

Course description (topics)

Title of the course: Unreal Engine for Interactive Experiences - Advanced Course				
Tutors of the course , contact details: Nemes Barna – nemesbarna@gmail.com				
Code: M-SZ-E-301 -FS-252602-02	Related curriculum (programme/level):	Recommended semester within the curriculum:	Credit: 5	Number of class hours: 40 Student working hours: 26
Related codes M-SZ-301- FS-252602 -02 B-SZ-401 -FS-252602 -02 ER-MOME -MA-252602 -02	Type: (seminar/lecture/class work/consultation, etc.)	Can it be an elective course? Yes	In case of elective what are the specific prerequisites: Basic Unreal Engine and 3D knowledge and experience with any 3D modeling software.	
Course connections (prerequisites, parallels): Prerequisite for participation in the course is a basic knowledge of Unreal Engine, and experience with any 3D modeling software.				
Aim and principles of the course: Provide foundational knowledge of Unreal Engine, focusing on prototyping interactive experiences and game ideas.				
Learning outcomes (professional and general competences to be developed): Knowledge: Understand Unreal Engine's Blueprint based Visual scripting toolset, capabilities, limitations and workflows. Ability: Create small playable games and interactive experiences inside Unreal Engine. Attitude: Develop a creative, collaborative, and problem-solving mindset. Autonomy and responsibility: Execute independent projects and manage interactive workflows in UE effectively.				
Topics and themes to be covered in the course: Basics, project and asset management, UI, layout, Blueprint visual scripting, game mode, pawns, level blueprints, interfaces, basic pickups, interactivity. Comprehensive overview of coming up with a game idea, testing that idea and iterating it based on player and peer feedback.				
Specificities of process organisation / organisation of learning: Interactive classes, hands-on learning, feedback-focused sessions, homework. Course structure, nature of the individual sessions and their timing (in case of several teachers' involvement, please indicate the distribution of their teaching input: 10 sessions, 3 hours each, mix of theory and practice, step by step exercises and independent project development. Students' tasks and responsibilities: Attend, complete assignments, deliver homework during the semester, deliver final playable game (can be inside Unreal) at the end of semester.				

Learning environment: (e.g. classroom, studio, off-site, online, in-company placement, etc.)
Computer lab in B-303 with Unreal Engine already installed on all computers.

Assessment:

(in case of more teachers are involved and they evaluate separately, separate assessments per teacher needed)

Evaluated through the final presentation of the short interactive project, delivered homework assignments and class participation.

Requirements to be met:

For the final project: An interactive real-time experience in Unreal Engine, that has at least a main menu, a playable level, and at least 4 interactive functions showcasing different techniques. The game should be playable, there should be a lose and a win condition. Plus point if the gameplay loop is exciting and original, and if the game mechanics insure replayability.

Method of assessment: (what methods are used for assessment {test, oral question, practical demonstration, etc.}) **Presenting the playable demo of the game idea to the whole class at the last session, everyone will have to play each other's projects.**

Assessment criteria (what is taken into consideration in the assessment):

Both artistic and technical evaluation of the game demo, considering the student's ability and prior knowledge.

How is the mark calculated (how is the result of each assessed requirement reflected in the final mark? {e.g. proportions, points, weights}):

course attendance 30%

final playable demo 40%

homework deliverables during the semester 40%

(failing course under 50%)

Required Literature: none

Recommended Literature:

<https://dev.epicgames.com/documentation/en-us/unreal-engine/unreal-engine-5-6-documentation>

Other information:

Only apply for this course

- **if you are willing to attend all classes (missing 3 sessions are an automatic failure of the course).**
- **if you are willing to dedicate at least 2 hours of work outside class time each week to deliver the homework assignments.**
- **if you have some 3D and Unreal Engine knowledge and you are really interested in making a small game / interactive project.**
- **if you want to improve and learn a lot about Unreal Engine and game design**

Paralell to applying to this course on Neptun you will have to prove that you have some Unreal Engine and / or 3D knowledge. Please create a folder with your name (course and class) and upload samples of your work into this drive folder.

https://drive.google.com/drive/folders/1I6ISFSJG7_KZWcJz1m4dgeZM-31FJvbS?usp=sharing

Or you can email me your stuff if you prefer that, (it is on top of this course description).

This will be an advanced course starting from basic Unreal Engine skills, if you attended the fall Unreal Engine for Filmmaking course then this should be good for you!

If you don't get into the course, don't worry, in the first week of the semester some people usually drop it, and there will probably be open places available.

Recognition of knowledge acquired elsewhere/previously/validation principle:

- No exemption from attending and completing the course will be granted.
- Exemptions from the acquisition of certain competences and the completion of certain tasks may be granted,
- some tasks may be replaced by other activities,
- full exemption may be granted.

Out-of-class consultation times and location: I'll set up a Discord server for sharing all class content, and for the collection of homework assignments and everything related to the course. If there is a question related to the course, you will be able to get help there.