



**SYLLABUS OF THE DISCIPLINE**  
**Video Game Development**  
**Component of the educational program - elective (3.0 credits)**

|   |   |
|---|---|
| <b>Educational and professional program</b> | Information technology and project management   |
| <b>Specialty</b>                            | 122 – Computer science  |
| <b>Field of knowledge</b>                   | 12 – Information technology   |
| <b>Level of higher education</b>            | first (bachelor's)  |
| <b>Language of instruction</b>              | English   |
| <b>Teacher's profile</b>                    | Andrii Dorosh,<br>PhD in Physics and Mathematics,<br>Associate Professor of the Department of<br>Mathematical Modeling<br><a href="https://mathmod.chnu.edu.ua/pro-nas/spivrobitnyky/dorosh-andrii-bohdanovych/">https://mathmod.chnu.edu.ua/pro-nas/spivrobitnyky/dorosh-andrii-bohdanovych/</a> |
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| <b>Course page in Moodle</b>                | <a href="https://moodle.chnu.edu.ua/course/view.php?id=8226">https://moodle.chnu.edu.ua/course/view.php?id=8226</a>   |

**SUMMARY OF THE SUBJECT**

Objective of the discipline is to master the basic principles of creating and developing video games of various genres for different platforms.

**EDUCATIONAL CONTENT OF THE EDUCATIONAL COMPONENT**

| <b>MODULE 1.</b> |                                  |
|------------------|----------------------------------|
| <b>Topic 1</b>   | Unity game engine user interface |
| <b>Topic 2</b>   | Simple objects and 3D physics    |
| <b>Topic 3</b>   | Textures and colliders           |
| <b>MODULE 2.</b> |                                  |
| <b>Topic 4</b>   | Creating scripts in C#           |
| <b>Topic 5</b>   | Creating animations              |
| <b>Topic 6</b>   | 2D physics                       |

**FORMS, METHODS AND EDUCATIONAL TECHNOLOGIES**

Teaching and learning methods: lectures, laboratory classes, e-learning using Moodle system, testing, completion of individualized learning tasks.

**FORMS AND METHODS OF CONTROL AND EVALUATION**

**Types and forms of control:**

1. Current (verbal questioning, problem solving).
2. Modular (tests, laboratory tasks).

**Means of assessment:** tests; team projects; analytical reports on laboratory work, individual tasks and independent work.

**Final control:** credit.

## **CRITERIA FOR ASSESSING LEARNING OUTCOMES**

The learning outcomes assessment system is based on ECTS principles and is cumulative. During the semester, students complete laboratory tasks and test assignments, for which they can get up to 60 points. The final control in the discipline is a credit (40 points).

### **POLICY ON ACADEMIC INTEGRITY**

Compliance with the policy on academic integrity by participants of the educational process in the study of the discipline is regulated by the following documents:

- ✓ Ethical Code of Yuriy Fedkovych Chernivtsi National University  
<https://www.chnu.edu.ua/universytet/normatyvni-dokumenty/etychnyi-kodeks-chernivetskoho-natsionalnoho-universytetu-imeni-yurii-a-fedkovycha/>
- ✓ Regulations on Detection and Prevention of Academic Plagiarism at Yuriy Fedkovych Chernivtsi National University  
<https://www.chnu.edu.ua/universytet/normatyvni-dokumenty/polozhennia-pro-vyivlennia-ta-zapobihannia-akademichnomu-plahiatu/>

### **INFORMATION RESOURCES**

1. <https://unity.com>
2. <https://moodle.chnu.edu.ua/course/view.php?id=8226>