

SYLLABUS

Game consoles and systems 7.5 credits S0017D

Spelkonsoler och system

Course syllabus admitted: Autumn 2021 Sp 1 - Present

**DECISION DATE
2021-02-17**

Game consoles and systems 7.5 credits S0017D

Spelkonsoler och system

First cycle, S0017D

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Medieteknik	Computer Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and mathematics equivalent to:

M0050M Basic Mathematics and Derivatives

M0051M Integrals, Vectors and Matrices

M0052M Differential Equations and Transform Theory

And programming skills equivalent to:

D0009E Introduction to Programming

D0037D Object Oriented Programming

S0006E Real-time computer graphics programming

D0041D Data structures and algorithms

Selection

The selection is based on 1-165 credits.

Examiner

Patrik Holmlund

Course Aim

The course aims to provide knowledge of the game consoles function and structure and the systems aspects in networking gaming for consoles as well as for the computer.

After course completion, the student should be able to demonstrate:

- broad knowledge in the field of computer game development and an understanding of the system level
- ability to apply knowledge of mathematics and science for specific issues. As shown through the presentation of concepts for a game.
- ability to model, simulate, predict, and evaluate methods and algorithms for systems in computer games. As shown through the simulation lab.
- ability to identify the need for further knowledge and to continuously upgrade their skills. As shown through the presentation of projects and assignments with the identification of further work.
- knowledge and experience about how video game consoles and systems are constructed and operate.
- in-depth knowledge of limitations and advantages of game consoles.

Contents

In this course covered:

- In-depth knowledge of limitations and advantages of game consoles.
- Systems' basic function and implementation
- Differences between various game console platforms - advantages and disadvantages
- Game development process for consoles as well as its deviations from development for the computer environment.
- Practical experience in implementation of the game on any platform
- Parallel systems
- Data-oriented design
- Cloud computing

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The course consists of lectures and presentations. Mandatory attendance at laboratory sessions and presentations.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Compulsory assignments and oral presentation.

Each assignment is graded, after which the final grade for the course is a combination of these grades. Each assignment specifies what is required for each grade.

Literature. Valid from Autumn 2011 Sp 1

Handouts.

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0005	Assignment report 1	G U 3 4 5	1	Mandatory	A11	
0006	Assignment report 2	G U 3 4 5	2	Mandatory	A11	
0007	Assignment report 3	G U 3 4 5	2	Mandatory	A11	
0008	Assignment report 4	U G#	2.5	Mandatory	A11	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Jonny Johansson, HUL SRT 2021-02-17

Syllabus established

by LTU Skellefteå 2010-02-19