



STUDY PROGRAMS IN COMPUTER SCIENCE

B.SC. IN COMPUTER SCIENCE

To complete a B.Sc. in general computer science, students need to complete 180 ECTS, of which 114 ECTS are mandatory. Each course is 6 ECTS, except for the final project which is 12 ECTS. An example of a study plan can be seen in the table; however, courses can be arranged differently as long as rules of prerequisites are followed.

<p>1. semester – fall term</p> <p>T-111-PROG – Programming - 6ECTS T-107-TOLH – Computer Architecture – 6ECTS T-117-STR1 – Discrete Mathematics I – 6ECTS T-216-GHOH – Software Requirements and Design – 6ECTS T-113-VLN1 – Semester Project 1 (3. Week course) – 6ECTS</p>	<p>2. semester – spring term</p> <p>T-201-GSKI – Data Structures – 6ECTS T-419-STR2 – Discrete Mathematics II – 6ECTS T-213-VEFF - Web-Programming – 6ECTS T-202-GAG1 – Databases – 6ECTS T-220-VLN2 - Semester Project 2 (3. Week course) – 6ECTS</p>
<p>3. semester – fall term</p> <p>T-317-CAST - Calculus and Statistics – 6ECTS T-301-REIR – Algorithms- 6ECTS T-303-HUGB – Software Engineering - 6ECTS Elective Course – 6 ECTS Elective Course (3. Week course) -6ECTS</p>	<p>4. semester – spring term</p> <p>T-501-FMAL – Programming Languages - 6ECTS T-215-STY1 – Operating Systems - 6ECTS Elective Course - 6ECTS Elective Course - 6ECTS X-204-STOF – Entrepreneurship and Starting New Ventures (3. Week course) - 6ECTS</p>
<p>5. semester – fall term</p> <p>T-409-TSAM – Computer Networks - 6ECTS Elective Course - 6ECTS Elective Course - 6ECTS Elective Course -6ECTS Elective Course (3. Week course) - 6ECTS</p>	<p>6. semester – spring term</p> <p>Elective Course - 6ECTS Elective Course - 6ECTS Elective Course - 6ECTS T-404-LOKA – Final Project (15. Week course) - 12ECTS</p>

Students take 66 ECTS for elective course, 36 ECTS can be outside of the department.

- Students who enrolled before fall 2016 are not required to take the course Entrepreneurship and Starting New Ventures.

Additional notes:

- Instead of taking T-317-CAST – Calculus and Statistics students may take T-101-STAI – Mathematics I and T-302-TOLF – Statistics I.
- It is possible to take T-103-STST–Discrete Mathematics for Engineering and T-211-Linear Algebra courses instead of T-117-STR1-Discrete Mathematics I and T-419-STR2 Discrete Mathematics II. This choice offers more opportunities to take interdisciplinary courses in Engineering as an alternative. However, the student must meet the prerequisites from the rule of mathematical preparation of secondary school and have taken the course T-101-STAI Mathematics I.



B.SC IN COMPUTER SCIENCE WITH MINOR IN BUSINESS

To complete a B.Sc. in Computer Science with a minor in Business students must complete 180 ECTS, of which 162 ECTS are mandatory. Each course is 6 ECTS, except the final project which is 12 ECTS. An example of a study plan can be seen in the table; however, courses can be arranged differently as long as rules of prerequisites are followed.

<p>1. semester – fall term</p> <p>T-111-PROG – Programming - 6ECTS T-216-GHOH – Software requirements and Design - 6ECTS T-107-TOLH – Computer Architecture - 6ECTS T-117-STR1 – Discrete Mathematics I - 6ECTS T-113-VLN1 – Semester Project 1 (3. Week course) - 6ECTS</p>	<p>2. semester – spring term</p> <p>T-201-GSKI – Data Structures - 6ECTS T-419-STR2 – Discrete Mathematics II - 6ECTS T-213-VEFF – Web-Programming - 6ECTS T-201-GAG1 – Databases - 6ECTS T-220-VLN2 – Semester Project 2 (3. Week course) - 6ECTS</p>
<p>3. semester – fall term</p> <p>T-317-CAST – Calculus and Statics - 6ECTS T-301-REIR - Algorithms - 6ECTS T-303-HUGB – Software Engineering -6ECTS V-108-REHA – Financial Accounting - 6ECTS Elective Course (3. Week course) -6ECTS</p>	<p>4. semester – spring term</p> <p>V-202-REGR – Business Process Analysis - 6ECTS T-501-FMAL – Programming Languages - 6ECTS V-201-RHAG - Microeconomics - 6ECTS T-215-STY1 – Operating Systems -6ECTS X-204-STOF – Entrepreneurship and Starting New Ventures (3. Week course) -6ECTS</p>
<p>5. semester – fall term</p> <p>V-307-GARS – Design and analysis of financial statements - 6ECTS I-406-IERP – Introduction to ERP systems - 6ECTS V-107-FJAR – Corporate Finance -6ECTS T-409-TSAM – Computer Networks - 6ECTS Elective Course (3. Week course)- 6ECTS</p>	<p>6. semester – spring term</p> <p>V-311-OPMA – Operations Management - 6ECTS I-707-VGBI – Business Intelligence - 6ECTS Elective Course - 6ECTS T-404-LOKA – Final Project (15. Week course) - 12ECTS</p>

Students take 18 ECTS in elective course within or outside of the department.

- Please note that the courses Applied Mathematics, Applied Information and Applied Statistics 1 (in School of Business) and Digital Technology (Science and Engineering) cannot be taken in the selection of the mandatory courses as they overlap the computer science courses. Note that you cannot get credit for both Data Processing and Databases because of overlap. Note that you cannot get credits for both Operating Systems and Fundamentals of Operating Systems because of overlap.



B.SC IN SOFTWARE ENGINEERING

To complete a B.Sc. in Software Engineering, students need to complete 180 ECTS, of which 156 ECTS are mandatory. Each course is 6 ECTS, except the final project which is 12 ECTS. An example of a study plan can be seen in the table, however courses can be arranged differently as long as rules of prerequisites are followed.

1. semester – fall term

T-111-PROG - Programming -6ECTS
 T-103-STST – Discrete Mathematics for Engineering - 6ECTS
 T-101-STA1 – Mathematics I - 6ECTS
 T-133-UIAD – Interactive design -6ECTS
 T-113-VLN1 – Semester Project 1 (3. Week course) - 6ECTS

2. semester – spring term

T-201-GSKI – Data Structures - 6ECTS
 T-211-LINA- Linear Algebra - 6ECTS
 T-201-STA2 – Mathematics II - 6ECTS
 T-233-SRAD – System requirements and design- 6ECTS
 X-204-STOF – Nýsköpun og stofnun fyrirtækja (3. vikna) - 6ECTS

3. semester – fall term

T-302-TOLF – Statistics 1 - 6ECTS
 T-301-REIR – Algorithms -6ECTS
 T-107-TOLH – Computer Architecture- 6ECTS
 T-302-HONN – Software design and implementation- 6ECTS
 T-333-HFOV - Software Processes and Project Management- 6ECTS

4. semester – spring term

T-213-VEFF – Web programming - 6ECTS
 T-501-FMAL – Programming Languages -6ECTS
 T-215-STY1 – Operating Systems - 6ECTS
 T-202-GAG1 – Databases - 6ECTS
 Elective Course (3. Week course) - 6ECTS

5. semester – fall term

T-535-CPSY - Cyber Physical Systems - 6ECTS
 T-409-TSAM – Computer Networks - 6ECTS
 Elective Course - 6ECTS
 Elective Course - 6ECTS
 Elective Course (3. Week course)- 6ECTS

6. semester – spring term

T-419-STR2 - Concurrent and Distributed Programming - 6ECTS
 T-533-VIHU - Software Maintenance - 6ECTS
 T-631-SOE2 – Software Engineering II – Testing - 6ECTS
 T-404-LOKA – Final Project (15 week course) - 12ECTS

Students take 24 ECTS of elective courses of their own choice. Students can choose elective courses within the department (i.e. Computer Science and Science and Engineering).

- If the choice is outside of the department students can apply for an assessment of up to 12 ECTS.
- Please note that the courses Applied Mathematics, Applied Information and Applied Statistics 1 (in School of Business) cannot be taken in the choice of the overlap with a core of software engineering.
- Note that you cannot get credit for T-216-GHOH software requirements and design and T-303-HUGB software engineering because of overlap



B.SC IN DISCRETE MATHEMATICS AND COMPUTER SCIENCE

To complete a B.Sc. in Discrete Mathematics and Computer Science students must complete 180 ECTS, of which 138 ECTS are mandatory, 18 ECTS are from capstone selection and 24 ECTS are elective credits. Each course is 6 ECTS, except the final project which is 12 ECTS. An example of a study plan can be seen in the table; however, courses can be arranged differently as long as rules of prerequisites are followed.

1. semester – fall term

T-111-PROG - Programming - 6ECTS
 T-103-STST – Discrete Mathematics for Engineering - 6ECTS
 T-101-STA1 – Calculus I - 6ECTS
 T-107-TOLH – Computer Architecture - 6ECTS
 T-113-VLN1 – Semester Project 1 (3. Week course) - 6ECTS

2. semester – spring term

T-201-GSKI – Data Structures - 6ECTS
 T-211-LINA- Linear Algebra - 6ECTS
 T-202-GAG1 – Databases - 6ECTS
 T-201-STA2 – Mathematics II - 6ECTS
 T-219-REMO– Real-time Models (3. Week course)- 6ECTS

3. semester – fall term

T-301-REIR – Algorithms - 6ECTS
 T-302-TOLF - Statistics 1 - 6ECTS
 Elective or Capstone selection course -6ECTS
 Elective course- 6ECTS
 E-402-STFO – Mathematical Programming (3. week) - 6ECTS

4. semester – spring term

T-501-FMAL – Programming Languages - 6ECTS
 T-604-HGRE – Design and Analysis of Algorithms - 6ECTS
 T-215-STY1 – Operating Systems or Elective Course
 T-218-ALOC - Algebra and Combinatorics - 6ECTS
 X-204-STOF – Entrepreneurship and Starting New Ventures - 6ECTS

5. semester – fall term

T-519-STOR – Theory of Computation - 6ECTS
 T-409-TSAM – Computer Networks or Elective Course - 6ECTS
 T-513-CRNU – Cryptography and Number theory
 Capstone selection course- 6ECTS
 Elective Course (3. Week course) -6ECTS

6. semester – spring term

T-505-ROKF – Logic in Computer Science - 6ECTS
 Elective course -6ECTS
 Capstone selection course- for example T-445-GRTH- Graph theory 6ECTS
 T-404-LOKA – Final Project (15 week course) - 12ECTS

Additional Notes:

- Students are required to take either Operating Systems or Computer Networks.
- Design and Analysis of Algorithms can be exchanged with Logic in Computer Science in the 4th and 6th semester.
- Algebra and Combinatorics is in rotation with Graph Theory
- Please note that the courses Applied Mathematics, Information Technology and Applied Statistics 1 (in School of Business) cannot be taken with a core of Software Engineering.
- Students who enrolled before fall 2016 are not required to take the course Entrepreneurship and Starting New Ventures



DIPLMOA IN COMPUTER SCIENCE

To complete a Diploma in Computer Science students must complete 120 ECTS, of which 90 ECTS are from mandatory courses. Each course is 6 ECTS, except the final project which is 12 ECTS. An example of a study plan can be seen in the table; however, courses can be arranged differently as long as rules of prerequisites are followed.

1. semester – fall term

T-111-PROG – Programming - 6ECTS
 T-107-TOLH – Computer Architecture – 6ECTS
 T-117-STR1 – Discrete Mathematics I – 6ECTS
 T-216-GHOH – Software reuirements and Design – 6ECTS
 T-113-VLN1 – Semester Project 1 (3. Week course) – 6ECTS

2. semester – spring term

T-201-GSKI – Data Structures – 6ECTS
 T-213-VEFF - Web-Programming – 6ECTS
 T-202-GAG1 – Databases – 6ECTS
 Elective course * 6ECTS
 T-220-VLN2 - Semester Project 2 (3. Week course) – 6ECTS

3. semester – fall term

T-317-CAST - Calculus and Statistics – 6ECTS
 T-301-REIR – Algorithms- 6ECTS
 T-409-TSAM – Computer Networks - 6ECTS
 Elective course* – 6ECTS
 Elective Course (3. Week course) -6ECTS

4. semester – spring term

T-215-STY1 – Operating Systems - 6ECTS
 Elective course * -6ECTS
 Elective course – 6ECTS
 T-404-LOKA – Final Project (15. Week course) - 12ECTS

Students take 30 ECTS electives. Students can choose elective courses within the department (i.e. Computer Science and Science and Engineering). If the course is outside of the department the following applies:

- In the case that the course is outside of the department students can apply for an assessment of up to 12 ECTS.

Additional Notes:

- Possible to take Discrete Mathematics II on 2nd term (it is required for BSc in computer science)
- Possible to take Calculus and statistics on 3rd term (it is required for BSc in Computer Science)
- Possible to take Programming Languages on 4th term (it is required for BSc in Computer Science)
- Please note that the courses Information Technology (in School of Business) cannot be taken as a course with computer science due to overlap