Study plan

Name of study plan: Software Engineering and Technology

Faculty/Institute/Others: Faculty of Electrical Engineering
Department:
Branch of study guaranteed by the department: Common courses
Garantor of the study branch:
Program of study: Software Engineering and Technology
Type of study: Bachelor combined
Required credits: 170
Elective courses credits: 10
Sum of credits in the plan: 180
Note on the plan:

Name of the block: Compulsory courses in the program
Minimal number of credits of the block: 150
The role of the block: P

Code of the group: BSITBAP-K
Name of the group: Bachelor Project
Requirement credits in the group: In this group you have to gain 20 credits
Requirement courses in the group: In this group you have to complete 1 course
Credits in the group: 20
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
BBAP20	**Bachelor thesis** *Roman Čmejla Roman Čmejla (Gar.)*	Z	20	12S	L,Z	P

Characteristics of the courses of this group of Study Plan: Code=BSITBAP-K Name=Bachelor Project

BBAP20	Bachelor thesis	Z	20

Code of the group: BSITBBE-K
Name of the group: Safety of the bachelor's studies
Requirement credits in the group:
Requirement courses in the group: In this group you have to complete at least 2 courses
Credits in the group: 0
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
BEZB	**Safety in Electrical Engineering for a bachelor´s degree** *Ivana Nová, Radek Havlíček, Vladimír Kůla* ***Radek Havlíček*** *Vladimír Kůla (Gar.)*	Z	0	2BP+2BC	Z,L	P
BEZZ	**Basic health and occupational safety regulations** *Ivana Nová, Radek Havlíček, Vladimír Kůla* ***Radek Havlíček*** *Vladimír Kůla (Gar.)*	Z	0	2BP+2BC	Z	P

Characteristics of the courses of this group of Study Plan: Code=BSITBBE-K Name=Safety of the bachelor's studies

BEZB	Safety in Electrical Engineering for a bachelor´s degree	Z	0
The purpose of the safety course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operation of it. This introductory course contains fundamentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work on electrical equipment.			
BEZZ	Basic health and occupational safety regulations	Z	0
The guidelines were worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech Technical University in Prague, which was provided by the Rector´s Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of Health and Occupational Safety regulations forms an integral and permanent part of qualification requirements. This program is obligatory.			

Code of the group: BSITBBE2-K
Name of the group: Safety of the bachelor's studies 2
Requirement credits in the group:
Requirement courses in the group:
Credits in the group: 0
Note on the group:

Code of the group: BSITMP1-K
Name of the group: Compulsory subjects of the programm 1st year
Requirement credits in the group: In this group you have to gain 60 credits
Requirement courses in the group: In this group you have to complete at least 12 courses
Credits in the group: 60
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
BD6B36DBS	**Database Systems**	Z,ZK	6	14KP+6KC	L	P
BD6B01LAG	**Linear Algebra**	Z,ZK	7	28KP+6KC	L	P
BD6B04PRE	**Presentation** ***Dana Saláková***	KZ	3	14+6	Z	P
BD6B36PJV	**Programming in Java**	Z,ZK	6	14KP+9KC	L	P
BD6B36SMP	**Requirements Engineering**	Z,ZK	6	14KP+9KC	L	P
BD6B36TS1	**Software Testing** ***Miroslav Bureš***	Z,ZK	5	14KP+6KC	L	P
BD6B36ZAL	**Introduction to Programming** ***Jiří Vokřínek***	Z,ZK	5	14KP+6KC	Z	P
BD6B01ZDM	**Introduction to Discrete Mathematics**	Z,ZK	5	14KP+6KC	Z	P
BD6B39ZMT	**Foundations of Multimedia Production** ***Roman Berka***	KZ	3	6KP+6KL	Z	P
BD6B38ZPS	**Basics of Computer Systems**	Z,ZK	6	22P+8C	Z	P
BD6B36ZPR	**Introduction to Project Management** ***Pavel Náplava***	KZ	3	6KP+6KC	Z	P
BD6B39ZWA	**Foundations of Web Applications**	Z,ZK	5	14KP+6KC	Z	P

Characteristics of the courses of this group of Study Plan: Code=BSITMP1-K Name=Compulsory subjects of the programm 1st year

BD6B36DBS	Database Systems	Z,ZK	6
BD6B01LAG	Linear Algebra	Z,ZK	7
BD6B04PRE	Presentation	KZ	3
BD6B36PJV	Programming in Java	Z,ZK	6

The course builds on the basics of algorithms and programming from the first semester and introduces students to the Java environment. The course also focus on the object concept of the Java language. The topics of the course includes exceptions, event handling, and building a graphical interface. Basic library methods, working with files and using generic types will be introduced. An important topic is models of multithreaded applications and their implementation. Practical exercises of practical skills and knowledge of Java is tested in the form of solving partial tasks and semester work, which will be submitted continuously through the source code version control system. The semester work scoring consists of points for the correctness and efficiency of the code, as well as points that take into account the quality of the source codes, their readability and reusability.

BD6B36SMP	Requirements Engineering	Z,ZK	6
BD6B36TS1	Software Testing	Z,ZK	5
BD6B36ZAL	Introduction to Programming	Z,ZK	5
BD6B01ZDM	Introduction to Discrete Mathematics	Z,ZK	5

No advanced knowleges of mathematics are required at the beginning of this course. Using illustrative examples we build sufficient understanding of combinatorics, set and graph theory. Then we proceed to formal construction of propositional calculus.

BD6B39ZMT	Foundations of Multimedia Production	KZ	3

The course familiarizes students with the basic principles of acquisition and processing of multimedia content, with a focus on image processing, video and audio, as well as the principles of graphic design and its implementation in a web environment. The course is organized within the block teaching when, within four days, students gradually pass each section of the course divided into two lectures and two workshops each day. Students will acquire the practical principles in the acquisition and processing of multimedia content while they use several different types of instruments at the application level and at the level of simple code. All students will apply the knowledge gained within the last day dedicated to composition rules within a Web project. After completing the course, students will carry out their own independent project and after its submission will be assessed.

BD6B38ZPS	Basics of Computer Systems	Z,ZK	6
BD6B36ZPR	Introduction to Project Management	KZ	3

The course introduces students to the general (not only IT) basics of project management. In addition to basic project management concepts (planning, organization, etc.) students also get practical experiences from team cooperation (information sharing, communication, etc.). All presented topics are practiced and extended in the consecutive courses.

BD6B39ZWA	Foundations of Web Applications	Z,ZK	5

Code of the group: BSITMP23-K

Name of the group: Compulsory subjects of the programm 2nd and 3rd year
Requirement credits in the group: In this group you have to gain 64 credits
Requirement courses in the group: In this group you have to complete at least 13 courses
Credits in the group: 64
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
BD6B36DSA	**Data Structures and Algorithms**	Z,ZK	6	14KP+9KC	L	P
BD6B33EAR	**Enterprise Architectures**	KZ	5	14KP+6KC	Z	P
BD6B36EAR	**Enterprise Architectures**	KZ	5	14KP+6KC	Z	P
BD6B16INS	**Information Systems** *Pavel Náplava* ***Pavel Náplava*** *Pavel Náplava (Gar.)*	KZ	4	14KP+6KS	L	P
BD6B32KAB	**Cryptography and Information Security** *Tomáš Vaněk* ***Tomáš Vaněk*** *Tomáš Vaněk (Gar.)*	Z,ZK	5	14P + 6C	Z	P
BD6B01MAA	**Mathematics Analysis**	Z,ZK	5	14KP+6KC	Z	P
BD6B36NSS	**Design of Software Systems** ***Jiří Vokřínek***	Z,ZK	5	14KP+6KC	L	P
BD6B36OMO	**Object-oriented Design and Modeling**	Z,ZK	6	14KP+6KC	Z	P
BD6B32PSI	**Computer Networks** *Pavel Bezpalec, Leoš Boháč* ***Pavel Bezpalec*** *Leoš Boháč (Gar.)*	Z,ZK	5	14P + 6C	Z	P
BD6B01PST	**Probability and Statistics**	Z,ZK	4	14KP+6KC	L	P
BD6B16PIT	**Law for IT** *Martin Dobiáš* ***Martin Dobiáš*** *Martin Dobiáš (Gar.)*	Z,ZK	4	14KP+6KS	Z	P
BD6B36PJC	**Programming in C/C++**	KZ	4	14KP+6KC	Z	P
BD6B36RSP	**Management of Software Projects** *Miroslav Bureš* ***Miroslav Bureš*** *Miroslav Bureš (Gar.)*	Z,ZK	6	14KP+6KC	L	P
BD6B16ZPD	**Business Economics** *Martin Dobiáš, Jiří Vašíček* ***Martin Dobiáš*** *Martin Dobiáš (Gar.)*	Z,ZK	5	14KP+6KS	Z	P

Characteristics of the courses of this group of Study Plan: Code=BSITMP23-K Name=Compulsory subjects of the programm 2nd and 3rd year

BD6B36DSA	Data Structures and Algorithms	Z,ZK	6
BD6B33EAR	Enterprise Architectures	KZ	5
The course offers an overview of enterprise system architectures, focusing on Spring and Java EE. Students will become familiar with the most common enterprise architectures and related design patterns. In particular, the focus will be put on the principles of inversion control, dependency injection and Java Bean lifecycle. Pairs of students will prepare a simple enterprise application as their semestral work.			
BD6B36EAR	Enterprise Architectures	KZ	5
The course offers an overview of enterprise system architectures, focusing on Spring and Java EE. Students will become familiar with the most common enterprise architectures and related design patterns. In particular, the focus will be put on the principles of inversion control, dependency injection and Java Bean lifecycle. Pairs of students will prepare a simple enterprise application as their semestral work.			
BD6B16INS	Information Systems	KZ	4
BD6B32KAB	Cryptography and Information Security	Z,ZK	5
BD6B01MAA	Mathematics Analysis	Z,ZK	5
This course is an introduction to differential and integral calculus. It covers basic properties of functions, limits of functions, derivative and its applications (graphing, Taylor polynomial) and definite/indefinite integral with its applications, sequences and series.			
BD6B36NSS	Design of Software Systems	Z,ZK	5
BD6B36OMO	Object-oriented Design and Modeling	Z,ZK	6
BD6B32PSI	Computer Networks	Z,ZK	5
BD6B01PST	Probability and Statistics	Z,ZK	4
BD6B16PIT	Law for IT	Z,ZK	4
BD6B36PJC	Programming in C/C++	KZ	4
BD6B36RSP	Management of Software Projects	Z,ZK	6
BD6B16ZPD	Business Economics	Z,ZK	5

Code of the group: BSITPRO-K
Name of the group: Project
Requirement credits in the group: In this group you have to gain 6 credits
Requirement courses in the group: In this group you have to complete 1 course
Credits in the group: 6
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors, **authors** and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
BD6B36PRO	**Semestral Project** *Jiří Vokřínek, Jiří Šebek **Jiří Vokřínek** Jiří Vokřínek (Gar.)*	KZ	6	2s	L,Z	P

Characteristics of the courses of this group of Study Plan: Code=BSITPRO-K Name=Project

BD6B36PRO	Semestral Project	KZ	6

Individual or team work in form of a project. Student selects the subject of their project from the list of topics relevant to the studied specialization and provided by the specific department/departments. The project's subject can be closely related to the future Bachelor thesis. Further instructions for the selection and resolution of the projects can be found on the web pages of the selected department. Within this course the project is also defended.

Code of the group: BSITECTSZAJ
Name of the group: Exam in English
Requirement credits in the group:
Requirement courses in the group: In this group you have to complete 2 courses
Credits in the group: 0
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors, **authors** and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
B0B04B1K	**English language B1 - classified assessment** *Markéta Havlíčková, Pavla Péterová, Erik Peter Stadnik, Michael Ynsua, Dana Saláková, Petra Juna Jennings **Petra Juna Jennings** Petra Juna Jennings (Gar.)*	KZ	0	0C	Z,L	P
B0B04B2Z	**English language B2 - exam** *Michael Ynsua, Dana Saláková, Petra Juna Jennings **Petra Juna Jennings** Petra Juna Jennings (Gar.)*	Z,ZK	0	0C	Z,L	P

Characteristics of the courses of this group of Study Plan: Code=BSITECTSZAJ Name=Exam in English

B0B04B1K	English language B1 - classified assessment	KZ	0

verifying of the student´s skills of B1 level

B0B04B2Z	English language B2 - exam	Z,ZK	0

I) The B2 English Exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Study and Examination Rules and Regulations for Students at CTU (Part III, Article 4), a compulsory subject is one "whose completion is a necessary condition in order to successfully complete the study programme." In addition, this requires the "passing of an examination evaluated on the scale A, B, C, D, or E…" (SERR Part III, Article 6). II) According to the Common European Framework of Reference for Languages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved the B2 (Upper-Intermediate) level is one who "…can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options." III) Students who have successfully passed an approved international exam within the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon approval, students are then exempt from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.cvut.cz/

Name of the block: Compulsory elective courses
Minimal number of credits of the block: 20
The role of the block: PV

Code of the group: BSITMPV-K
Name of the group: Compulsory subjects
Requirement credits in the group: In this group you have to gain at least 20 credits (at most 133)
Requirement courses in the group: In this group you have to complete at least 4 courses
Credits in the group: 20
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors, **authors** and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
B6B32DSV	**Distributed Computing** *Peter Macejko, Lukáš Kencl **Peter Macejko** Lukáš Kencl (Gar.)*	Z,ZK	5	2P + 2L + 4D	Z	PV
B6B16FIP	**Corporate finance** *Jiří Vašíček, Oldřich Starý, Josef Černohous **Jiří Vašíček** Jiří Vašíček (Gar.)*	Z,ZK	5	2P+2S+2D	L	PV
BD6B16FIP	**Corporate finance** ***Oldřich Starý***	Z,ZK	5	14KP+6KS	L	PV
BD6B16MPR	**Decision Making Methods** ***Jaroslav Knápek***	Z,ZK	5	14KP+6KC	L	PV

B6B16MPR	**Decision Making Methods** *Martin Dobiáš, Jaroslav Knápek* ***Jaroslav Knápek*** *Jaroslav Knápek (Gar.)*	Z,ZK	5	2P+2S+2D	Z	PV
B0B39MM1	**Multimedia 1** *Libor Husník, Roman Berka, František Rund* ***František Rund*** *Roman Berka (Gar.)*	Z,ZK	6	2P+2L+8D	Z	PV
B6B37MM2	**Multimedia 2** *František Rund, Jan Bednář, Miloš Klíma* ***Jan Bednář*** *František Rund (Gar.)*	Z,ZK	5	2P+2L+6D	L	PV
BD6B37MM2	**Multimedia 2** *František Rund, Miloš Klíma* ***František Rund*** *Miloš Klíma (Gar.)*	Z,ZK	5	14KP+6KL	L	PV
B6B32ST2	**Advanced Networking Technologies** *Leoš Boháč* ***Zbyněk Kocur*** *Leoš Boháč (Gar.)*	Z,ZK	5	2P + 2C + 4D	Z	PV
B6B39PDA	**Principles of mobile applications** *Ivo Malý* ***Ivo Malý*** *Ivo Malý (Gar.)*	Z,ZK	6	2P+2C	L	PV
BD6B16ISP	**Business Process Management** ***Pavel Náplava***	Z,ZK	5	14KP+6KS	Z	PV
B6B16ISP	**Business Process Management** *Pavel Náplava, Jan Kočí* ***Jan Kočí*** *Pavel Náplava (Gar.)*	Z,ZK	5	2P+2S+2D	Z	PV
B0B39PGR	**Computer graphics programming** *Petr Felkel, Jaroslav Sloup* ***Jaroslav Sloup*** *Petr Felkel (Gar.)*	Z,ZK	6	2P+2C+8D	L	PV
B6B32SOS	**Network Operating Systems** *Pavel Troller* ***Ján Kučerák*** *Pavel Troller (Gar.)*	Z,ZK	5	2P + 2L + 2D	Z	PV
B6B36SPS	**Computer Networks Administration**	Z,ZK	5	2P+2C+3D	L	PV
BD6B36SPS	**Computer Networks Administration**	Z,ZK	5	14KP+6KC	L	PV
B6B32TKS	**Telecommunications Networks** *Jaromír Hrad, Ivan Pravda* ***Ivan Pravda*** *Jaromír Hrad (Gar.)*	Z,ZK	5	2P + 2L + 2D	L	PV
BD6B32TKS	**Telecommunications Networks** ***Ivan Pravda***	Z,ZK	5	14P + 6L	L	PV
B6B39TUR	**User Interface Testing**	Z,ZK	5	2P+2S+2D	Z	PV
B0B39KAJ	**Client applications in JavaScript** *Ondřej Žára* ***Ondřej Žára*** *Ondřej Žára (Gar.)*	Z,ZK	5	2P+2C	L	PV
BD6B16ZMI	**Marketing Research**	Z,ZK	5	14KP+6KS	Z	PV
B6B16ZMI	**Marketing Research** *Ondřej Pešek* ***Ondřej Pešek*** *Ondřej Pešek (Gar.)*	Z,ZK	5	2P+2S+2D	Z	PV
B6B39TDM	**3D Modeling** *David Sedláček* ***David Sedláček*** *David Sedláček (Gar.)*	KZ	5	0P+4C+6D	Z	PV

Characteristics of the courses of this group of Study Plan: Code=BSITMPV-K Name=Compulsory subjects

B6B32DSV	Distributed Computing	Z,ZK	5
The course is focused on technologies that support distributed computing: on mechanisms ensuring reliable, efficient and secure connection of application processes, programming interfaces of communication channels and up-to-date middleware technologies. A significant part of lectures is dedicated to distributed algorithms that assure causality, exclusive access, deadlock detection/avoidance, fault-tolerance, mobile computing, and security.			
B6B16FIP	Corporate finance	Z,ZK	5
BD6B16FIP	Corporate finance	Z,ZK	5
BD6B16MPR	Decision Making Methods	Z,ZK	5
B6B16MPR	Decision Making Methods	Z,ZK	5
B0B39MM1	Multimedia 1	Z,ZK	6
The course gives students knowledge necessary to produce and edit multimedia content using variety of tools and creative methods. Lectures are focused on presentation of standards, technologies, methods and approaches commonly used in commercial and alternative creation processes. The presented topics include production process of multimedia content, interactive multimedia applications, data formats and compression methods, technical equipment to record video, lighting devices and their control. The course also contain problematics of archivation and distribution of multimedia content. The part of the course is also a project with use of presented technologies and methods.			
B6B37MM2	Multimedia 2	Z,ZK	5
BD6B37MM2	Multimedia 2	Z,ZK	5
B6B32ST2	Advanced Networking Technologies	Z,ZK	5
B6B39PDA	Principles of mobile applications	Z,ZK	6
Student who successfully passed the course get overview about properties and about limits of single mobile technologies. The course is focused on specific problems related to limitations and new capabilities of mobile devices. Attention is paid to maximal utilization of environment characteristics in which the mobile application is used. Course is not focused on introduction of basic programming techniques for mobile application development - it is expected that students already have this skills or will be gained by means of self-study.			
BD6B16ISP	Business Process Management	Z,ZK	5
B6B16ISP	Business Process Management	Z,ZK	5
B0B39PGR	Computer graphics programming	Z,ZK	6
B6B32SOS	Network Operating Systems	Z,ZK	5
Network operating systems, Linux, Unix. Administration and network tools, managing and administration of documentation. The graduates will be informed about basic conception and procedures in operating systems administration (UNIX) and gain the basic facility in operating systems configuration based on the x 86 platforms.			
B6B36SPS	Computer Networks Administration	Z,ZK	5
BD6B36SPS	Computer Networks Administration	Z,ZK	5
B6B32TKS	Telecommunications Networks	Z,ZK	5
BD6B32TKS	Telecommunications Networks	Z,ZK	5

B6B39TUR	User Interface Testing	Z,ZK	5
Students will learn the basic principles of user interface testing in the context of User-Centered Design. The course covers the most important topics in this field so that students can run their own (either quantitative or qualitative) user interface tests. Another important part of the course is the topic of disabilities that users can suffer from. The tutorials cover the entire cycle of conducting tests (incl. infrastructure, ethics concerns), running tests and methods for its evaluating.			
B0B39KAJ	Client applications in JavaScript	Z,ZK	5
BD6B16ZMI	Marketing Research	Z,ZK	5
B6B16ZMI	Marketing Research	Z,ZK	5
B6B39TDM	3D Modeling	KZ	5

Name of the block: Elective courses
Minimal number of credits of the block: 0
The role of the block: V

Code of the group: BSITHJKTV-K
Name of the group: Humanities, language courses, physical training
Requirement credits in the group:
Requirement courses in the group:
Credits in the group: 0
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
A0B04GA	***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04KA	**English Conversation 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
B6B04A21	**English language A2-1**	Z	0	2s	Z	v
B6B04A22	**English language A2-2**	Z	0	2s	L	v
B6B04B11	**English language B1-1**	Z	0	2s	Z	v
B6B04B12	**English language B1-2**	Z	0	2C	L	v
B6B04B21	**English language B2-1**	Z	3	2C	Z	v
B6B04B22	**English language B2-2**	Z	3	2C	Z,L	v
A0B04OA	**Technical English Course** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
AE0B04C0	**Czech Language 0** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04C2Z	**Czech language 2** ***Jitka Pinková*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z	v
A0B04C2L	**Czech language 2** ***Jitka Pinková*** *Petra Juna Jennings (Gar.)*	Z	2	2C	L	v
A0B04CIN	***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04KF1	**French conversation 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04KF2	**French conversation 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04F1	**French language 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04F2	**French language 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04F3	**French Language 3** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04JAP	**Japanese** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04GN	**German Grammar** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04KN	**German Conversation** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04KN2	**German conversation 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04N1	**German language 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04N2	**German language 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04N3	**German language 3** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04ON	**Professional German** ***Petra Juna Jennings*** *Dana Lisá (Gar.)*	Z	2	2C	Z,L	v

A0B04CAE1	**Certificate of Advanced English CAE 1** ***Pavla Péterová*** *Pavla Péterová (Gar.)*	Z	2	2C	Z,L	v
A0B04CAE2	**Certificate of Advanced English CAE 2** ***Pavla Péterová*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04CAE3	**Certificate of Advanced English CAE 3** ***Pavla Péterová*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04CAE4	**Certificate of Advanced English 4** ***Pavla Péterová***	Z		2C	Z,L	v
A0B04FCE1	**FCE 1** ***Petra Juna Jennings***	Z	2	2C	*	v
A0B04FCE2	**FCE 2** ***Petra Juna Jennings***	Z	2	2C	*	v
A0B04FCE4	**FCE4** ***Dana Saláková***	Z	2	2C	Z,L	v
A0B04FCE3	**FCE 3** ***Petra Juna Jennings***	Z	2	2C	Z,L	v
A0B04PZP	**Preparation for stay in Germany** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04RET	**Rhetoric** ***Jitka Pinková*** *Petra Juna Jennings (Gar.)*	Z	2	2C	Z,L	v
A0B04KR	**Russian conversation** ***Dana Saláková***	Z	2	2C	Z,L	v
A0B04KR2	**Russian conversation 2** ***Dana Saláková***	Z	2	2C	*	v
A0B04R1	**Russian language 1** ***Jitka Pinková*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04R2	**Russian language 2** ***Jitka Pinková*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04R3	**Russian language 3** ***Jitka Pinková***	Z	2	2C	*	v
A0B04R4	**Russian language 3** ***Dana Saláková***	Z	2	2C	*	v
A0B04KS1	**Spanish conversation 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04KS2	**Spanish conversation 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04S1	**Spanish language 1** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04S2	**Spanish language 2** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04S3	**Spanish language 3** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04S4	**Spanish Language 4** ***Petra Juna Jennings*** *Petra Juna Jennings (Gar.)*	Z	2	2C	*	v
A0B04CA	**Technical English for Pre-Intermediate** ***Dana Saláková***	Z	2	2C	L	v
TVV	**Physical education**	Z	0	0+2	Z,L	v
A003TV	**Physical Education**	Z	2	0+2	L,Z	v
TV-V1	**Physical education**	Z	1	0+2	Z,L	v
TVV0	**Physical education**	Z	0	0+2	Z,L	v
TVKLV	**Physical Education Course**	Z	0	7dní	L	v
TVKZV	**Physical Education Course**	Z	0	7dní	Z	v

Characteristics of the courses of this group of Study Plan: Code=BSITHJKTV-K Name=Humanities, language courses, physical training

A0B04GA		Z	2
The aim of this course is to extend and complement grammatical patterns covered in other English courses that are intended for full-time students. The course is meant mainly as a supplement for students who have not yet passed the B2 examination and are interested in further study and additional practice.			
A0B04KA	English Conversation 2	Z	2
The course is designed for students who want to develop their communication skills. Students will be given the opportunity to use the vocabulary they already know, as well as learn new words and phrases, to communicate on a variety of topics and themes. This course is not designed for beginners.			
B6B04A21	English language A2-1	Z	0
The course is open to students who are beginners in their second language. Course objective: Achieving competence in basic English.			
B6B04A22	English language A2-2	Z	0
The course is open to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowledge of the English language.			
B6B04B11	English language B1-1	Z	0
Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken English.			
B6B04B12	English language B1-2	Z	0
Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken English.			
B6B04B21	English language B2-1	Z	3
The course is suitable for students who have good knowledge of the material covered in secondary school in that language. Course objective: The course focuses on technical English and practising difficult grammar concepts.			

B6B04B22	English language B2-2	Z	3
The course is suitable for students who have good knowledge of the material covered in secondary school. Course objective: The course focuses on technical English and practising difficult grammar.			
A0B04OA	Technical English Course	Z	2
This course is designed for students who have successfully passed the B2 Exam or have met the exam requirement. Its main objective is to prepare students to be able to communicate about technical subject matter in English in a variety of formats. This will be practiced by examining the structure and style of writing in formal English and practicing via 3 different types of texts: an abstract, a short explanatory article, and a research article.			
AE0B04C0	Czech Language 0	Z	2
The course is aimed towards ERASMUS students - especially beginners. The course is taught on the basis of English language support. The goal of the course is to give the students first hand information about pronunciation, vocabulary and grammar structure of the Czech language, and also provide them with basic useful phrases needed for everyday communication during their stay in the Czech Republic.			
A0B04C2Z	Czech language 2	Z	2
The course is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technical university students			
A0B04C2L	Czech language 2	Z	2
The course is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technical university students.			
A0B04CIN		Z	2
A0B04KF1	French conversation 1	Z	2
A0B04KF2	French conversation 1	Z	2
A0B04F1	French language 1	Z	2
A0B04F2	French language 2	Z	2
A0B04F3	French Language 3	Z	2
A0B04JAP	Japanese	Z	2
A0B04GN	German Grammar	Z	2
A0B04KN	German Conversation	Z	2
A0B04KN2	German conversation 2	Z	2
A0B04N1	German language 1	Z	2
A0B04N2	German language 2	Z	2
A0B04N3	German language 3	Z	2
A0B04ON	Professional German	Z	2
A0B04CAE1	Certificate of Advanced English CAE 1	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE1 covers units 1-4. Studying for CAE helps you to improve your language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based on realistic tasks and indicates the ability to use the language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to understand and produce texts of various types. CAE is recognised by the majority of universities in English speaking countries as proof of adequate language skills for courses taught and assessed in English as well as by employers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. It is possible but not necessary for obtaining credit to take CAE at British Council.			
A0B04CAE2	Certificate of Advanced English CAE 2	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE2 covers units 5-8. Studying for CAE helps you to improve your language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based on realistic tasks and indicates the ability to use the language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to understand and produce texts of various types. CAE is recognised by the majority of universities in English speaking countries as proof of adequate language skills for courses taught and assessed in English as well as by employers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. It is possible but not necessary for obtaining credit to take CAE at British Council. Student is allowed to enrol only into one CAE course during one semester.			
A0B04CAE3	Certificate of Advanced English CAE 3	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE3 covers unit 9 - 12. Studying for CAE helps you to improve your language skills (reading, writing English in use, listening and speaking) and use them in a wide range of contexts.			
A0B04CAE4	Certificate of Advanced English 4	Z	
A0B04FCE1	FCE 1	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			
A0B04FCE2	FCE 2	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			
A0B04FCE4	FCE4	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			
A0B04FCE3	FCE 3	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Common European Framework of Reference for Languages (CEFR). The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 CEFR.			
A0B04PZP	Preparation for stay in Germany	Z	2
A0B04RET	Rhetoric	Z	2
The objective of the subject is to master and improve skills necessary for successful presentation as well as enhancing the communicative ability of the prospective engineers and bachelors. This subject will enable the students to develop both spoken and written presentations, non verbal communication and remove the psychological barriers for public speaking so that the students can create a good image. The course "Retorika" provides an introduction to this subject.			
A0B04KR	Russian conversation	Z	2
A0B04KR2	Russian conversation 2	Z	2
A0B04R1	Russian language 1	Z	2

A0B04R2	Russian language 2	Z	2
A0B04R3	Russian language 3	Z	2
A0B04R4	Russian language 3	Z	2
A0B04KS1	Spanish conversation 1	Z	2
A0B04KS2	Spanish conversation 2	Z	2
A0B04S1	Spanish language 1	Z	2
A0B04S2	Spanish language 2	Z	2
A0B04S3	Spanish language 3	Z	2
A0B04S4	Spanish Language 4	Z	2
A0B04CA	Technical English for Pre-Intermediate	Z	2
TVV	Physical education	Z	0
A003TV	Physical Education	Z	2
TV-V1	Physical education	Z	1
TVV0	Physical education	Z	0
TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0

Code of the group: BSTMVOLSI
Name of the group: Elective subjects
Requirement credits in the group:
Requirement courses in the group:
Credits in the group: 0
Note on the group: ~Nabídku volitelných předmětů uspořádaných podle kateder najdete na webových stránkách http://www.fel.cvut.cz/cz/education/volitelne-predmety.html\\

List of courses of this pass:

Code	Name of the course	Completion	Credits
A003TV	Physical Education	Z	2
A0B04C2L	Czech language 2	Z	2
The course is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technical university students.			
A0B04C2Z	Czech language 2	Z	2
The course is aimed at foreign students studying in Czech, it further develops their language knowledge and skills to meet the needs of technical university students			
A0B04CA	Technical English for Pre-Intermediate	Z	2
A0B04CAE1	Certificate of Advanced English CAE 1	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE1 covers units 1-4. Studying for CAE helps you to improve your language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based on realistic tasks and indicates the ability to use the language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to understand and produce texts of various types. CAE is recognised by the majority of universities in English speaking countries as proof of adequate language skills for courses taught and assessed in English as well as by employers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. It is possible but not necessary for obtaining credit to take CAE at British Council.			
A0B04CAE2	Certificate of Advanced English CAE 2	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE2 covers units 5-8. Studying for CAE helps you to improve your language skills (reading, writing, English in use, listening and speaking) and use them in a wide range of contexts. The exam is based on realistic tasks and indicates the ability to use the language in practical situations. You will be able to participate in meetings and discussions, expressing opinions clearly and be able to understand and produce texts of various types. CAE is recognised by the majority of universities in English speaking countries as proof of adequate language skills for courses taught and assessed in English as well as by employers who require knowledge of a foreign language. CAE is taken by more than 60 000 people each year in more than 60 countries. It is possible but not necessary for obtaining credit to take CAE at British Council. Student is allowed to enrol only into one CAE course during one semester.			
A0B04CAE3	Certificate of Advanced English CAE 3	Z	2
The aim of the course is to prepare for Certificate of Advanced English - the second highest level Cambridge ESOL exam. The course CAE3 covers unit 9 - 12. Studying for CAE helps you to improve your language skills (reading, writing English in use, listening and speaking) and use them in a wide range of contexts.			
A0B04CAE4	Certificate of Advanced English 4	Z	
A0B04CIN		Z	2
A0B04F1	French language 1	Z	2
A0B04F2	French language 2	Z	2
A0B04F3	French Language 3	Z	2
A0B04FCE1	FCE 1	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			

A0B04FCE2	FCE 2	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			
A0B04FCE3	FCE 3	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the Common European Framework of Reference for Languages (CEFR). The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 CEFR.			
A0B04FCE4	FCE4	Z	2
The course is aimed for students, employees of the Faculty and the public whose knowledge of English corresponds to B1 level according to the European Language Frame. The course focuses on improving all language skills - writing, speaking, reading, listening, grammar and phonetics - and is submitted to the goal of obtaining the required skills needed for B2 ELF.			
A0B04GA		Z	2
The aim of this course is to extend and complement grammatical patterns covered in other English courses that are intended for full-time students. The course is meant mainly as a supplement for students who have not yet passed the B2 examination and are interested in further study and additional practice.			
A0B04GN	German Grammar	Z	2
A0B04JAP	Japanese	Z	2
A0B04KA	English Conversation 2	Z	2
The course is designed for students who want to develop their communication skills. Students will be given the opportunity to use the vocabulary they already know, as well as learn new words and phrases, to communicate on a variety of topics and themes. This course is not designed for beginners.			
A0B04KF1	French conversation 1	Z	2
A0B04KF2	French conversation 1	Z	2
A0B04KN	German Conversation	Z	2
A0B04KN2	German conversation 2	Z	2
A0B04KR	Russian conversation	Z	2
A0B04KR2	Russian conversation 2	Z	2
A0B04KS1	Spanish conversation 1	Z	2
A0B04KS2	Spanish conversation 2	Z	2
A0B04N1	German language 1	Z	2
A0B04N2	German language 2	Z	2
A0B04N3	German language 3	Z	2
A0B04OA	Technical English Course	Z	2
This course is designed for students who have successfully passed the B2 Exam or have met the exam requirement. Its main objective is to prepare students to be able to communicate about technical subject matter in English in a variety of formats. This will be practiced by examining the structure and style of writing in formal English and practicing via 3 different types of texts: an abstract, a short explanatory article, and a research article.			
A0B04ON	Professional German	Z	2
A0B04PZP	Preparation for stay in Germany	Z	2
A0B04R1	Russian language 1	Z	2
A0B04R2	Russian language 2	Z	2
A0B04R3	Russian language 3	Z	2
A0B04R4	Russian language 3	Z	2
A0B04RET	Rhetoric	Z	2
The objective of the subject is to master and improve skills necessary for successful presentation as well as enhancing the communicative ability of the prospective engineers and bachelors. This subject will enable the students to develop both spoken and written presentations, non verbal communication and remove the psychological barriers for public speaking so that the students can create a good image. The course "Retorika" provides an introduction to this subject.			
A0B04S1	Spanish language 1	Z	2
A0B04S2	Spanish language 2	Z	2
A0B04S3	Spanish language 3	Z	2
A0B04S4	Spanish Language 4	Z	2
AE0B04C0	Czech Language 0	Z	2
The course is aimed towards ERASMUS students - especially beginners. The course is taught on the basis of English language support. The goal of the course is to give the students first hand information about pronunciation, vocabulary and grammar structure of the Czech language, and also provide them with basic useful phrases needed for everyday communication during their stay in the Czech Republic.			
B0B04B1K	English language B1 - classified assessment	KZ	0
verifying of the student´s skills of B1 level			
B0B04B2Z	English language B2 - exam	Z,ZK	0
I) The B2 English Exam is a compulsory subject for all Faculty of Electrical Engineering students at the Czech Technical University. According to the Study and Examination Rules and Regulations for Students at CTU (Part III, Article 4), a compulsory subject is one “whose completion is a necessary condition in order to successfully complete the study programme.” In addition, this requires the “passing of an examination evaluated on the scale A, B, C, D, or E…” (SERR Part III, Article 6). II) According to the Common European Framework of Reference for Languages (CEFR), an international standard for describing language ability, the definition of an English language learner who has achieved the B2 (Upper-Intermediate) level is one who “…can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.” III) Students who have successfully passed an approved international exam within the past five years may present their certificate to the Department of Languages, Faculty of Electrical Engineering.Upon approval, students are then exempt from both the Written Test and the Oral Part. For a list of approved international exams go the department website: http://jazyky.fel.cvut.cz/			
B0B39KAJ	Client applications in JavaScript	Z,ZK	5
B0B39MM1	Multimedia 1	Z,ZK	6
The course gives students knowledge necessary to produce and edit multimedia content using variety of tools and creative methods. Lectures are focused on presentation of standards, technologies, methods and approaches commonly used in commercial and alternative creation processes. The presented topics include production process of multimedia content,			

	interactive multimedia applications, data formats and compression methods, technical equipment to record video, lighting devices and their control. The course also contain problematics of archivation and distribution of multimedia content. The part of the course is also a project with use of presented technologies and methods.		
B0B39PGR	Computer graphics programming	Z,ZK	6
B6B04A21	English language A2-1	Z	0
	The course is open to students who are beginners in their second language. Course objective: Achieving competence in basic English.		
B6B04A22	English language A2-2	Z	0
	The course is open to students who are beginners in their second foreign language. The course objective is to develop and sustain their basic knowledge of the English language.		
B6B04B11	English language B1-1	Z	0
	Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken English.		
B6B04B12	English language B1-2	Z	0
	Course objective: Broadening the basic knowledge of general English; mastering basic specialised language; focusing on text analysis and vocabulary expansion; understanding spoken English.		
B6B04B21	English language B2-1	Z	3
	The course is suitable for students who have good knowledge of the material covered in secondary school in that language. Course objective: The course focuses on technical English and practising difficult grammar concepts.		
B6B04B22	English language B2-2	Z	3
	The course is suitable for students who have good knowledge of the material covered in secondary school. Course objective: The course focuses on technical English and practising difficult grammar.		
B6B16FIP	Corporate finance	Z,ZK	5
B6B16ISP	Business Process Management	Z,ZK	5
B6B16MPR	Decision Making Methods	Z,ZK	5
B6B16ZMI	Marketing Research	Z,ZK	5
B6B32DSV	Distributed Computing	Z,ZK	5
	The course is focused on technologies that support distributed computing: on mechanisms ensuring reliable, efficient and secure connection of application processes, programming interfaces of communication channels and up-to-date middleware technologies. A significant part of lectures is dedicated to distributed algorithms that assure causality, exclusive access, deadlock detection/avoidance, fault-tolerance, mobile computing, and security.		
B6B32SOS	Network Operating Systems	Z,ZK	5
	Network operating systems, Linux, Unix. Administration and network tools, managing and administration of documentation. The graduates will be informed about basic conception and procedures in operating systems administration (UNIX) and gain the basic facility in operating systems configuration based on the x 86 platforms.		
B6B32ST2	Advanced Networking Technologies	Z,ZK	5
B6B32TKS	Telecommunications Networks	Z,ZK	5
B6B36SPS	Computer Networks Administration	Z,ZK	5
B6B37MM2	Multimedia 2	Z,ZK	5
B6B39PDA	Principles of mobile applications	Z,ZK	6
	Student who successfully passed the course get overview about properties and about limits of single mobile technologies. The course is focused on specific problems related to limitations and new capabilities of mobile devices. Attention is paid to maximal utilization of environment characteristics in which the mobile application is used. Course is not focused on introduction of basic programming techniques for mobile application development - it is expected that students already have this skills or will be gained by means of self-study.		
B6B39TDM	3D Modeling	KZ	5
B6B39TUR	User Interface Testing	Z,ZK	5
	Students will learn the basic principles of user interface testing in the context of User-Centered Design. The course covers the most important topics in this field so that students can run their own (either quantitative or qualitative) user interface tests. Another important part of the course is the topic of disabilities that users can suffer from. The tutorials cover the entire cycle of conducting tests (incl. infrastructure, ethics concerns), running tests and methods for its evaluating.		
BBAP20	Bachelor thesis	Z	20
BD6B01LAG	Linear Algebra	Z,ZK	7
BD6B01MAA	Mathematics Analysis	Z,ZK	5
	This course is an introduction to differential and integral calculus. It covers basic properties of functions, limits of functions, derivative and its applications (graphing, Taylor polynomial) and definite/indefinite integral with its applications, sequences and series.		
BD6B01PST	Probability and Statistics	Z,ZK	4
BD6B01ZDM	Introduction to Discrete Mathematics	Z,ZK	5
	No advanced knowleges of mathematics are required at the beginning of this course. Using illustrative examples we build sufficient understanding of combinatorics, set and graph theory. Then we proceed to formal construction of propositional calculus.		
BD6B04PRE	Presentation	KZ	3
BD6B16FIP	Corporate finance	Z,ZK	5
BD6B16INS	Information Systems	KZ	4
BD6B16ISP	Business Process Management	Z,ZK	5
BD6B16MPR	Decision Making Methods	Z,ZK	5
BD6B16PIT	Law for IT	Z,ZK	4
BD6B16ZMI	Marketing Research	Z,ZK	5
BD6B16ZPD	Business Economics	Z,ZK	5
BD6B32KAB	Cryptography and Information Security	Z,ZK	5
BD6B32PSI	Computer Networks	Z,ZK	5
BD6B32TKS	Telecommunications Networks	Z,ZK	5
BD6B33EAR	Enterprise Architectures	KZ	5
	The course offers an overview of enterprise system architectures, focusing on Spring and Java EE. Students will become familiar with the most common enterprise architectures and related design patterns. In particular, the focus will be put on the principles of inversion control, dependency injection and Java Bean lifecycle. Pairs of students will prepare a simple enterprise application as their semestral work.		
BD6B36DBS	Database Systems	Z,ZK	6

BD6B36DSA	Data Structures and Algorithms	Z,ZK	6
BD6B36EAR	Enterprise Architectures	KZ	5
The course offers an overview of enterprise system architectures, focusing on Spring and Java EE. Students will become familiar with the most common enterprise architectures and related design patterns. In particular, the focus will be put on the principles of inversion control, dependency injection and Java Bean lifecycle. Pairs of students will prepare a simple enterprise application as their semestral work.			
BD6B36NSS	Design of Software Systems	Z,ZK	5
BD6B36OMO	Object-oriented Design and Modeling	Z,ZK	6
BD6B36PJC	Programming in C/C++	KZ	4
BD6B36PJV	Programming in Java	Z,ZK	6
The course builds on the basics of algorithms and programming from the first semester and introduces students to the Java environment. The course also focus on the object concept of the Java language. The topics of the course includes exceptions, event handling, and building a graphical interface. Basic library methods, working with files and using generic types will be introduced. An important topic is models of multithreaded applications and their implementation. Practical exercises of practical skills and knowledge of Java is tested in the form of solving partial tasks and semester work, which will be submitted continuously through the source code version control system. The semester work scoring consists of points for the correctness and efficiency of the code, as well as points that take into account the quality of the source codes, their readability and reusability.			
BD6B36PRO	Semestral Project	KZ	6
Individual or team work in form of a project. Student selects the subject of their project from the list of topics relevant to the studied specialization and provided by the specific department/departments. The project's subject can be closely related to the future Bachelor thesis. Further instructions for the selection and resolution of the projects can be found on the web pages of the selected department. Within this course the project is also defended.			
BD6B36RSP	Management of Software Projects	Z,ZK	6
BD6B36SMP	Requirements Engineering	Z,ZK	6
BD6B36SPS	Computer Networks Administration	Z,ZK	5
BD6B36TS1	Software Testing	Z,ZK	5
BD6B36ZAL	Introduction to Programming	Z,ZK	5
BD6B36ZPR	Introduction to Project Management	KZ	3
The course introduces students to the general (not only IT) basics of project management. In addition to basic project management concepts (planning, organization, etc.) students also get practical experiences from team cooperation (information sharing, communication, etc.). All presented topics are practiced and extended in the consecutive courses.			
BD6B37MM2	Multimedia 2	Z,ZK	5
BD6B38ZPS	Basics of Computer Systems	Z,ZK	6
BD6B39ZMT	Foundations of Multimedia Production	KZ	3
The course familiarizes students with the basic principles of acquisition and processing of multimedia content, with a focus on image processing, video and audio, as well as the principles of graphic design and its implementation in a web environment. The course is organized within the block teaching when, within four days, students gradually pass each section of the course divided into two lectures and two workshops each day. Students will acquire the practical principles in the acquisition and processing of multimedia content while they use several different types of instruments at the application level and at the level of simple code. All students will apply the knowledge gained within the last day dedicated to composition rules within a Web project. After completing the course, students will carry out their own independent project and after its submission will be assessed.			
BD6B39ZWA	Foundations of Web Applications	Z,ZK	5
BEZB	Safety in Electrical Engineering for a bachelor´s degree	Z	0
The purpose of the safety course is to give the students basic knowledge of electrical equipment and installation as to avoid danger arising from operation of it. This introductory course contains fundamentals of Safety Electrical Engineering. In this way the students receive qualification of instructed person that enables them to work on electrical equipment.			
BEZZ	Basic health and occupational safety regulations	Z	0
The guidelines were worked out based on The Training Scheme for Health and Occupational Safety designed for employees and students of the Czech Technical University in Prague, which was provided by the Rector´s Office of the CTU. Safety is considered one of the basic duties of all employees and students. The knowledge of Health and Occupational Safety regulations forms an integral and permanent part of qualification requirements. This program is obligatory.			
TV-V1	Physical education	Z	1
TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0
TVV	Physical education	Z	0
TVV0	Physical education	Z	0

For updated information see http://bilakniha.cvut.cz/en/f3.html
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