



Faculty of Arts and Social Sciences

Programme Study Plan

Study Programme in IT Design

Programme Code	SGITD
Programme Approval	The programme study plan was approved by the Faculty Board of Arts and Social Sciences on 18 October 2017 and valid from the autumn semester of 2018.
Programme Title	Study Programme in IT Design
Credits	180
Language of Instruction	Swedish and English
Degree Level	Bachelor
Degree Type	General
Prerequisites	General admission requirements plus either field-specific eligibility A4 (upper secondary school level Mathematics 3b or 3c, Civics 1b or 1a1+1a2) or field-specific eligibility 4 (upper secondary school level English B, Mathematics C and Civics A)

General information

The programme provides a broad base in the IT field with the opportunity for students to specialise in one of the following areas: Enterprise Systems and economy, software

design or information systems design. The aim of the specialisation in Enterprise Systems and economy is that students acquire knowledge and understanding of the approaches, theories and methods of information technology and business administration in the areas of business development, process development and Enterprise Systems. The aim of the specialisation in systems design is that students acquire knowledge and understanding of the approaches, theories and methods of information technology in the areas of business development and systems development. The aim of the specialisation in software design is that students acquire knowledge and understanding of the approaches, theories and methods of information technology and computer science in the areas of program and software development.

Aims and Learning outcomes

National outcomes

Knowledge and understanding

For a Degree of Bachelor the student shall

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, knowledge of applicable methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Competence and skills

For a Degree of Bachelor the student shall

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems independently and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work independently in the main field of study.

Judgement and approach

For a Degree of Bachelor the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and on-going learning.

Independent project (degree project)

A requirement for the award of a Degree of Bachelor is completion by the student of an independent project (degree project) for at least 15 credits in the main field of study.

Programme structure

During the first year students study basic courses in information systems, computer science and business administration as a basis for further studies and future professional activities.

During the second and third year students study continuation and application courses that can be mandatory, elective, or optional. An elective course is one among a limited range of choices, e.g., “courses in business administration”, while an optional course is any course offered at Karlstad University or elsewhere.

The programme is concluded with a degree project, preferably completed in cooperation with a company, public authority, etc.

All students, regardless of specialisation, have opportunities to study abroad. For the Enterprise Systems and Economy and the Software Design specialisations the best period to study abroad is semester 5 and semester 4 for System Design students.

Programme curriculum

The education comprises 180 ECTS cr including 90 ECTS cr in the main field of study. Students who have earned a Bachelor’s degree can add one or two years to qualify for a Master’s degree of 60 ECTS cr or of 120 ECTS cr.

The main field of study for the Enterprise Systems and Economy specialisation is Information Systems. The Bachelor’s degree gives eligibility for Master level studies in Information Studies. Provided the Bachelor’s degree includes the following courses, students are also eligible for Master level studies in Service Management and in Marketing at Karlstad University:

FEGA01 Business Administration I 30 ECTS cr
 FEGB24 Management Control 6 ECTS cr
 FEGB25 Business Benefits of IT Systems 3 ECTS cr
 FEGB45 Corporate Finance 6 ECTS cr
 ISGB05 Enterprise Systems I 7.5 ECTS cr
 ISGB06 Enterprise Systems II 7.5 ECTS cr
 ISGC07 Service Management and Information Technology 15 ECTS cr
 ISGC09 Information Systems: Degree project 15 ECTS cr

The main field of study for the Software Design specialisation is Computer Science. A Bachelor’s degree gives eligibility for Master level studies in Computer Science.

The main field of study for the Information Systems Design specialisation is Information Systems. A Bachelor’s degree gives eligibility for Master level studies in Information Systems.

Note that programme courses may have different titles and be offered in a different order from what is listed here.

Enterprise Systems and Economy

Semester 1

- Introduction to IT design 7.5 ECTS cr
- Enterprise and IT 7.5 ECTS cr
- Acquisition of IT Systems 7.5 ECTS cr
- Programming Techniques 7.5 ECTS cr

Semester 2

- Business Administration I 30 ECTS cr

Semester 3

- Database Design 7.5 ECTS cr
- Object-Oriented Modelling 7.5 ECTS cr

Optional courses 15 ECTS cr. Examples of courses to choose if offered and accessible: Program Development 7.5 ECTS cr (required course for further studies in programming), Web Development 7.5 ECTS cr, Business by Web and Web Analytics 7.5 ECTS cr, General Project Management Methodology 7.5 ECTS cr (distance course).

Semester 4

- Enterprise Systems I: Analysis Models 7.5 ECTS cr
- Enterprise Systems II: Development Models 7.5 ECTS cr
- Management Control 6 ECTS cr
- Business Benefits of IT Systems 3 ECTS cr
- Investment and Financing 6 ECTS cr

Semester 5

- Service Management and Information Technology: e-Business 15 ECTS cr
Optional courses 15 ECTS cr. Examples of courses to choose if offered and accessible: Information Systems Practical Placement 7.5 ECTS cr, Interaction Design 7.5 ECTS cr and, if not taken in semester 3: Business by Web and Web Analytics 7.5 ECTS cr and General Project Management Methodology 7.5 ECTS cr (distance course). Design Pattern Java and UML 7.5 ECTS cr can be chosen by students who have not studied Program Development 7.5 ECTS cr earlier.

Semester 6

- Information Systems: Bachelor Thesis 15 ECTS cr
- Business Development from a Process and Partnership Perspective 7.5 ECTS cr
- Basic programming 7.5 ECTS cr

Software Design*Semester 1*

- Introduction to IT design 7.5 ECTS cr
- Enterprise and IT 7.5 ECTS cr
- Acquisition of IT Systems 7.5 ECTS cr
- Programming Techniques 7.5 ECTS cr

Semester 2

- Software Development Methodology 7.5 ECTS cr
- Basic Business Administration 7.5 ECTS cr
- Graphical User Interfaces 7.5 ECTS cr
- Introductory Mathematics 7.5 ECTS cr

Semester 3

- Operative Systems 7.5 ECTS cr
- Computer Engineering 7.5 ECTS cr
- Data Structures and Algorithms 7.5 ECTS cr
- Mathematics for Computer Science 7.5 ECTS cr

Semester 4

- Computer Networking I 7.5 ECTS cr
- Database Techniques 7.5 ECTS cr
- Programming Languages 7.5 ECTS cr

Semester 5

Optional courses 30 ECTS cr. Examples of courses to choose if offered and accessible: Software Engineering 7.5 ECTS cr, Computer Science Project 7.5 ECTS cr, Computer Networking II 7.5 ECTS cr, Distributed Systems and Applications 7.5 ECTS cr, Computer Safety I 7.5 ECTS cr, Computer Safety II 7.5 ECTS cr, C#.NET 7.5 ECTS cr, Test Design for Software 7.5 ECTS cr, Computer Science Practical Placement 7.5 ECTS cr, Design Patterns, Java and UML 7.5 ECTS cr, Linear Algebra 7.5 ECTS cr.

Semester 6

- C#.NET 7.5 ECTS cr
- Systems Integration 7.5 ECTS cr
- Degree Project/Bachelor Thesis 15 ECTS cr

Systems Design

Semester 1

- Introduction to IT design 7.5 ECTS cr
- Enterprise and IT 7.5 ECTS cr
- Acquisition of IT Systems 7.5 ECTS cr
- Programming Techniques 7.5 ECTS cr

Semester 2

- Software Development Methodology 7.5 ECTS cr
- Basic Business Administration 7.5 ECTS cr
- Graphical User Interfaces 7.5 ECTS cr
- Introductory Mathematics 7.5 ECTS cr

Semester 3

- Database design 7.5 ECTS cr
- Object-Oriented Modelling 7.5 ECTS cr
- Program Development 7.5 ECTS cr
- Web Development 7.5 ECTS cr

Semester 4

Optional courses 30 ECTS cr. Examples of courses to choose if offered and accessible: Project Management 7.5 ECTS cr, Information Systems Practical Placement 7.5 ECTS cr, Enterprise Systems I: Analysis Models 7.5 ECTS cr, Enterprise Systems II: Development Models, 7.5 ECTS cr, Business Development from a Process and Partnership Perspective 7.5 ECTS cr, C#.NET 7.5 ECTS cr, Computer Networking I 7.5 ECTS cr, Business by Web and Web Analytics 7.5 ECTS cr.

Semester 5

- Development of Apps for Mobile e-Services 7.5 ECTS cr
- Project Management in IT Projects 7.5 ECTS cr (or User tests, Prototyping and Evaluation 7.5 ECTS cr, if Project Management is studied in semester 4).
- Design Patterns Java and UML 7.5 ECTS cr

Semester 6

- Information Systems: Bachelor Thesis 15 ECTS cr
- Systems Analysis and Design 7.5 ECTS cr
- Systems Integration 7.5 ECTS cr

Degree Title

Enterprise Systems and Economy

Bachelor of Science

Major: Information Systems

Software Design

Bachelor of Science

Major: Computer Science

Information Systems Design

Bachelor of Science

Major: Information Systems

Transfer of credits

According to the Higher Education Ordinance (Ch. 6, § 6-8), students may transfer credits from previously completed university courses subject to approval.

Additional Information

The local regulations for undergraduate studies at Karlstad University stipulate the obligations and rights of students and staff.

Previous versions of the programme study plan:

2006-12-14, dnr FAK1 2006/192, effective from autumn 2007.

2008-12-18, dnr FAK1 2006/192, effective from autumn 2007.

2010-04-29, dnr FAK1 2010/39, effective from autumn 2010.

2012-03-23, dnr FAK1 2012/53, effective from autumn 2012.

2014-02-19, dnr HS 2014/146, effective from autumn 2014.

2016-03-10, dnr HS 2016/205, effective from autumn 2016.

2017-03-10, dnr HS 2017/252, effective from autumn 2017.