

SYLLABUS

STUDY YEAR 2022/2023

Bachelor Programme in Computer Game Programming

Enrollment semester Autumn 2022

DATE

2020-12-08

REFERENCE NO.

LTU-4192-2020

DECISION MAKER

Dean of the Faculty of Engineering

Programme content and structure

A Bachelor of Science degree from the program in Computer Game Programming (180 credits) requires (mandatory courses): Base courses 37,5 credits, Core courses 120 credits, electable courses 7,5 credits and thesis work of minimum 15 credits. Internships during the study period is recommended but not required for graduation. The programme is located at Campus Skellefteå.

For admission to the degree project course entry requirements specified in the Course Syllabus must be completed. Information regarding the application- and admission process is given and ensured by the responsible department.

Credits

180 credits

Degree

- Degree of Bachelor of Science in Engineering, Computer Engineering med inriktning mot Computer Game Programming

Entry requirements

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

Upper secondary school courses English 6, Physics 2, Chemistry 1, Mathematics 3c or Mathematics D.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Compulsory courses

Compulsory courses 37.5 credits

Course code	Course	Cr	Level	Comment
F0060T	Mechanics and Experimental Methods	7.5	Grundnivå	
G0010N	Industrial Management with a Sustainability Perspective	7.5	Grundnivå	
M0050M	Basic Mathematics and Derivatives	7.5	Grundnivå	
M0051M	Integrals, Vectors and Matrices	7.5	Grundnivå	
M0052M	Differential Equations and Transform Theory	7.5	Grundnivå	

Compulsory courses 112.5 credits

Course code	Course	Cr	Level	Comment
D0009E	Introduction to Programming	7.5	Grundnivå	
D0037D	Object oriented programming	7.5	Grundnivå	
D0041D	Data structures and algorithms	7.5	Grundnivå	
S0003E	Game development project	15	Grundnivå	
S0005E	Introduction to game development	7.5	Grundnivå	
S0009E	Computer graphics programming	15	Grundnivå	
S0010E	Software Engineering	7.5	Grundnivå	
S0011E	Game engine architecture	15	Grundnivå	
S0012E	Computer Game Systems	15	Grundnivå	
S0013E	Game Physics and Research Fundamentals	15	Grundnivå	

30 credits

Credits for optional courses is 15 credits. Within the optional space of the programme it is possible to choose optional courses. The given number of credits must be met for degree.

Course code	Course	Cr	Level	Comment
S0003D	Thesis, computer games	15	Grundnivå	
S0007E	Specialisation project in game development	15	Grundnivå	Selectable

Study schedule

Year of study 1 Enrollment semester Autumn 2022, Is offered in 2022/2023

Study-period	Course code	Course	Cr	Comment
1	D0009E	Introduction to Programming	7.5	
1	M0050M	Basic Mathematics and Derivatives	7.5	
2	D0037D	Object oriented programming	7.5	
2	M0051M	Integrals, Vectors and Matrices	7.5	
3	M0052M	Differential Equations and Transform Theory	7.5	
3	S0005E	Introduction to game development	7.5	
4	D0041D	Data structures and algorithms	7.5	
4	G0010N	Industrial Management with a Sustainability Perspective	7.5	

Year of study 2 Enrollment semester Autumn 2022, Is offered in 2023/2024, planned study schedule

Study-period	Course code	Course	Cr	Comment
1	S0009E	Computer graphics programming	15	
2	F0060T	Mechanics and Experimental Methods	7.5	
2	S0010E	Software Engineering	7.5	
3	S0011E	Game engine architecture	15	
4	S0003E	Game development project	15	

Year of study 3 Enrollment semester Autumn 2022, Is offered in 2024/2025, planned study schedule

Study-period	Course code	Course	Cr	Comment
1	S0012E	Computer Game Systems	15	
2	S0013E	Game Physics and Research Fundamentals	15	

3	S0007E	Specialisation project in game development	15	Selectable
3		Credits för optional courses	15	
4	S0003D	Thesis, computer games	15	Entry requirements