



Skeiðshandbók fyri BSc í KT-verkfrøði / Course Catalog for BSc in Software Engineering

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Heiti	Innleiðing í teldufrøði	Title	Introduction to Computer Science
Skeið nr. 5010.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í støddfrøði.	Course no. 5010.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamál	Endamálið við skeiðnum er at geva eina breiða innleiðing í nútímans teldufrøði (computer science) og evnir sum forritanarmál, stýriskipanir og teldubygnaður, algoritmur, forritanar verkfrøði (software engineering), netverk og databasur.	Objective	The objective of this course is to give a broad introduction to computer science with basic concepts about software languages and software construction, computer hardware and operating systems, software algorithms, software engineering, networks, and databases.
Evni	Bite, logisk algebra, binerar og hexadecimalar talskipanir. Stýriskipanir og prosessir, teldubygnaður (CPU, RAM, buss), maskin koda og koyring av programmum. Client-server, teldu netverk og protokollir, OSI-modellið, internet (adressur, email, www), hardware og data goymslur (RAM, HD, CD, Tape). Algoritmur, leitingar og sorteringar. Forritanarmál (maskinu-, assembler- og há-stig mál), forritanar hættir, vanlig forritan: variablar, datatypur, datastrukturar, funktiónir og undirprogramm. Frá kodu til maskin kodu (leksikal analysa, parsing, kodu generering). Menning av forritum, lívrásin hjá forritum, stig í menning av forritum (Analysa - design - íverkseting - testing). Modul, samband og samspæl, topp niður botn upp. Data strukturar: pointarar, array, listar, tráðir, stakkar, bíðirøðir, sjálgjörðar datatypur. Fílstrukturar: sekvensrættaðir filar, tekstfilar, index filar. Databasur: relatiónsdatabasur, SQL.	Topics	Bytes, logical algebra, binary and hexadecimal number systems. Operating systems and processes, computer systems (CPU, RAM, bus), machine code and execution of programs. Client-server, computer networks and protocols, the OSI-protocol model, internet (addresses, email, www), hardware and data storage (RAM, HDD, CD, Tape). Algorithms, searching and sorting. Software languages (machine-, assembler- and high-level languages), programming paradigms, traditional programming: variables, data types, data structures, functions and subroutines. From code to machine code (lexical analysis, parsing, code generation). Software development, software life cycle, steps in software development (Analysis - design - implementation - testing). Modules, connection and cohesion, top down - bottom up. Data structures: pointers, arrays, lists, threads, stacks, queues, self-developed data types. File structures: sequential files, text files, index files. Databases: relational databases, SQL.
Undirvísing	Fyrilestrar og uppgávurokning.	Instruction	Lectures and problem solving.
Døming	Skrivlig 4 tímars próvtøka við loyvdum hjálparamboðum, galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestralisti	Brookshear J. Glenn. Computer Science: an Overview, Addison-Wesley, latest edition.	Literature	Brookshear J. Glenn. Computer Science: an Overview, Addison-Wesley, latest edition.
Samskipti	Petur Zachariassen; email: peturz@setur.fo	Contact	Petur Zachariassen; email: peturz@setur.fo

Heiti	Innleiðandi forritan við Java	Title	Introductory Programming in Java
Skeið nr. 5011.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í støddfrøði.	Course no. 5011.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamál	Endamálið við skeiðnum er at geva teimum lesandi eitt gott grundarlag innan nútíðar forritan við Java. Java er eitt nýmótans, logiskt og einfalt objekt-grundað mál, sum ofta verður brúkt í menning av applikatiónum til internetið, til fartelesfonir v.m. Skeiðið fer í grundina við almennum og grundleggjandi tættum í forritan, sum t.d. variablar, typur, operatorar, procedurur og funktiúnir.	Objective	The aim of the course is to give students a solid foundation in contemporary programming using Java. Java is new, simple, well-designed, and logical Object-Oriented language. It is widely spread and has numerous applications in Web development, Internet applications, Systems and application programming, and beyond. This course familiarizes students with the fundamental programming concepts of the language, e.g., variables, types, declarations, operators, procedures, etc., common to all programming languages.
Evni	Typur, dynamiskir og statiskir variablar, array, strukturar, klassar, markamót, og objektir. Java program strukturar, standard klassar og markamót. Objekt-grundað kravfesting og forritan. Grundleggjandi algoritmur og forritan av teimum í Java.	Topics	Types, dynamic and static variables, arrays, structures, classes, interfaces, and objects. Java program structure, standard classes and interfaces. Basics of Object-Oriented design and programming. Basic algorithms and their implementation in Java.
Undirvísing	Fyrilestrar og venjingar í forritan	Instruction	Lectures and programming practice.
Døming	Skrivlig 4 tímars próvtøka við loyvum hjálparamboðum, galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	H. Deitel, P. Deitel. Java: How to Program (Early Object Version), 8th Edition, Pearson/Prentice Hall, 2010.	Literature	H. Deitel, P. Deitel. Java: How to Program (Early Object Version), 8th Edition, Pearson/Prentice Hall, 2010.
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo

Heiti	Forrit og forritan í vinnuni	Title	The Software Engineering Profession
Skeið nr. 5012.10	ECTS: 7.5 Fortreytir: Skeiðið: Innleiðing í teldufrøði (7,5 ECTS).	Course no. 5012.10	ECTS: 7.5 Prerequisites: The course: Introduction to computer science (7.5 ECTS).
Endamál	Endamálið við skeiðnum er at geva eitt gott innlit í yrkið sum KT-verkfrøðingur og í ymiskar starvsmøguleikar innan kunningartøkni.	Objective	The aim of this course is to give a overview of the Software Engineering Profession and of job opportunities in the IT-industry.
Evni	Hvat hendur í vinnuni og hvørjar KT-førleikar saknar vinnan? Hvørjar skipanir vera brúktar, hvør menning fer fram og hvussu rekur vinnan sínar KT-skipanir? Hetta eru spurningar sum verða viðgjørdir í hesum skeiði har bæði grundleggjandi teori um vinnuskipanir og gestafyrilestrar við fólki úr KT-vinnuni vera á skránni. Eisini fáa næmingarnir høvi til at arbeiða í bólum, at gera sínar egnu kanningar, at gera skrivligar frágreiðingar og til at leggja hesar fram.	Topics	The course investigates both present and expected future developments in the IT-industry. This involves both software development projects and the use of both commercial and open source software systems. These subjects will be discussed by use of theory and by guest lectures given by people from the local industry. The students will also work in groups, do their own research, write reports and present their work.
Undirvísing	Fyrilestrar og bólkaarbeiði.	Instruction	Lectures and group work.
Døming	Skrivligar frágreiðingar og framløgur av bólkaarbeiðum. The existing grade scale will be used.	Evaluation	Written reports and oral presentation of group works. The existing grade scale will be used.
Lestrarlisti	Brookshear J. Glenn, Computer Science an overview, Addison-Wesley Beynon-Davies P, Information Systems. An Introduction to Informatics in organisations., Palgrave	Literature	Brookshear J. Glenn, Computer Science an overview, Addison-Wesley Beynon-Davies P, Information Systems. An Introduction to Informatics in organisations., Palgrave
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Innleiðandi forritan við C++	Title	Introductory Programming in C++
Skeið nr. 5013.10	ECTS: 7.5 Fortreytir: Skeiðið: Innleiðing í teldufrøði (7,5 ECTS).	Course no. 5013.10	ECTS: 7.5 Prerequisites: The course: Introduction to Computer Science (7.5 ECTS).
Endamál	Endamálið við skeiðnum er at geva eina innleiðing í C++ og í forritan av einføldum forritum við C++.	Objective	The objective of the course is to give an introduction to C++ and to teach to code simple programs in C++ based on procedural programming.
Evni	Grundleggjandi forritan. Sekvens, iteratióin og val sum grundarlag fyri forritan av algoritimum. Datatypur og operatorar. Tú vilt brúka deilforrit, funktiúnir og søvn (libraries) í C/C++ til skipan av forritum og til endurnýtslu av kotu. - datatypur og operatorar í C++ - sekvens, val og iteratióin - strukturering av forritum - einfaldar algoritmur - funktiúnir - parameturyvirfóring við virðis- og referensuparametrum - brúk av bókasavnsfunktiónum - brúk av standardklassum til t.d. streingir og tekstfílar - yvurlagring av funktiónum	Topics	Programming fundamentals. Sequences, iterations, selection as a basis for the construction of algorithms. Data types and operators. You will use subprograms, functions and libraries in C/C++ for program-structuring and the re-usability of code. - data types and operators in C++ - sequences, iterations, selection - program structure - simple algorithms - functions - passing of parameters by value- and by reference - use of library functions - use of standard classes for e.g. strings and text files - overlaying of functions
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweeden University.
Døming	Skrivlig web-próvtøka telur 4.5 ECTS og innlatingar telja 3 ECTS. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Web-examination (4.5 ECTS), exercises (3 ECTS). Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Deitel & Deitel, Prentice Hall: C++: HOW TO PROGRAM	Literature	Deitel & Deitel, Prentice Hall: C++: HOW TO PROGRAM
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Databasur og SQL	Title	Databases and SQL
Skeið nr. 5014.10	ECTS: 7.5 Fortreytir: Innleiðing í teldufrøði, Java og C++	Course no. 5014.10	ECTS: 7.5 Prerequisites: Introduction to Computer Science, Java and C++
Endamál	Endamálið við hesum skeiði er at geva eina innleiðing í teori og metodur innan databasur og umsiting av databasum. Lært verður um datamodelling og databasumálið SQL, PL/SQL. Tey lesandi koma at arbeiða við MySQL-dabasuni í smærri verkætlanum, og hetta gevur grundarlag fyri seinni skeiðum í web-menning.	Objective	The aim of this course is to introduce students to database systems concepts, both theoretical and practical. Entity-relationship paradigm, relational data model and data language SQL/PL are studied. Practically the students are exposed to the MySQL database management language and work on small-scale database development projects. This lays foundation for the future Web application development courses.
Evni	Dabasur og brúk av databasum, ER-modellið, relatióndatabasu-ástøði, relatións hættir, relatiórnir, talvur, tupplar og relatiónsútrokningar, relatións algebra og relatiónsútrokningar fyri økir (domains), databasumálið SQL, index, hashing, íverkseting og optimering av databasuleitingum, databasubroytingar, databasumsiting, tíðar- og staðarlig dataumsiting, objekt-grundaðar databasur. MySQL og PostgreSQL forritan, íverkseting av smærri verkætlanum.	Topics	Databases and their applications, Entity-Relation diagrams, relational database theory, relation schemes, relations, tables, tuples, relational algebra, domain relational calculus, tuple relational calculus, Standard Query Language SQL, indexing, hashing, query implementation and optimization, transactions, structure of database management systems, temporal and spacial data management, Object-Oriented databases. Extensive MySQL and PostgreSQL/PL programming, implementing small database projects.
Undirvísing	Fyrilestrar, uppgávur og lítlar verkætlanir.	Instruction	Lectures, problem solving and small projects.
Døming	Ein 4-tímar long skrivlig próvtøka, síðani munnlig próvtøka. Skeiðstílfar, teldur og internet eru loyvd hjálpiamboð. Galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination, followed by oral exam. Reference material, computers, and web access permitted. The existing grade scale will be used.
Lestrarlisti	Abraham Silberschatz, Henry F. Korth, and S. Sudarshan. Database System Concepts, 6th edition, McGraw Hills Co., 2010.	Literature	Abraham Silberschatz, Henry F. Korth, and S. Sudarshan. Database System Concepts, 6th edition, McGraw Hills Co., 2010.
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo

Heiti	Objekt-grundað forritan við C++	Title	Object-based programming in C++
Skeið nr. 5015.10	ECTS: 7.5 Fortreytir: 15 ECTS harímillum skeiðið: Innleiðing í forritan við C++ (7,5 ECTS).	Course no. 5015.10	ECTS: 7.5 Prerequisites: 15 ECTS including the course: Introduction to programming in C++ (7,5 ECTS).
Endamál	Endamálið við skeiðnum er at geva eina innleiðing í objekt-grundaði hugtøk og objekt-grundaða forritan við kravfesting, íverksetan og brúk av klassum í C++.	Objective	Introduction to object oriented concepts and programming with specification, design, implementation and use of classes in C++.
Evni	- objekt-grundaði hugtøk: klassar, limir, operatióinir, attributtar, objekt, instansur, arvur, relatióin, samskipti v.m. - kravfesting og íverkseting av klassum í C++ - umbroyting av operatorum - abstraktar datatypur som kø, stackar og listar - brúk av dynamiskum minni - peikarar og teirra tillagingar - rekursivar algoritmur - innleiðing í typu-parametrisering - bygging klassar i standardbókasavni - sortering og leiting - innleiðing í UML - kompilering og verkætlan	Topics	- object-oriented concepts: classes, members, operations, attributes, objects, instance, inheritance, relations, messaging etc. - specification and implementation of classes in C++ - operator overloading - abstract data types: queue, stacks and lists - use of dynamic memory - pointers - recursive algorithms - introduction to type-parameterisation - container classes in the standard library - sorting and searching - introduction to UML - compilation and project
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweeden University.
Døming	Skrivlig web-próvtøka telur 4.5 ECTS og innlatingar telja 3 ECTS. Hjálpamóð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Web-examination (4.5 ECTS), exercises (3 ECTS). Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Deitel , Deitel, C++ How to program, Prentice Hall, fifth edition	Literature	Deitel , Deitel, C++ How to program, Prentice Hall, fifth edition
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Teldunetverk og data samskipti	Title	Computer Networks and Data Communication
Skeið nr. 5016.10	ECTS: 7.5 Fortreytir: Skeiðið: Innleiðing í teldufrøði (7,5 ECTS).	Course no. 5016.10	ECTS: 7.5 Prerequisites: The course: Introduction to computer science (7.5 ECTS).
Endamál	Endamálið við skeiðnum er at geva eitt gott innlit í hvussu lokal teldunetverk og internetið eru uppbygd. Evnini eru OSI-modellin fyri netverk, samskiptisprotokollir TCP/IP v.m., netbygnaður, transmissiónsmedia, adressering- og routing, og amboð til feilfinning av netverkum.	Objective	This course is an introduction to data communication and networking and describes the infrastructure and function of local computer networks (LANs), wide area networks (WANs) and the Internet.
Evni	Inngangur til data samskipti. Grundleggjandi hugtøk, søgulig menning og standardisering. Ymisk sløg av protokollum innan data samskipti. Digitalisering. Ring- og pakkakobling. TCP/IP og OSI-modellið fyri netverk. Bygnaður og datatøkni til lokal netverk (LAN), víðkaði netverk (WAN) og internet: fysiska lagið, datalink lagið, netverkslagið, transportlagið og nýtslulagið.	Topics	Introduction to data communications and networking. Basic concepts, historical developments and standardizations. Data communication protocols. Digitalization. Circuit- and packet switching. TCP/IP and the OSI network model. Infrastructure and communication technologies for local networks (LANs), wide area networks (WANs) and the Internet: physical layer, data link layer, network layer, transport layer and application layer.
Undirvísing	Fyrilestrar, uppgávurokning og venjingar.	Instruction	Lectures, problem solving and exercises.
Døming	Skrivlig próvtøka í fyra tímar. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	B. A. Forouzan: "Data Communications and Networking", 4th ed. McGrawhill, 2006	Literature	B. A. Forouzan: "Data Communications and Networking", 4th ed. McGrawhill, 2006
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Stýriskipanir	Title	Computer Architecture and Operating Systems
Skeið nr. 5017.10	ECTS: 7.5 Fortreytir: Java, C++ forritan	Course no. 5017.10	ECTS: 7.5 Prerequisites: Java, C++ programming
Endamáli	Endamálið við hesum skeiði er at geva eina innleiðslu í grundleggjandi hugtøk og hættir til bygnað av nútíðar teldustýriskipanum, t.d. Linux og Windows, sum vera kannaði, greinaði, samanborin og royndir gjørdar við.	Objective	The goal of this course is to introduce fundamental concepts and approaches for constructing contemporary operating systems (including GNU/Linux and Windows), which are studied, analyzed, compared and experimented with.
Evni	Bygnaður av stýriskipanum, uppgávur, minni, goymslu-umsiting, uppgávu-samskipti, uppgávu-samskipan og tíðarstýring, virtúelt minni, paging, verja, umbýting og umbýtingar-hættir, caching, trygd og verja av telduskipan, gjøgnumgongd av dømum. Venjingar við Linux, parallel forritan, synkronisering, virtualisering, teldu-hópar, teldu-skýggj.	Topics	Operating systems architecture, process, memory, storage management, interprocess communication, process coordination, scheduling, multitasking, virtual memory, paging, protection, swapping, caching, swapping strategies. System protection and security, case studies. Laboratory work with Linux, parallel programming, synchronization, virtualization, clusters, compute clouds.
Undirvísing	Fyrilestrar og uppgávuloysn.	Instruction	Lectures and problem solving.
Døming	Skrivlig 4 tímars próvtøka við loyvdum hjálparamboðum, galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Abraham Silberschatz, Peter B. Gavlin, Greg Gagne, Operating System Concepts, 8th ed., 2010 (International Paperback Student Edition), John Wiley & Sons Inc., ISBN-13: 978-0-470-23399-3.	Literature	Abraham Silberschatz, Peter B. Gavlin, Greg Gagne, Operating System Concepts, 8th ed., 2010 (International Paperback Student Edition), John Wiley & Sons Inc., ISBN-13: 978-0-470-23399-3.
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo

Heiti	Innleiðing í Web skipanir	Title	Introduction to Web Development
Skeið nr. 5018.10	ECTS: 7.5 Fortreytir: 15 ECTS, við einum skeiði í forritan.	Course no. 5018.10	ECTS: 7.5 Prerequisites: 15 ECTS, with one programming course.
Endamál	Endamálið við hesum skeiði er at geva eina innleiðing í menning av heimasíðum og heimasíðuskipanum við nútíðar menningaramboðum.	Objective	The objective of this course is to teach the students basic skills about design and programming of interactive web applications.
Evni	- HTML, HTTP, URL, Talvur og frames - Dynamiskt HTML - XML - Formar - Skipan of web síðum - CGI og script mál - Forritan við einum script máli - Databasu íbinding	Topics	- HTML, HTTP, URL, Tables and frames - Dynamic HTML - XML - Forms - Organization of web applications - CGI and script languages - Programming with a script language - Database connections
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweedan University.
Døming	4.5 ECTS venjingar, 3 ECTS web-próvtøka. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	4.5 ECTS exercises, 3 ECTS web-based examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Deitel, Deitel, Nieto, Internet & World Wide Web - How to program, Prentie Hall, 3/e, ISBN 0-13-145091-3 (2/a ISBN 0-13-030897-8).	Literature	Deitel, Deitel, Nieto, Internet & World Wide Web - How to program, Prentie Hall, 3/e, ISBN 0-13-145091-3 (2/a ISBN 0-13-030897-8).
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Støddfrøði 1 til Kunningartøkni	Title	Mathematics 1 for Information Technology
Skeið nr. 5019.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í støddfrøði.	Course no. 5019.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamál	Endamálið við skeiðnum er at geva studentunum eina innleiðslu í diskreta støddfrøði við atliti at nýtslu í teldufrøði, við tí fyri eyga at geva eitt gott ástøðiligt grundarlag fyri víðari arbeiði.	Objective	To give the students an introduction to discrete mathematics with respect to applications in computer science with the purpose to give a good theoretical foundation for further work.
Evni	Grundleggjandi støddfrøðiligt háttalag, logikkur, teljutrupulleikar, relatióinir, funktióinir, ordan, trø, polynom.	Topics	Basic mathematical methods, logic, counting problems, relations, functions, order, trees, polynomials.
Undirvísing	Fyrilestrar og uppgávurokning. Innlatingar.	Instruction	Lectures, problem solving, written exercises.
Døming	Skrivlig próvtøka í fyra tímar. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Kolman, Busby, and Ross: Discrete Mathematical Structures, 6th Ed., Pearson Education. Chapters 1-8, and weeklies and notes.	Literature	Kolman, Busby, and Ross: Discrete Mathematical Structures, 6th Ed., Pearson Education. Chapters 1-8, and weeklies and notes.
Samskipti	Gunnar Restorff, email: gunnarr@setur.fo	Contact	Gunnar Restorff, email: gunnarr@setur.fo

Heiti	Forritanar verkfrøði 1	Title	Software Engineering I
Skeið nr. 5020.10	ECTS: 7.5 Fortreytir: 30 ECTS frá KT-verkfrøði.	Course no. 5020.10	ECTS: 7.5 Prerequisites: 30 ECTS from the ICT-program.
Endamál	Endamálið við skeiðnum er at geva eitt gott innlit í arbeiðshættir innan software menning og í ymisk model fyri skipanar-menning. Skeiðið viðger prosessir, princippir og praksis í design av software produktum við áherslu á góðsku, dokumentatióin og tól innan software menning.	Objective	The objective of this course is to give a basic understanding of the software engineering process and of different models for system development. This includes quality aspects, documentation and tools for software development.
Evni	- Hættir og tøknilik innvið menning av skipanum - Objektrætting, UML og hættir sum byggja á UP - Agil skipanarmenning - menning av prototypum - tillagingarvenjing	Topics	- Methods and techniques for system development - Object orientation, UML and methods based on UP - Agile system development - Prototyping - Modification exercise
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweden University.
Døming	Skrivlig web-próvtøka telur 3 ECTS og innlatingar telja 4.5 ECTS. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Web-examination (3 ECTS), exercises (4.5 ECTS). Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Wiktorin, L, Systemutveckling på 2000-talet, Studentlitteratur, Senaste upplagan Lundell H., Fyra rundor med RUP, Studentlitteratur., 2003, 91-44-04210-8	Literature	Wiktorin, L, Systemutveckling på 2000-talet, Studentlitteratur, Senaste upplagan Lundell H., Fyra rundor med RUP, Studentlitteratur., 2003, 91-44-04210-8
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Hagfrøði fyri KT-verkfrøðingar	Title	Statistical Methods for Software Engineers
Skeið nr. 5021.10	ECTS: 7.5 Fortreytir: Innleiðing í teldufrøði (7,5 ECTS).	Course no. 5021.10	ECTS: 7.5 Prerequisites: Introduction to computer science (7,5 ECTS).
Endamál	At læra studentarnar grundleggjandi hagfrøði, sannlíkindarokning og kanningarhættir til at útvega og greina hagtøl í KT-høpi og til at brúka hóskaði telduamboð til endamálið.	Objective	To teach the students basic statistics, probability, statistical methods and computer based tools for statistical analysis of IT-systems.
Evni	Frágreiðandi hagfrøði. Sannlíkindi og stokastiskir variablar. Diskretir tættleikar, binomial- og poisson-býtið. Kontinuerir tættleikar, normalbýtið. Tilvildarlig sýnistøka og sýnistættleikar. Punkt- og interval-estimatióin. Hagfrøðilig modell og test av hypotesum. Korrelatióin, linjurøtt regressiún og einvegis variansanalýsa (ANOVA), t-test og chi-kvadrat test, styrki av testum (power), stór og smá sýni. Planlegging av kanningum, handfaring og viðgerð av mátingum til at royna og eftirmeta KT-skipanir.	Topics	Descriptive statistics. Probability and stochastic variables. Discrete distributions, the binomial and Poisson distributions. Continuous distributions, the normal distribution. Random sampling and sampling density. Point- and interval estimation. Statistical models and test of hypothesis. Least squared concept, correlation and regression, t-test, ANOVA and chi-squared. Power of tests, small and large samples. Design of experiments, data sampling and statistical analysis of hypotheses regarding evaluation of IT-systems.
Undirvísing	Fyrilestrar, sjálvlestur og smærri uppgávuloysn. Tvær kravdar stóruppgávur skulu latast inn um grundleggjandi hagfrøði og hagfrøðisligar greiningar, sum hava við KT-skipanir at gera.	Instruction	Lectures, self-study and small problem solving. Two obligatory projects about basic statistics and statistical analysis of IT-systems.
Døming	Skrivlig og/ella munnlig próvtøka. Hjálpiamboð loyvd. Stóruppgávarnar eru partur í dømingini. Galdandi próvtalsstigi verður nýttur.	Evaluation	Written and/or oral examination. Reference material permitted. The projects will consider a part of the evaluation. The existing grade scale will be used.
Lestrarlisti	Verður avgjørt seinni (to be decided).	Literature	Verður avgjørt seinni (to be decided).
Samskipti	Petur Zachariassen; email: peturz@setur.fo Hannes Gislason; email: hannesg@setur.fo	Contact	Petur Zachariassen; email: peturz@setur.fo Hannes Gislason; email: hannesg@setur.fo

Heiti	Web skipanir við ASP.NET/C#	Title	Web Applications: ASP.NET with C#
Skeið nr. 5022.10	ECTS: 7.5 Fortreytir: 30 ECTS við 15 ECTS innan forritan við C++, Java ella C# og 7,5 ECTS innan databasur.	Course no. 5022.10	ECTS: 7.5 Prerequisites: 30 ECTS with 15 ECTS in programming with C++, Java or C# and 7.5 ECTS in databases.
Endamáll	Endamálið við hesum skeiði, er at læra tey lesandi um menning av web skipanum við ASP.NET/C# amboðum, til at menna interaktivar databasudrivnar web skipanir.	Objective	The objective of this course, is to teach the students web-development with ASP.NET/C# to program interactive and database-driven web-sites.
Evni	XHTML, CSS, SQL Server Express, SQL Server Management Studio Express, data veitarar. Visual Studio 2005, ASP.NET 2.0 servera kontrollar, brúkara scripting, XML við ASP.Net, web skipanir: data tilknýtis kontrollar, master síður, brúkarafatur, brúkarastýring, trygd í ASP 2.0, feilfinning og feil viðgerð, brúkarafatur til mobilar eindir, navigatión, ASP.NET 2.0 konfiguratión og yvirvaking.	Topics	XHTML, CSS, SQL Server Express, SQL Server Management Studio Express, data providers. Visual Studio 2005, ASP.NET 2.0 server controls, client script, XML with ASP.Net, web sites: data access controller, master pages, user interfaces, authentication, security in ASP 2.0, debugging and error handling, usability for mobile devices, navigation, ASP.NET 2.0 configuration and surveillance.
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweeden University.
Døming	5 ECTS innlatingar; 2,5 ECTS verkætlan við rapport. Próvtal staðið/ikki staðið.	Evaluation	5 ECTS exercises; 2.5 ECTS project with report. Grade: passed/failed.
Lestrarlisti	Professional ASP.NET 2.0, Wiley Publishing, Inc., latest edition.	Literature	Professional ASP.NET 2.0, Wiley Publishing, Inc., latest edition.
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Støddfrøði 2 til Kunningartøkni	Title	Mathematics 2 for Information Technology
Skeið nr. 5023.10	ECTS: 7.5 Fortreytir: Støddfrøði 1 til Kunningartøkni	Course no. 5023.10	ECTS: 7.5 Prerequisites: Mathematics 1 for Information Technology
Endamál	At geva studentunum eina víðari innleiðslu í diskreta støddfrøði við atliti at nýtslu í teldufrøði.	Objective	To give the students a further introduction to discrete mathematics with respect to applications in computer science.
Evni	Predikat logikkur, rekursivir formlar, grafar, trø, matricur, kompleksitetur, útroknligheit, diskret líkindarokning.	Topics	Predicate logic, recursive formulas, graphs, trees, matrices, complexity, computability, discrete probability.
Undirvísing	Fyrilestrar og uppgávurokning. Innlatingar.	Instruction	Lectures, problem solving, written exercises.
Døming	Skrivlig próvtøka í fyra tímar. Hjalparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Verður avgjørt seinni (to be decided).	Literature	Verður avgjørt seinni (to be decided).
Samskipti	Gunnar Restorff, email: gunnarr@setur.fo	Contact	Gunnar Restorff, email: gunnarr@setur.fo

Heiti	Algoritmur og datastrukturar	Title	Algorithms and Data Structures
Skeið nr. 5024.10	ECTS: 7.5 Fortreytir: Støddfrøði 1 og 2 til Kunningartøkni, Innleiðandi forritan í Java, C++.	Course no. 5024.10	ECTS: 7.5 Prerequisites: Mathematics 1 and 2 for Information Technology, Introductory Programming in Java, C++.
Endamáll	Endamálið við hesum skeiði er at venja tey lesandi við grundleggjandi evni, tól og hugtøk, sum vera brúkt til menning og greining av algoritnum. At geva grundarlag og førleikar til at menna nýggjar og effektivar algoritmur.	Objective	To familiarize students with the fundamental paradigms, tools, and concepts in algorithm design and analysis. To build solid foundations and skills for students' ability to devise new efficient algorithms.
Evni	Innseting, samanseting, skjótt sorterandi algoritmur, leiting, algoritmur til útveljing, grundleggjandi datastrukturar, array, listar, trø, heaps og hash-talvur. Háttaløg til loysn av endurtøkum, Master hátturin. Sløg av algoritnum: divide-and-conquer, greedy, dynamisk forritan. Venjingar í loysn av trupulleikum við algoritnum.	Topics	Insertion, Merge, Quick sorting algorithms, searching, selection algorithms, elementary data structures, arrays, lists, trees, heaps, trees, hash tables. Technique for solving recurrences, the Master method. Algorithm design paradigms: divide-and-conquer, greedy, dynamic programming. Extensive algorithmic problem solving exercises.
Undirvísing	Fyrilestrar og uppgávuloysn.	Instruction	Lectures and problem solving.
Døming	Skrivlig 4 tímars próvtøka við loyvdum hjálparamboðum, galdandi próvtalsstigi verður nýttur.	Evaluation	Four-hour written examination. Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Cormen, Leiserson, Rivest, Stein. Introduction to Algorithms, 3rd ed. MIT Press, 2009	Literature	Cormen, Leiserson, Rivest, Stein. Introduction to Algorithms, 3rd ed. MIT Press, 2009
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo

Heiti	KT-verkætlan	Title	IT-project
Skeið nr. 5025.10	ECTS: 7.5 Fortreytir: Avhangandi av valdum evni, kunneika svarandi til uml. hálvu 1-3 (90 ECTS) úr KT-verkfrøði.	Course no. 5025.10	ECTS: 7.5 Prerequisites: Depending on the selected topic, knowledge corresponding to about semester 1-3 (90 ECTS) from the IT-program.
Endamál	Endamálið við hesum verkætlanar-skeiði er at fáa eitt gott innlit í eitt ávíst KT-øki so sum forritanar verkfrøði, KT-tøkni ella teldufrøði, gera kanningar og menning innan evnið og at gera eina skrivliga verkætlanarfrágreiðing, sum verður lögð fram á einari munnligari próvtøku. Hetta gevur royndir við verkætlanararbeiði og við val av evnum, sum fyrireiking til bachelor verkætlanina.	Objective	The objective of this project-based course is to acquire the in-depth knowledge of a selected field of Software Engineering, Information Technology, or Computer Science, conduct research and development within this area, and present the results in a written report to be presented for an oral examination. This serves as a preparation step for the Bachelor project.
Evni	Evni vera vald av teimum lesandi í samráði við vegleiðarar. Skeiðið kann eisini brúkast til smærri verkætlanir í samstarvi við vinnuna.	Topics	Topics will be selected by the students jointly with their advisors. This course may also be used for small projects together with the IT-industry.
Undirvísing	Verkætlanar-arbeiði við sjálvlestri og bólkaarbeiði. Ein skrivlig verkætlanar-frágreiðing verður kravd.	Instruction	Project based self-study and group work. A project report is mandatory.
Døming	Munnlig framløga av verkætlanar-frágreiðing. Galdandi próvtalsstigi verður nýttur.	Evaluation	Oral presentation of project report. The existing grade scale will be used.
Lestrarlisti	Verður avgjørt seinni (to be decided).	Literature	Verður avgjørt seinni (to be decided).
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo; Hannes Gislason, hannesg AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo; Hannes Gislason, hannesg AT setur DOT fo

Heiti	Brúkaravinarligar KT-skipanir	Title	Human-Computer Interaction
Skeið nr. 5026.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í stöddfrøði.	Course no. 5026.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamál	At geva innlit í teori og metodur innan brúkaravinarliga skipanarmenning. Herundir hættir, modell og leiklutir í skipanarmenning. Við støði í hesum verður kannað hvussu brúkarin kann viðvirka til at KT-skipanir gerast lættari at brúka, tá brúkaravinarlig skipanarmenning verður brúkt.	Objective	To give a basic knowledge of system development from the user perspective. This includes an understanding of processes, models, and roles in a system development project. Also, you will study how to involve the users in IT projects to get better usability of the final product.
Evni	- brúkaravinarlig skipanarmenning - modell, grundleggjandi hugtøk og tíðar-ringrás innan skipanarmenning - ymisk háttaløg og leiklutir innan skipanarmenning - leikluturin hjá skipanar mennarum, ábyrgd og avleiðingar	Topics	- usability engineering - models, central concepts and the life-cycle in system development - different methods and roles of system development - the designer role, responsibility and consequences
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweeden University.
Døming	Framløga av skeiðsuppgávu telur 4.5 ECTS og innlatingar telja 3 ECTS. Galdandi próvtalsstigi verður nýttur.	Evaluation	Presentation of course assignment (4.5 ECTS), exercises (3 ECTS). The existing grade scale will be used.
Lestrarlisti	Gulliksen Jan, et al, Användarcentrerad systemdesign, Studentlitteratur, Senaste upplagan Löwgren,J. och Stolterman,E., Design av informationsteknik, Lund, Studentlitteratur, Senaste upplagan Wiktorin, L, Systemutveckling på 2000-talet, Studentlitteratur, Senaste upplagan	Literature	Gulliksen Jan, et al, Användarcentrerad systemdesign, Studentlitteratur, Senaste upplagan Löwgren,J. och Stolterman,E., Design av informationsteknik, Lund, Studentlitteratur, Senaste upplagan Wiktorin, L, Systemutveckling på 2000-talet, Studentlitteratur, Senaste upplagan
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Datategygd og góðska av forritum	Title	Information Security and Risk Analysis
Skeið nr. 5027.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í støddfrøði.	Course no. 5027.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamáli	At viðgera datategygd og góðsku av forritum útfrá brúkarar-, tekniskum- og virkis-sjónarvinkli. Skeiðið lærir teg grundleggjandi hugtøk til at greina og meta um góðsku- og trygdarviðurskipti, umframt at geva tær vitan um tiltøk fyri at minka um trygdarvandar til eitt støði, sum kann góðtakast. Skeiðið kemur eisini inn á søgulig og lögfrøðilig viðurskipti innan hetta øki.	Objective	To investigate data security from the user-, technological- and organizational perspective. Basic concepts will be treated to learn how to identify risk, make risk analysis and perform protective measures to reduce the risks to an acceptable level. Also, historical and legal issues will be treated.
Evni	Yvirliit og modellir: grundleggjandi hugtøk, søguligt yvirliit, trygdar model, vegleiðingar til trygdar reglur. Hóttanir ímóti datategygd: teldusnýkar, virusar, maskur og trojanar, data avlurting, broyting av data og sendara. Verja av datategygd: fyrirbygging, verja og dagføringar, stýring av brúkararættindum, kryptering, digitalur signatur og brúkarar eyðmerking, eldverjur og onnur tól. Sampælið ímillum menniskju, tøkni og felagskapir sæð frá einum trygdar sjónarmiði: lógir og kunngerðir, trygd sæð frá brúkarar sjónarmiði, vanda greining, ymisk tól og model til vanda greining, trygdar reglur, trygdar ætlanir í einum virki ella felagskapi, ISO 27001 standardurin.	Topics	Overview and models: basic concepts, historical perspective, security models, guidelines for building security polices. Threats against information security: hacker attacks, viruses, masks, and trojans, data interceptions, data and sender modifications. Protection of data security: prevention, protection and updates, user rights control, cryptography, electronic signatures and authentication, firewalls and other tools. Interactions between humans, technology and organizations from a security perspective: laws and regulations, security from the user perspective, risk analysis, different tools and models for risk analysis, security policy, security plans in a company or organization, the ISO 27001 standard.
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki, og/ella fyrilestrar og venjingar á NVD.	Instruction	WebCT, remote education from Mid-Sweedan University and/or local lectures and exercises.
Døming	Innlatingar telja 4.5 ECTS og verkætlanar frágreiðing 3 ECTS. Galdandi próvtalsstigi verður nýttur.	Evaluation	Exercises (4.5 ECTS), project report (3 ECTS). The existing grade scale will be used.
Lestrarlisti	Ross J Anderson, Security Engineering. A guide to Building Dependable Distributed Systems, Wiley & Sons, Second Edition, 978-0-470-06852-6	Literature	Ross J Anderson, Security Engineering. A guide to Building Dependable Distributed Systems, Wiley & Sons, Second Edition, 978-0-470-06852-6
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Verkætlanarleiðsla	Title	Project Management
Skeið nr. 5028.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í stóddfrøði.	Course no. 5028.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamáli	At geva eina innleiðing í verkætlanir og verkætlanarleiðslu við ávísari áherslu á KT-verkætlanir. Tey lesandi fáa innlit í at arbeiða við verkætlanum og verkætlanarleiðslu, teori og metodur, umframt at høvi verður til at viðgera eina ávísa verkætlanareind.	Objective	To give an introduction to project work with focus on IT-projects. The students will learn basic concepts, theories, and methods, as well as study real-world examples of projects and project management.
Evni	- serkendir eginleikar fyri verkætlanir - ymisk sløg av verkætlanum - stýringsfasur í eini verkætlan, mál, planir, íverkseting og uppfylging - ábyrgdir og hendingar í verkætlanum, leiklutir og uppgávur - bólkaarbeiði í verkætlanar-fasum - kunning og samskipti - KT-amboð í verkætlanum - greining av veruligum verkætlanum og verkætlanar metodum	Topics	- characteristics of a project - different types of project structures - control phases in a project, goals, planning, execution and follow up - responsibilities and activities in a project, roles and tasks - group work during the project phase - information and communication - IT-tools in a project - analysis of real projects and project methods
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweeden University.
Døming	Innlatingar telja 4.5 ECTS, skrivlig frágreiðing 3 ECTS. Galdandi próvtalsstigi verður nýttur.	Evaluation	Exercises (4.5 ECTS), report (3 ECTS). Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Gustavsson, Tomas, Agile: Konsten att slutföra projekt, TUK förlag, latest edition, 10:9197621714 Tonnquist, Bo, Projektledning, Bonnier utbildning, latest edition, 10: 9162280465 Articles about projects and project management in general and about IT-projects.	Literature	Gustavsson, Tomas, Agile: Konsten att slutföra projekt, TUK förlag, latest edition, 10:9197621714 Tonnquist, Bo, Projektledning, Bonnier utbildning, latest edition, 10: 9162280465 Articles about projects and project management in general and about IT-projects.
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Fíggarstýring	Title	Engineering Economics
Skeið nr. 5029.10	ECTS: 7.5 Fortreytir: Miðnámsprógv við B-stig í støddfrøði.	Course no. 5029.10	ECTS: 7.5 Prerequisites: Upper Secondary School with B-level in mathematics.
Endamál	At definera hugtøk og bólking av útreiðslum og inntøkum, teoretisk og praktisk model fyri úrslitsmetingum, produktútrokningum, fíggarætlanir og fíggarstýring.	Objective	To give definitions of basic concepts and classifications of expenses and incomes, theoretical and practical methods for result planning, product calculations, result budgeting and internal control.
Evni	Hetta skeið kann sýggjast sum ein innleiðing til fíggarstýrings skipanir í virkjum og tað inniheldur bæði teoretisk og praktisk evnir. Skeiðið byrjar við definitión og klassifikatióin av grundleggjandi búskaparligum hugtøkum. Síðani verður kannað hvussu hesi hugtøk vera brúkt til greining av fíggarligum úrslitum og lønsemi hjá virkjum. Ein stórir partur av skeiðnum inniheldir teoretisk model og praktiskar metodur til úrslits-planlegging, vøru útrokningar, úrslits fíggarætlan og innanhýsis kontrol. Áhersla verður lögð á samanspælið ímillum informatiún, greining, planlegging og uppfylging.	Topics	This course can be seen as an introduction to economical information systems in organizations and it includes both theoretical and practical issues. The course starts with definitions and classifications of basic economical concepts. Then the course investigates how these concepts apply to the economical results and profitability of companies. A large proportion of the content involves theoretical models and practical methods for result planning, product calculations, result budgeting and internal control. The importance of the interplay between information, analysis, planning and follow up is highlighted.
Undirvísing	Fyrilestrar og uppgávurokning.	Instruction	Lectures and problem solving.
Døming	Skrivlig próvtøka ella døming av eini uppgávu-rapport. Galdandi próvtalsstigi verður nýttur.	Evaluation	Written examination or evaluation of a exercise-report. The existing grade scale will be used.
Lestrarlisti	Verður avgjørt seinni (to be decided). (Ax, C. Johansson, C. Kullvén, H, Den nya ekonomistyrningen, Liber, latest edition. Ax, C. Kullvén, H., Den nya ekonomistyrningen. Exercise book, Liber, latest edition.)	Literature	Verður avgjørt seinni (to be decided). (Ax, C. Johansson, C. Kullvén, H, Den nya ekonomistyrningen, Liber, latest edition. Ax, C. Kullvén, H., Den nya ekonomistyrningen. Exercise book, Liber, latest edition.)
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Forritanar verkfrøði 2	Title	Software Engineering II
Skeið nr. 5030.10	ECTS: 7.5 Fortreytir: 30 ECTS innihaldandi Objektrættað forritan í C++ ella mindst 15 ECTS í C++.	Course no. 5030.10	ECTS: 7.5 Prerequisites: 30 ECTS including the course Objectoriented programming in C++ or at least 15 ECTS in C++.
Endamá	At geva eina innleiðing í designmynstur, sum eru almennar loysnir til afturvendandi trupulleikar innanfyri menning av software. Brúk av designmynstrum viðger endurnýtslu av bæði design og kodu, og minkar tí um menningartíðina av nýggjum og betri skipanum.	Objective	To give an introduction to design patterns, which are general solutions to common object-oriented design problems. The use of design patterns enhances the re-usability of both design and code and this shortens the development time and leads to better and more robust programs.
Evni	- Objektrættaði hugtøk, samband ímillum typur, markamót og klassar - UML-skrivihættir - ymisk sløg av designmynstrum - vanlig designmynstur frá teimum ymisku sløgnum - íverksetan av designmynstrum í C++	Topics	- Object oriented terminology, relations between types, interfaces and classes - UML-notation - different categories of design patterns - common design patterns from the different categories - implementation of design patterns in C++
Undirvísing	WebCT, fjarlestur frá Mittuniversitetet, Svøríki.	Instruction	WebCT, remote education from Mid-Sweedeen University.
Døming	Skrivlig web-próvtøka telur 3 ECTS og innlatingar telja 4.5 ECTS. Hjálparamboð loyvd. Galdandi próvtalsstigi verður nýttur.	Evaluation	Web-examination (3 ECTS), exercises (4.5 ECTS). Reference material permitted. The existing grade scale will be used.
Lestrarlisti	Alan Shalloway, James Trott, Design Patterns Explained, Addison Wesley, second edition, ISBN 0321247140 Gamma E, Helm R m.fl, Design Patterns, Addison-Wesley, ISBN 0201633612	Literature	Alan Shalloway, James Trott, Design Patterns Explained, Addison Wesley, second edition, ISBN 0321247140 Gamma E, Helm R m.fl, Design Patterns, Addison-Wesley, ISBN 0201633612
Samskipti	Hannes Gislason; email: hannesg@setur.fo	Contact	Hannes Gislason; email: hannesg@setur.fo

Heiti	Bachelor verkætlan	Title	Bachelor Project
Skeið nr. 5070.10	ECTS: 22.5 Fortreytir: 157,5 ECTS, íroknað øll bundin skeið.	Course no. 5070.10	ECTS: 22.5 Prerequisites: 157.5 ECTS, including all compulsory courses
Endamáll	Bachelorlesturin verður lokin við at gera eina verkætlan um eitt valt evni í KT-verkfrøði og skriva eina samanhangið og greiða frágreiðing um arbeiðið. Frágreiðingin skal verða skipað sambært vanligum reglum í vísindaligum frágreiðingum.	Objective	The Bachelor study is concluded by carrying out an original project on a subject in ICT, Software Engineering, or Computer Science, and writing a comprehensible report about the work performed according to the usual norms for scientific technical reports.
Evni	Evni vera vald av teimum lesandi í samráði við vegleiðarar. Verkætlanin umfatir eina útgreinda lýsing og viðgerð av tillutaðu verkætlanaruppgávuni, mátingar við máttitólum, um tað er viðkomandi, savn av tilfari, greining av spurningum, og møguliga gerð ella kanning av skipan ella telduforriti. Ein víðfevnd ritgerð verður skrivað, og skal hon innihalda viðkomandi tekst, myndir, talvur, samandrátt, innihaldsyvirlit, indeks, og ein lista yvir tekn. Ritgerðin skal umfata skildomandi og víðfevnda umráðingar og viðgerð við niðurstøðum um úrslit, umframt samanbering við áður vunnin úrslit, t.d. viðgjørð í faklium og vísindaligum tilvísingum. Ein stuttur ikki-serfrøðiligur samandráttur, ein hálva A4 síðu í stódd skal skrivast á føroyskum og á enskum. Ritgerðin verður skrivað á máli, ið semja verður gjørd um millum ábyrgdarlærara og student, vanlig á føroyskum, einum øðrum norðurlandskum máli ella enskum.	Topics	Topics will be selected by the students jointly with their advisors. The project includes an outlining of the definition of the assignment in question, measurements with relevant instrumentation where applicable, collection of relevant material, analysis of problem, and possibly design and investigation of systems or programs. A comprehensive report is to be written, including, where relevant, text, figures, tables, abstract, and list of contents, index, and list of symbols. The report shall include a critical and comprehensive discussion and conclusion of the results, and comparison with previously obtained results, e.g. described in the professional and scientific literature. A short non-specialist, popular summary one half A4 page in size is to be written in Faroese and in English. The report will be written in a language agreed upon by the supervisor and the student, normally expected to be Faroese, another Nordic language or English.
Undirvísing	Verkætlanar-arbeiði við sjálvlestri og bólkaarbeiði. Leiðbeining og kjak av verkætlanini. Alt arbeiðið skal verða avrikað innan fyri tíðarkarm uppá 16 vikur, og ein evsta freist fyri innlating av B.Sc-ritgerð verður sett.	Instruction	Project based self-study and group work. Supervision and discussion of project. Work should be completed within 16 weeks, and a deadline should be set for submission.
Døming	Meting av ritgerð. Próvtøkuúrslit sambært galdandi próvtalsstiga.	Evaluation	Evaluation of report. The existing grade scale will be used. The existing grade scale will be used.
Lestrarlisti	Allar viðkomandi greinar, bókur, savn av dátum og instrumentering, dokumenterað forrit (any relevant papers, textbooks, collection of data, and instrumentation, documented software).	Literature	Allar viðkomandi greinar, bókur, savn av dátum og instrumentering, dokumenterað forrit (any relevant papers, textbooks, collection of data, and instrumentation, documented software).
Samskipti	Sergei Vorobyov, sergeiv AT setur DOT fo; Hannes Gislason, hannesg AT setur DOT fo	Contact	Sergei Vorobyov, sergeiv AT setur DOT fo; Hannes Gislason, hannesg AT setur DOT fo