

IIO50Z Game Programming (15 cr)

IIO50100 Basics of Game Programming 7 cr

IIO50200 Game Programming Project 8 cr

Introduction

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Quick review: what are your expectations for the courses?

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Game programming module

- Main goal: you learn the entire cycle of game development
 - starting from game design
 - learning basics of the most essential parts of game development (programming, graphics, etc.)
 - finishing with the completion of the game project
- The course topics include the tools, environments and technologies used in game development
- You are able to work as members of a game development team (e.g. as a game designer, graphics designer, or game programmer)



IIO50100 Basics of Game Programming

- Prerequisites: Basics of object-oriented programming (C# or C++ preferred)
- Objectives / learning outcomes => you:
 - understand the principles of computer game design
 - understand the technical architecture of computer games
 - know the basics of real-time 2D/3D graphics programming
 - are able to include input and output devices such as keyboard, mouse, sound effects and background music to the game



IIO50100 Basics of Game Programming

- Course Contents:
 - Game design and game mechanics
 - Game programming (with Unity)
 - Game graphics (with Blender)
- Assessment (pass/fail) is based on completed assignments on all three subjects mentioned above
 1. Game design assignments
 2. Exercises for game programming with Unity (including personal “exam”)
 3. Game graphics assignments



Discussion: what skills you need when developing a game?

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IIO50200 Game Programming Project

- Prerequisites: project work experience, Basics of Game Programming
- Objectives / learning outcomes => you learn
 - [different roles](#) and working in a game project
 - to develop a (first prototype of an) computer game



IIO50200 Game Programming Project

- Course Contents:
 - game development in a team and project documentation
 - roles and teamwork
 - computer game development (design, implementation, testing)
- Assessment (0-5) is based on the computer game you make as a project group work: project plan, game design documentation (GDD), the actual computer game, presentation, and the final report
- Individual evaluation is partly based on a [learning report](#)

IIO50200 Game Programming Project

- Grade 5: Student carries out the project work with self-determination and efficiency and shows initiative in presenting new ideas in the implementation. Student provides detailed documentation about game design and implementation. Game project plan is feasible including schedule and workload estimates.
- Grade 3-4: Student provides sufficient game project documentation and implementation.
- Grade 1-2: Student participates on design and implementation of simple computer game.



Discussion: problems and solutions in game projects

- What are the typical problems (pitfalls, mistakes) in game projects?
- What kind of solutions you could find for solving them?

