Design and Programming of Computer Games

Programme course

6 credits

Design och programmering av datorspel

TDDD23

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2017-01-25

Main field of study

Information Technology, Computer Science and Engineering, Computer Science, Programming

Course level

Second cycle

Advancement level

A1N

Course offered for

- Computer Engineering, B Sc in Engineering
- Programming
- Computer Science and Engineering, M Sc in Engineering
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering
- Information Technology, M Sc in Engineering
- Computer Science and Software Engineering, M Sc in Engineering
- Computer Science, Master's programme

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Programming 10 credits (at least 6 credits object-oriented programming), Basic course in Usable systems or similar prerequisite

Intended learning outcomes

The goal of course is that you will acquire knowledge of how computer games are constructed and how design parameters affect how computer games are programmed.
Goals for knowledge and understadning:

- Analyze what creates different game experiences
- Describe different designparameterar in games

Goals for skills and ability:

- Using high-level language / high-level tools for game development
- Designing different types of games
- Implement game prototypes
- Analyze and discuss gaming

Goals for values and attitudes:

- Using and evaluating high-level tools for programming computer games
- Evaluate gaming experiences

Course content

- Characteristics of computer games
- Variety in game experiences
- Design parameters
- Game analysis
- High-level languages and tools for game development

Teaching and working methods

The course includes a series of lectures on design parameters and technical issues of design and programming of computer games. The design part of the course is focused on progression, variation, and the communication of game mechanisms through the game. Graphic design or sound in this sense is not considered in the course, it is the actual game play we design. The students are supervised in developing their own game prototype, including an individual choice of a high-level technical platform for game development. An analysis of the basic game idea and testing of prototypes, and reflection and feedback on implemented games are made and form the basis for the reflection on the game design parameters and the valuation of the chosen technical platform.

Examination

PRA2	Project work	6 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department
Institutionen för datavetenskap

Director of Studies or equivalent
Jalal Maleki

Examiner
Erik Berglund

Course website and other links
http://www.ida.liu.se/~TDDD23

Education components
Preliminary scheduled hours: 52 h
Recommended self-study hours: 108 h

Course literature

Additional literature

Other
Course literature is presented at the course website.

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.