Visual effects and simulation 7.5 credits W0027E

Visuella effekter och simuleringar

Course syllabus admitted: Autumn 2024 Sp 1 - Present

DECISION DATE
2024-02-15

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Visual effects and simulation 7.5 credits W0027E

Visuella effekter och simuleringar

First cycle, W0027E

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

Main field of study

Media 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 courses corresponding with W0012E - Introduction to Computer Graphics 15 credits, W0013E - Design processes and methods for Computer Graphics 15 credits, W0019E - 3D graphics 7.5 credits and W0020E - Animation and Rigging 7,5 credits, W0021E Realtime Graphics 7,5 credits and W0024E Compositing 7,5 credits.

Good knowledge in English, equivalent to English 6.

Selection

The selection is based on 1-165 credits.

Course Aim

On completing this course the student shall be able to:

1. Create credible 3D simulations of natural phenomena.
2. Describe the technical, artistic and practical foundations in the field.
3. Critically evaluate practical methods and visual results, based on the course subject and principles for creative projects.

Contents

The course discusses the following subject areas:

- Procedural tools for generating effects.
- Methods for generating effects
- Simulation of particles, volumes, and other dynamic effects
- Rendering of particles, volumes, and other dynamic effects
- Procedural / environments - set dressing and rendering.

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Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
This course is only offered to programme students. You will have access to your own workstation in the campus studio, which has most hardware and software provided. You will have to arrange some equipment, such as headphones and certain specialized software, on your own. Access to the studio is contingent on following the posted rules.

Your skill as an artist and technical problem-solver is developed through continuous practice. This programme is largely based on assignments carried out on your own or in collaboration with others, outside scheduled activities. This format challenges you to develop good skills in organizing your time, searching for information, independently troubleshooting issues, and consciously exercising your practical skills. You are encouraged to use the studio as much as possible to take advantage and inspiration from your fellow students' learning processes.

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.
The course objectives are examined in various forms, as defined in the Modules section below. A module may consist of multiple assignments, each with specific criteria. Each assignment is detailed in the study guide for the course offering. Assignments must be submitted according to the assignment description, as well as according to general assignment guidelines communicated in the study guide for the course.

Late submissions are handled the same as failed assignments. No submissions are accepted after the final date of the course. Re-examination of assignments after the end of the course depends on the assignment type and teacher availability but can always be redone at the next course offering. Students who fail all or most parts of a course may not attempt re-exam assignments of individual assignments and will instead need to retake the course at the next course offering.

Projects are practical computer graphics productions carried out in miniature, under set conditions, in a given time, and with close interaction with a mentor. Re-examination of projects is possible before the beginning of the fall semester or else at the next course offering.

Practical exams are assignments that need to be carried out over a short period of time and under given conditions. Usually, the work is to be carried out in less than a single day, on location at campus. Re-exams are arranged at the next re-exam period and then again at the beginning of the fall semester.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Course offered by

Department of Computer Science, Electrical and Space Engineering

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Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Project	U G#	2.5	Mandatory	A23	
0002	Practical exam	U G#	2.5	Mandatory	A23	
0003	Written exam	U G#	2.5	Mandatory	A23	

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 Robert Brännström 2024-02-15

Syllabus established

by Robert Brännström 2023-02-15

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