> <li>• The Graduate develops 3D models by transforming and digitizing previously designed characters and objects using specialized 3D tools;</li> <li>• The Graduate elaborates a representation based on traditional but also digital techniques of some characters, objects or landscapes, which clearly convey information with aesthetic, morphological and functional content;</li> <li>• The Graduate proposes optimized models for their subsequent use within a large-scale project.</li> </ul>

Responsabilitate și autonomie	<ul style="list-style-type: none"> <li>• The Graduate consults with directors and other production staff to develop ideas and concepts applicable to later stages of a project (digital game, animation, film production).</li> <li>• The Graduate changes approach in unpredictable situations such as unexpected and sudden changes in needs or trends, by changing strategies and adapting naturally to these circumstances.</li> <li>• The Graduate specifies the useful resources for the documentation related to the project.</li> <li>• The Graduate appreciates the workload and personal involvement in completing the project.</li> <li>• The Graduate elaborates a phasing of the objectives to be achieved in order to achieve the results assumed in the project.</li> <li>• The Graduate respects the previously established deadlines related to the elaborated project.</li> <li>• The Graduate deduces from his own experience the consumption of time necessary to achieve the result.</li> <li>• The Graduate maintains an art portfolio to showcase his own styles, interests, skills, and accomplishments.</li> </ul>
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## 7. Conținuturi

7.1 Curs	Metode de predare	Observații
<ul style="list-style-type: none"> <li>• Advance knowledge of digital tools and stages dedicated to 3D character sculpting and optimization</li> <li>-concept</li> <li>-sketch</li> <li>-sculpting/modeling</li> <li>-retopology</li> <li>-UV mapping</li> <li>-digital texturing/painting</li> <li>-3D scanning /photogrammetry</li> </ul>	<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 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=uHQ4WCU1WQc">https://www.youtube.com/watch?v=uHQ4WCU1WQc</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=8Ryn7qm3CvI">https://www.youtube.com/watch?v=8Ryn7qm3CvI</a> (youtube)</li> <li>• <a href="https://www.youtube.com/watch?v=7kHi2OLAK2k">https://www.youtube.com/watch?v=7kHi2OLAK2k</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> Videoconferencing platform used: Google Meet (link available from Google Classroom – code found in the timetable)</p>
Bibliografie:		

- 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=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))

7.2 Seminar / laborator	Metode de predare	Observații
<p>Assignment: create a humanoid character adapted for <i>concept art</i> presentation:</p> <ul style="list-style-type: none"> <li>• Formal fit with the aesthetic style of current video game design trends – <i>hyper-realist, cartoonish, stylized</i>.</li> <li>• Use of basic (stock) models to be modified or the complete realization of the model.</li> <li>• Thematic and</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>A special place is given to practical works during which corrections and discussions with the students are</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=nbIqNp7XoWU">https://www.youtube.com/watch?v=nbIqNp7XoWU</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-arrives-on-the-marketplace">https://www.unrealengine.com/en-US/blog/animation-and-rigging-toolkit-arrives-on-the-marketplace</a> (Maya rigging tool for UE4)</li> <li>• <a href="https://www.youtube.com/watch?v=gWayxuYmjdY">https://www.youtube.com/watch?v=gWayxuYmjdY</a> (Maya humanik plugin)</li> </ul>

<p>aesthetic alignment with the requirements stipulated by the theme description.</p> <ul style="list-style-type: none"> <li>• Creating a series of concepts (concept art) to establish the details.</li> <li>• Digital sculpting of the game character based on the proposed concept, (software platform of choice), painting with various details and surface materials, and unwrapped texture map – UV unwrap - (software platform of choice). The textures will be exported as diffuse, AO, bump (normals), displacement, roughness etc. channels.</li> </ul> <p><b>The assignment will require:</b></p> <ul style="list-style-type: none"> <li>• Research file / documentation and sketches: 4p</li> <li>• establishing the functions and objectives of the project;</li> <li>• reporting to other similar projects and their objective analysis;</li> <li>• assimilation of knowledge of the use of work tools;</li> <li>• creating a series of concepts based on a previously chosen direction;</li> <li>• presentation of a fully detailed character at</li> </ul>	<p>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>	<ul style="list-style-type: none"> <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>
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<p>the (3D geometry and painted details).</p> <ul style="list-style-type: none"> <li>● <b>Deadline:</b></li> </ul> <p>At the end of each week will be completed and presented stages of conceptual creation, exploration and use of digital tools adapted to the project's solution requirements.</p> <p>At the end of the semester the final presentation will be presented.</p>		
<p><b>Bibliografie:</b></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>● 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> <li>● Giesen, Rolf., Khan, Anna., <i>Acting and Character Animation: The Art of Animated Films, Acting and Visualizing</i>, CRC Press, New York, 2017</li> <li>● Millington, Ian., <i>Artificial intelligence for games</i>, Ed. CRC Press, Boca Raton, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)</li> <li>● Montola, Markus., <i>Pervasive Games: Theory and Design</i>, Ed. Morgan Kaufmann, Burlington, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)</li> <li>● O'hailey, Tina., <i>Rig it Right! Maya Animation Rigging Concepts (Computers and People) 2nd Edition</i>, CRC Press, New York, 2018</li> <li>● Porges, Seth., <i>How The Original 'Prince Of Persia' Changed Video Game Animation</i> (<a href="https://www.forbes.com/sites/sethporges/2017/12/19/how-the-original-prince-of-persia-changed-video-gameanimation/#736302813f6d">https://www.forbes.com/sites/sethporges/2017/12/19/how-the-original-prince-of-persia-changed-video-gameanimation/#736302813f6d</a>)</li> <li>● Steed, Anthony., Oliveira, Manuel Fradinho., <i>Networked Graphics Building Networked Games and Virtual Environments</i>, Ed. Morgan Kaufmann, Burlington, 2009. (BIBLIOTECA Eugen Todoran – UVT Timisoara)</li> <li>● Tickoo, Sham., <i>Autodesk Maya 2017 A Comprehensive Guide</i>, Purdue University Northwest, 2017</li> <li>● Tickoo, Sham., <i>MAXON CINEMA 4D R18 Studio: A Tutorial Approach</i>, Purdue University Northwest, 2017</li> <li>● Wolf J.P. Mark., <i>The Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming</i>, Ed. ABC-CLIO, Santa Barbara, 2021</li> </ul>		

([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 assimilated notions and fitting into the theme	Attendance at laboratory activities - minimum 60% of attendance. Testing continues throughout the semester. Completion of semester assignments, examination - solving a design project with theoretical notions and practical skills at your disposal.	50%
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

Data avizării în departament

Titular de disciplină

Director de departament