

## CT60A5400 Fundamentals of Game Development

The key information on this course has been summarized here from LUT SISU, <https://sis-lut.funidata.fi/student/courseunit/lut-CT60A5400-2019-2020/brochure> .

**Teacher in Charge:** Associate Professor, D.Sc. (Tech.) Jussi Kasurinen

**Year:** MSc (Tech.) 1

**Assessment scale and assessment methods:** 0-5. Continuous evaluation, no exam: Project proposal and presentation 20%; individual project assignments (x2) 60%; peer review work on other project assignments 20%.

**Aims:** At the end of the course the student will be able to:

1. Conduct independent work in entertainment software engineering context.
2. Independently design and implement a small-scale game program with some industry-relevant platform.
3. Acquiring further knowledge concerning the taught game development tool.
4. Working as a productive member and as part of a team developing larger entertainment software product.

### Contents:

Applied software engineering course. The objective for this course is for students to learn how to use their software engineering knowledge in an entertainment software engineering context. With the selected game development tools, student is capable to independently design and develop a small game program on some modern game engine platform, or work as a part of a team developing a larger game product.

List of Topics: lectures and project works:

- Games as software products
- Basics of processes and models applied in the entertainment software industry
- Basics of the game development tools
- Introduction to game engines and their functions
- Basics of 3D objects
- Introduction to game development-related programming problem.
- Basics of artificial intelligence in entertainment software engineering context.
- Basics of sound engineering
- Gamification and Serious games.

### Teaching Methods:

Primary mode of work is assisted self-study. Lectures 8 h, Independent work and project assignments 148 h. Total 156 h.

### Prerequisites:

This is an advanced programming heavy software engineering course, so to participate this course you must have

1. Bachelor's thesis or degree completed
2. solid programming skills on some modern programming language (C++, Java, Python etc.)
3. at least 2 courses (12+ study credits) on software engineering, software testing, or similar topics.

**Teaching Language:**

English

**Study materials:**

Materials given at the lectures.