

## Recommended pass through the study plan

### Name of the pass: Branch Software Engineering - Passage through study

Faculty/Institute/Others: Faculty of Electrical Engineering

Department: Department of Computer Science

Pass through the study plan: Softwarové inženýrství (STM-A7B)

Branch of study guaranteed by the department: Software Engineering

Guarantor of the study branch: doc. Ing. Ivan Jelínek, CSc.

Program of study: Software Engineering and Management

Type of study: Bachelor full-time

Note on the pass:

Coding of roles of courses and groups of courses:

P - compulsory courses of the program, PO - compulsory courses of the branch, Z - compulsory courses, S - compulsory elective courses, PV - compulsory elective courses, F - elective specialized courses, V - elective courses, T - physical training courses

Coding of ways of completion of courses (KZ/Z/ZK) and coding of semesters (Z/L):

KZ - graded assesment, Z - assesment, ZK - examination, L - summer semester, Z - winter semester

Number of semester: 3

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
A0B04B2Z	English language B2-exam <i>Pavla Péterová</i>	Z,ZK	0	0C	Z,L	P
A7B36DBS	Databases	Z,ZK	6	2P+2C	Z	P
A7B36DSA	Data Structures and Algorithms	Z,ZK	6	2P+2S	Z	P
A7B01MCS	Mathematics for Computer Science	Z,ZK	6	2+2	Z	P
A7B36PJC	Programming in the C++ Language	Z,ZK	6	2P+2C	Z	PO
A7B39WPA	Web Enterprise Applications	Z,ZK	6	2P+2C	Z	PO

Number of semester: 4

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
A7B32KBE	Ciphers and information security	Z,ZK	6	2P + 2L	L	P
A7B36PSI	Computer Networks	Z,ZK	6	2P+2C	L	P
A7B36SIN	Software Engineering	Z,ZK	6	2P+2C	L	PO
A7B36XML	XML Technology	Z,ZK	6	2P+2C	L	PO
BSTMVOLSI	Volitelné p edm ty	Min. cours. 0	Min/Max 0/999			V

Number of semester: 5

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
A7B36VYD	Data Mining	Z,ZK	5	2P+2C	Z	P
A7B36SI2	Managment of SW Projects	Z,ZK	5	2P+2C	Z	PO
BSTMPRO	Projekt <i>A7B39PRO,A7B36PRO</i>	Min. cours. 1	Min/Max 5/30			P
BSTMECTSHJKTV	Humanitní, jazykové kurzy, t lesná výchova <i>A0B04GA,A0B04KA,..... (see the list of groups below)</i>	Min. cours. 1	Min/Max 4/125			V
BSTMVOLSI	Volitelné p edm ty	Min. cours. 0	Min/Max 0/999			V

Number of semester: 6

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
ABAP20	Bachelor thesis	Z	20	28s	L,Z	P
A7B16EPD	Business Economics	KZ	5	2+2s	L	P
BSTMVOLSI	Volitelné p edm ty	Min. cours. 0	Min/Max 0/999			V

### List of groups of courses of this pass with the complete content of members of individual groups

Kód	Name of the group of courses and codes of members of this group (for specification see here or below the list of courses)	Completion	Credits	Scope	Semester	Role
<b>BSTMECTSHJKTV</b>	<b>Humanitní, jazykové kurzy, t lesná výchova</b>	<b>Min. cours. 1</b>	<b>Min/Max 4/125</b>			<b>V</b>
A0B04GA		A0B04KA	English Conversation 2	A0B04A0Z	English language 0-1	
A0B04A0L	Czech language 0	A0B04A1Z	English language 1-1	A0B04A1L	English language 1-2	
A7B04A2Z	English Language 2-1	A0B04OA	Technical English Course	AE0B04C0	Czech Language 0	
A0B16ET1	Ethic	A0B16FIL	Philosophy	A0B16F11	Philosophy I	
A0B04KF1	French conversation 1	A0B04KF2	French conversation 1	A0B04F1	French language 1	
A0B04F2	French language 2	A0B04F3	French Language 3	A7B39GRT	Graphical Design	
A0B16HI1	History I	A0B16HTE	History of technology and econom ...	A0B04JAP	Japanese	
A0B16MPL	Management psychology	A0B16MPS	Psychology	A0B04GN	German Grammar	
A0B04KN	German Conversation	A0B04KN2	German conversation 2	A0B04N1	German language 1	
A0B04N2	German language 2	A0B04N3	German language 3	A0B04ON	Professional German	
A0B04CAE1	Certificate of Advanced English ...	A0B04CAE2	Certificate of Advanced English ...	A0B04CAE3	Certificate of Advanced English ...	
A0B04CAE4	Certificate of Advanced English ...	A0B04FCE1	FCE 1	A0B04FCE2	FCE 2	
A0B04FCE4	FCE4	A0B04FCE3	FCE 3	A0B04PZP	Preparation for stay in Germany	
A0B04KR	Russian conversation	A0B04KR2	Russian conversation 2	A0B04R1	Russian language 1	
A0B04R2	Russian language 2	A0B04R3	Russian language 3	A0B04R4	Russian language 3	
A0B04RET	Rhetoric	A0B04CA	Technical English for Pre-Intern ...	A003TV	Physical Education	
A0B03TV3	Physical Education 3	A0B03TV4	Physical Education 4	A0B03TV5	Physical Education 5	
A0B03TV6	Physical Education 6	A0B03TVKL	Physical Education Course	A0B03TVKZ	Physical Education Course	
A0B04C2Z	Czech language 2	A0B04C2L	Czech language 2	A0B04CIN		
A0B04KS1	Spanish conversation 1	A0B04KS2	Spanish conversation 2	A0B04S1	Spanish language 1	
A0B04S2	Spanish language 2	A0B04S3	Spanish language 3	A0B04S4	Spanish Language 4	
<b>BSTMPRO</b>	<b>Projekt</b>	<b>Min. cours. 1</b>	<b>Min/Max 5/30</b>			<b>P</b>
A7B39PRO	Semester Project	A7B36PRO	Semestral Project			
<b>BSTMVOLSI</b>	<b>Volitelné p edm ty</b>	<b>Min. cours. 0</b>	<b>Min/Max 0/999</b>			<b>V</b>

### List of courses of this pass:

Code	Name of the course	Completion	Credits
A003TV	Physical Education	Z	2
A0B03TV3	Physical Education 3	Z	1
<p>The main goal of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their education as well as gain basic knowledge connected with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sedentary occupation of students as a part of combat with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following disciplines: aerobics, aikido, basketball, beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, ninjutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described sport disciplines according to their own interest and available capacity.</p>			
A0B03TV4	Physical Education 4	Z	1
<p>The main goal of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their education as well as gain basic knowledge connected with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sedentary occupation of students as a part of combat with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following disciplines: aerobics, aikido, basketball,</p>			

beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, ninjutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described sport disciplines according to their own interest and available capacity.

A0B03TV5	Physical Education 5	Z	1
The main goal of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their education as well as gain basic knowledge connected with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sedentary occupation of students as a part of combat with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following disciplines: aerobics, aikido, basketball, beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, ninjutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described sport disciplines according to their own interest and available capacity.			
A0B03TV6	Physical Education 6	Z	1
The main goal of the physical training is to improve and extend locomotive skills which students have been earned within previous stages of their education as well as gain basic knowledge connected with kinantropology, hygienics and physiotherapy. Special attention is paid on the healthy lifestyle forming and compensation of sedentary occupation of students as a part of combat with civilization diseases. Within different study programmes, the Department of Physical Education and Sport offers following disciplines: aerobics, aikido, basketball, beach volleyball, badminton, bowling, skating, budo, floorball, football, frisbee, golf, in-line skating, canoeing, karate, fitness, downhill skiing, ice hockey, climbing, shooting bow, ninjutsu, swimming, softball, spinning, squash, table tennis, tennis, hiking, volleyball and health physical education. Students may choose one of above described sport disciplines according to their own interest and available capacity.			
A0B03TVKL	Physical Education Course	Z	1
In the bachelor stage of study the student has to undergo one of P.E. courses (winter or summer course). These courses are aimed at improving exercise skills. The summer course - games course - focuses on improving the knowledge and skills on multigame level - courses of hiking, cycling, canoeing and combined courses - special courses - swimming, windsurfing			
A0B03TVKZ	Physical Education Course	Z	1
In the bachelor stage of study the student has to undergo one of P.E. courses (winter or summer course). These courses are aimed at improving exercise skills. The winter course - cross-country skiing, downhill skiing, snowboarding training.			
A0B04A0L	Czech language 0	Z	0
A0B04A0Z	English language 0-1	Z	0
A0B04A1L	English language 1-2	Z	0
A0B04A1Z	English language 1-1	Z	0
A0B04B2Z	English language B2-exam	Z,ZK	0
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
The course is designed for students who have completed the B2 English course. Its main objective is to prepare students for the study of selected specialized courses in English by covering a broader range of topics in engineering. In addition to teaching materials aimed at expanding technical vocabulary and consolidating current language skills, the focus is on authentic articles adapted from professional journals and accompanying videos. The syllabus also leaves space for students' presentations covering various fields of science.			
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
A0B16ET1	Ethic	KZ	4
Aim of this subject is to provide the students an orientation not only in general problems of ethics but above all to offer instructions for solving various situations of human life. Essential parts of the subject are discussions in which students can react to lectures but also to actual questions coming with news and look for the communal answers.			
A0B16F11	Philosophy I	KZ	4
We deal with the most important persons, schools and ideas of ancient philosophy. We are concerned especially on transdisciplinary nature of philosophy and connection of old philosophical thoughts with recent problems of science, technology, economics and politics.			
A0B16FIL	Philosophy	ZK	2
A0B16HI1	History I	KZ	4
The main purpose of this subject is to provide a historical overview and explanation of rises and developments of mass movements and totalitarian states in 20th century. The course is based on political and econom-social history with attention to philosophic and psychologic connections.			
A0B16HTE	History of technology and economic	ZK	2
A0B16MPL	Management psychology	ZK	2
Psychology of personality, psychology of work and organization. Psychology in human resources management. The manager, his role and competencies. Motivation and engagement. Skills development. Communication and conflict resolution. Work group and team, conducting meetings. Time management and delegation. Dealing with stress and emotions. Company culture and organizational change.			
A0B16MPS	Psychology	Z,ZK	4
A7B01MCS	Mathematics for Computer Science	Z,ZK	6
A7B04A2Z	English Language 2-1	Z	0
A7B16EPD	Business Economics	KZ	5
Legal forms of businesses. Assets and capital of the company. Fundamentals of the management of the firm. Short-term and long-term financing. Basic accounting principles. Accounting statements and their structure. Financial analysis indicators. Decision-making, investment effectiveness. Fundamentals of management, organisational structures. Tax system in CR with a focus to income tax. Financial markets. Subject is the introduction to various disciplines in management of the firm.			
A7B32KBE	Ciphers and information security	Z,ZK	6
The orientation of this course reflects the increasing importance of information security. The course involves the essential mathematical theory and presents contemporary algorithms and applications of cryptography. Both symmetrical and asymmetrical cryptographic systems are mentioned.			

A7B36DBS	<b>Databases</b>	Z,ZK	6
Bulk data processing, DBMS concepts and architecture; conceptual data models, E-R model; database models, network, hierarchical, relational and object-relational model; relational algebra, formal query language; relational database design, functional dependencies, normalization, design algorithms; mapping E-R concepts to the database models; query language SQL, DDL, DML, integrity constraints; transaction, error recovery, parallel access, data security, client-server architecture; physical level data view.			
A7B36DSA	<b>Data Structures and Algorithms</b>	Z,ZK	6
A7B36PJC	<b>Programming in the C++ Language</b>	Z,ZK	6
Basic course of programming in the C and C++ languages. Students are expected to know how to write simple programs (in Java programming language) and have a basic knowledge of object modelling. They get acquainted with data types in C++, object oriented means, overloading, and with the other features of the C++ language.			
A7B36PRO	<b>Semestral Project</b>	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.			
A7B36PSI	<b>Computer Networks</b>	Z,ZK	6
The course is aimed at computer network architectures, technologies, and methods that enable interconnection of different networks into a single unified system - the Internet. Seminars and laboratories are oriented on network programming and configuration.			
A7B36SI2	<b>Management of SW Projects</b>	Z,ZK	5
The course aims on problems of large SW products with focus on design and management such a SW.			
A7B36SIN	<b>Software Engineering</b>	Z,ZK	6
The basic course in software engineering. Methods of structured and object-oriented analysis and design. Known techniques and tools. Software project life cycle, organizational aspects, management of a project. Formal and informal specifications, graphical techniques for data, process, and dynamic analysis. Small software projects are solved in groups as an exercise.			
A7B36VYD	<b>Data Mining</b>	Z,ZK	5
A7B36XML	<b>XML Technology</b>	Z,ZK	6
Overview of basic principles, formats and tools for XML technology. The structure of XML, the schema defined in DTD or XML Schema language. Representation of XML data and documents, DOM and SAX. XPath and XQuery language. XML databases and their relationship to other database management systems.			
A7B39GRT	<b>Graphical Design</b>	KZ	5
The course grants an overview of graphical design and typography. It includes also a practical training in creating graphical design of electronic documents and hand drawing.			
A7B39PRO	<b>Semester Project</b>	KZ	6
A7B39WPA	<b>Web Enterprise Applications</b>	Z,ZK	6
The aim of the course is to get practical skills with implementation of web applications based on application servers technology, next to get overview knowledge of modern web concepts.			
ABAP20	<b>Bachelor thesis</b>	Z	20
AE0B04C0	<b>Czech Language 0</b>	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.			

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

Generated: day 30. 10. 2020, time 06:24.