



Course title: **Game design in the UNITY environment**

ECTS credit allocation (and other scores): **5**

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English /Polish

Number of hours per semester: 30 lectures + 30 classes = 60 hours

Course coordinator/ Department and e-mail: Piotr Jastrzębski/ WMil, piojas@matman.uwm.edu.pl

Type of classes: classes and lectures

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Substantive content

CLASSES:

During computer classes, students will train basic techniques of creating games based on the UNITY engine

LECTURES:

Introduction to the Unity environment. Introduction to ludology. Overview of the basic elements of the environment. Game objects concept. Light and Camera in Unity. Scripts. Fundamentals of physics in Unity. Application user interface. Creating an animation in Unity.

LEARNING PURPOSE

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Imparting to students a body of knowledge and skills in the area pertaining to game design using the Unity 3D environment.

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On completion of the study programme the graduate will gain:

Knowledge:

The student knows how to navigate the Unity environment. They are familiar with the basic concepts related to game design.

Skills:

The student is capable of preparing the Unity environment for work. They navigate the application's user interface efficiently. They can use the C# language to independently write scripts. The game design principles they have learned can be applied to create applications on their own.

Social Competencies:

The student is able to formulate problems and implement solutions correctly, aware of the need to continuously improve their programming skills..

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**BASIC LITERATURE**

- 1) Mike Geig, Unity. Przewodnik projektanta gier. Wydanie III, Wyd.Helion, 2019



- 2) Jeremy Gibson Bond, Projektowanie gier przy użyciu środowiska Unity i języka C#. Od pomysłu do gotowej gry. Wydanie II, Wyd. Helion, 2018.
- 3) Jacek Ross, Unity i C#. Praktyka programowania gier, Wyd. Helion, 2020

#### **SUPPLEMENTARY LITERATURE**

- 1) Ewa Ross, Jacek Ross, Unity i C#. Podstawy programowania gier, Wyd. Helion, 2018.

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 2,6 ECTS points,

Student's independent work: 2,4 ECTS points,