

## 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	Arts in game design / Digital artist for video games

### 2. Date despre disciplină

2.1 Denumirea disciplinei	Animation techniques for digital games I (FADMGA 2107)						
2.2 Titularul activităților de curs	Lect. univ. dr. Valentin Lucian Ciorba						
2.3 Titularul activităților de seminar	Lect. univ. dr. Valentin Lucian Ciorba						
2.4 Anul de studiu	II	2.5 Semestrul	1	2.6 Tipul de evaluare	E	2.7 Regimul disciplinei	Dsi, Dop

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

3.1 Număr de ore pe săptămână	2	din care: 3.2 curs	1	3.3 seminar/laborator	1
3.4 Total ore din planul de învățământ	28	din care: 3.5 curs	14	3.6 seminar/laborator	14
Distribuția fondului de timp:					ore
Studiul după manual, suport de curs, bibliografie și notițe					12
Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate / pe teren					40
Pregătire seminare / laboratoare, teme, referate, portofolii și eseuri					40
Tutoriat					30
Examinări					9
Alte activități					
3.7 Total ore studiu individual	<b>122</b>				
3.8 Total ore pe semestru	<b>150</b>				
3.9 Numărul de credite	<b>6</b>				

### 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 game 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>• 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 căroră contribuie parcurgerea și promovarea disciplinei

Knowledge	<ol style="list-style-type: none"> <li>1. Demonstrate knowledge of video game history, artistic trends and their contemporary developments,</li> <li>2. It classifies video games based on their interaction with game environments, such as simulation games, strategy games, adventure games, and arcade games.</li> <li>3. It recognizes the different genres and narratives that exist in the gaming world.</li> <li>4. Has knowledge of adding diverse digital content (images, 3D objects, etc.) on predefined surfaces so that the user can interact in real time with the technology using devices such as mobile phones, headsets, AR glasses, etc.</li> <li>5. He has specialized knowledge of the digital process that simulates lighting in a 3D environment to create context scenes.</li> <li>6. Has specialist knowledge of the digital process of simulating lighting in the context of a concept illustration.</li> <li>7. Is capable of rendering body movement, kinematics, etc. using the processes and principles of 2D and 3D animation,</li> <li>8. He has specialized knowledge of using game engines as specialized visualization and interaction tools designed for rapid iteration of computer games.</li> <li>9. Analyzes recent trends, developments and innovations in modern visualization and modeling technologies in the virtual environment.</li> <li>10. Research information to develop new ideas and concepts for the design of a particular production.</li> </ol>
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Abilities	<ol style="list-style-type: none"> <li>1. Appreciate a fair contextualization of the result of the concept art process.</li> <li>2. Apply the principles of visual communication at an advanced level and on exact topics.</li> <li>3. It 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>4. Apply a variety of visual techniques to design graphic material and combine graphic elements to convey concepts and ideas.</li> <li>5. Develops new artistic concepts and creative ideas.</li> <li>6. Develops 3D models by transforming and digitizing previously designed characters and objects using specialized 3D tools.</li> <li>7. Develops a computer-generated 3D representation of a set, such as the simulated environment in which users interact.</li> <li>8. Creates and processes two-dimensional and three-dimensional digital images depicting animated objects or illustrating a process, using computer animation or modeling programs.</li> <li>9. Develops a digital game story by imagining a detailed working scenario and storyboard with game descriptions and objectives.</li> </ol>
Responsibility and autonomy	<ol style="list-style-type: none"> <li>1. Work both within a complex team and in a context of full autonomy, when assuming all creative decisions and project responsibility.</li> <li>4. 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>5. Understands the available digital media related to the game not only from a player's point of view, but also from a game producer's point of view.</li> <li>6. 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>7. Explore in depth the process of writing a screenplay and storyboard for a game, differentiating between all the stages involved and analyzing the key components and concepts that should be found in a screenplay.</li> <li>8. Appreciate the workload and personal involvement in completing the project.</li> <li>9. Elaborate a phasing of the objectives to be achieved in order to achieve the results assumed in the project.</li> <li>10. He deduces from his own experience the consumption of time necessary to achieve the result.</li> <li>11. Maintain an art portfolio to showcase his own styles, interests, skills, and accomplishments.</li> <li>12. Perform self-promotion.</li> <li>13. Effectively expresses his own point of view, formally and informally, on his own approach to achieving objectives and results.</li> <li>14. Apply the code of ethics for the professional activity in which he is qualified.</li> <li>15. Respect the rights and obligations from the perspective of labor and intellectual property rules and regulations.</li> </ol>

## 7. Conținuturi

7.1 Course	Teaching methods	Comments
1. Character animation principles in game animation, creative and technical skills	Interactive teaching, visual support, tutorials	The course is correlated, to meet the established

<ol style="list-style-type: none"> <li>2. Rigging, motion capture and games engines to create exceptional digital products</li> <li>3. Autodesk Maya and CINEMA 4D rig overview</li> <li>4. Posing character animation: <ul style="list-style-type: none"> <li>• Telling stories through posing</li> <li>• Balance and symmetry in poses</li> <li>• Creating strong lines of action in poses</li> <li>• Silhouetting and flow</li> <li>• Sequencing poses</li> </ul> </li> <li>5. Straight Ahead and Pose-to-Pose Animation <ul style="list-style-type: none"> <li>• Animating hair and clothing straight ahead</li> <li>• Animating natural effects straight ahead</li> <li>• Timing the blocking pass</li> <li>• Shifting weight and arcs</li> <li>• Adding anticipation and follow-through</li> <li>• Animating a character from seated to standing: Creating the main poses <ul style="list-style-type: none"> <li>• Animating a character from seated to standing: Adding secondary motion</li> </ul> </li> </ul> </li> <li>6. Character Animation movements and Walks <ul style="list-style-type: none"> <li>• Two-legged walks and placement</li> <li>• Lower and upper body poses and motion</li> <li>• Arms and hands animation</li> <li>• Animating the head</li> </ul> </li> </ol>	<p>and debates (Case Study)</p> <p>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>objectives, the lecture will be interactive</p> <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>7.2 Seminar / laborator</p>	<p>Teaching methods</p>	<p>Comments</p>
<p><b>Assignment:</b></p> <ol style="list-style-type: none"> <li>1. Case Study: Analyse at list one video game animation, identifying character animation principals respected or ignored in the production game development</li> <li>2. Choose one of the techniques in character animation to create one scene or a short video game respecting the theory from the courses</li> </ol> <ul style="list-style-type: none"> <li>• Keyframe Animation</li> <li>• Motion Capture</li> <li>• Blendshape Animation</li> <li>• Particle Animation</li> <li>• Ragdoll Physics simulations</li> <li>• Cutscene Animation</li> <li>• Procedural Animation</li> <li>• Skeletal Animation</li> </ul> <p><b>The assignment will require:</b></p> <ul style="list-style-type: none"> <li>• Case study analysis: +4p</li> <li>• One scene or a short video game production: +6p</li> </ul> <p><b>Deadline:</b></p> <p>At the end of the semester or during the scheduled final exam.</p>	<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 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.</p> <p>Analysis, dialogue, corrections</p>	<p>Case studies – personal projects posted and presented on Google Classroom, Google Meet and YouTube channel of the Design and Applied Arts Department)</p> <p>Teaching activities are conducted exclusively <b>face to face</b></p> <p>Videoconferencing platform used: Google Meet</p>

**Bibliografie:**

- Angry ANIMATOR <https://www.youtube.com/@angryanimator>
- Cartoon Animation with Preston Blair, Revised Edition, Learn techniques for drawing and animating cartoon characters, Preston Blair, Quarto Publishing Group 2020
- Figure Drawing: Design and Invention Paperback, Michael Hampton, 2009, published by M Hampton
- 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
- 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+Beyon&source=gbs\\_navlinks\\_s](https://books.google.ro/books?id=fc0vEAAAQBAJ&dq=A+History+from+PONG+to+Playstation+and+Beyon&source=gbs_navlinks_s))

**1. 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.

**2. 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	Attendance at course activities - minimum 60% attendance. Examination – solving a practical task with the	50%

	understanding and application, not memorization).	course and bibliography at your disposal.	
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  
11.03.2023

Titular de disciplină



Data avizării în departament

Director de departament