

Study plan

Name of study plan: Software Technologies

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Biomedical and Clinical Informatics

Type of study: Follow-up master full-time

Required credits: 120

Elective courses credits: 0

Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses

Minimal number of credits of the block: 120

The role of the block: Z

Code of the group: F7SWT POV 18

Name of the group: Software Technologies compulsory course

Requirement credits in the group: In this group you have to gain 120 credits

Requirement courses in the group: In this group you have to complete 26 courses

Credits in the group: 120

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
F7PMIARVD	Analysis and Recognition of Multidimensional Data Olga Št pánková Olga Št pánková Olga Št pánková (Gar.)	Z,ZK	4	2P+2C	L	z
F7PMIAS1	Signal Analysis I. Jan Hejda, Michal Huptych, Václav Gerla, Jan Kauler Jan Kauler Václav Gerla (Gar.)	Z,ZK	4	2P+2C	Z	z
F7PMIAS2	Signal Analysis II. Jan Hejda, Michal Huptych, Václav Gerla, Kamila Lepková Jan Hejda	Z,ZK	4	2P+2C	L	z
17BOZP	Occupational Safety and Health, Fire Protection and First Aid Petr Kudrna Petr Kudrna Petr Kudrna (Gar.)	Z	0	1P	Z	z
F7PMIBMD-S	Safety at Work with Biomedical Dates Martin Stan k, Anna Hor áková, Karel Hána, David Jirsa Anna Hor áková Anna Hor áková (Gar.)	KZ	5	1P+2C	L	z
F7PMIBD	Big Data Lenka Lhotská, Ond ej Klempí , Bohuslav Dvorský Lenka Lhotská Lenka Lhotská (Gar.)	Z,ZK	4	2P+2C	Z	z
F7PMIBSB	Biological Signals and Biometrics Jan Kauler, Lenka Lhotská, Vladimír Kraj a Jan Kauler Vladimír Kraj a (Gar.)	Z,ZK	2	1P+1C	L	z
F7PMIBLGC-S	Human Biology David Mack David Mack David Mack (Gar.)	ZK	2	2P	Z	z
F7PMIBST	Biostatistics Vojt ch Kamenský, Aleš Tichopád Vojt ch Kamenský Aleš Tichopád (Gar.)	Z,ZK	4	2P+2C	Z	z
F7PMIDWT	Database and Web Technologies Jan Hejda, Bohuslav Dvorský Bohuslav Dvorský Bohuslav Dvorský (Gar.)	Z,ZK	4	2P+2C	L	z
F7PMIDP1	Diploma Thesis I. Ond ej Klempí , Zoltán Szabó, Vladimíra Petr áková, Petr Písa ík, Pavel Smr ka, Radím Krupí ka, Ond ej Fišer, Václav Petr ák, Martin Ot áhal, Radím Krupí ka Zoltán Szabó (Gar.)	KZ	8	2S	Z	z
F7PMIDP2	Diploma Thesis II. Ond ej Klempí , Zoltán Szabó, Vladimíra Petr áková, Petr Písa ík, Pavel Smr ka, Radím Krupí ka, Ond ej Fišer, Václav Petr ák, Martin Ot áhal Zoltán Szabó Zoltán Szabó (Gar.)	Z	14	2S	L	z
F7PMIELD-S	Electronic Medical Record and Medical Documentation Michal Huptych, Anna Hor áková, Lenka Lhotská Anna Hor áková Lenka Lhotská (Gar.)	Z,ZK	2	1P+1C	L	z

F7PMIIMA-S	Image Analysis Zoltán Szabó, Václav Hlavá , Tereza Hubená Zoltán Szabó Václav Hlavá (Gar.)	Z,ZK	6	2P+2C	Z	z
F7PMILEG	Legislation and Safety of Biomedical Software and Data Lenka Lhotská, Dagmar Brechlerová Dagmar Brechlerová Dagmar Brechlerová (Gar.)	ZK	2	2P	Z	z
F7PMINUR	Design of User Interfaces Zden k Míkovec Zden k Míkovec Zden k Míkovec (Gar.)	Z,ZK	2	1P+1C	Z	z
F7PMIOOP	Object-Oriented Programming Radim Krupi ka, Ond ej Dvorský Radim Krupi ka Radim Krupi ka (Gar.)	Z,ZK	3	1P+2C	Z	z
F7PMIPSMB-S	Computer Simulation, Modelling and Chemo/Bioinformatics Ond ej Klempí , Arnošt Mládek Arnošt Mládek	Z,ZK	6	2P+2C	L	z
F7PMIPAZ	Advanced Algorithms Pavel Smr ka, Jan Broulím Pavel Smr ka Pavel Smr ka (Gar.)	Z,ZK	5	2P+2C	Z	z
F7PMIRAST	Robotics and Assistive Technology Jan Kauler, Václav Hlavá Jan Kauler	Z,ZK	5	2P+2C	L	z
F7PMIRPJ1	Year Project I. Zoltán Szabó, Petr Písa ík, Radim Krupi ka, Václav Petrák, Martin Bejtíc, Jaroslav Tint ra Radim Krupi ka Radim Krupi ka (Gar.)	KZ	8	2S	Z	z
F7PMIRPJ2	Year Project II. Vladimíra Petráková, Petr Písa ík, Pavel Smr ka, Radim Krupi ka, Ond ej Fišer, Václav Petrák, Martin Otáhal, Jan Broulím, Martin Bejtíc, Zoltán Szabó	KZ	8	2S	L	z
F7PMISKJ	Scripting Languages Ond ej Klempí Radim Krupi ka Radim Krupi ka (Gar.)	KZ	2	2C	Z	z
F7PMISWI-S	Software Engineering Jan Mužík, Dominik Fiala, Pavel Trnka Jan Mužík Jan Mužík (Gar.)	Z,ZK	6	2P+2C	Z	z
F7PMITBA-S	Biomedical Application Development Radim Krupi ka, Tomáš Kraj a Radim Krupi ka Radim Krupi ka (Gar.)	Z,ZK	6	1P+3C	L	z
F7PMIUMIT	Artificial Intelligence Olga Št pánková, Milan N mý, Martin Macaš Martin Macaš Olga Št pánková (Gar.)	Z,ZK	4	2P+2C	Z	z

Characteristics of the courses of this group of Study Plan: Code=F7SWT POV 18 Name=Software Technologies compulsory course

F7PMIARVD	Analysis and Recognition of Multidimensional Data	Z,ZK	4
F7PMIAS1	Signal Analysis I.	Z,ZK	4
F7PMIAS2	Signal Analysis II.	Z,ZK	4
17BOZP	Occupational Safety and Health, Fire Protection and First Aid	Z	0
F7PMIBMD-S	Safety at Work with Biomedical Dates	KZ	5
F7PMIBD	Big Data	Z,ZK	4
F7PMIBSB	Biological Signals and Biometrics	Z,ZK	2
F7PMIBLGC-S	Human Biology	ZK	2
F7PMIBST	Biostatistics	Z,ZK	4
F7PMIDWT	Database and Web Technologies	Z,ZK	4
F7PMIDP1	Diploma Thesis I.	KZ	8
F7PMIDP2	Diploma Thesis II.	Z	14
F7PMIELD-S	Electronic Medical Record and Medical Documentation	Z,ZK	2
F7PMIIMA-S	Image Analysis	Z,ZK	6

The course aims to acquaint students with methods of image processing and analysis. The course is taught in English. The course will teach students how to process and analyze images on a computer. We will explain digital image processing methods where we do not have semantic knowledge about the image's content. We will also study image analysis procedures, where we can segment objects from the background according to semantics, describe them with features and recognize them. We will build on the student's knowledge of mathematical analysis, linear algebra, and signal theory.

F7PMILEG	Legislation and Safety of Biomedical Software and Data	ZK	2
F7PMINUR	Design of User Interfaces	Z,ZK	2
F7PMIOOP	Object-Oriented Programming	Z,ZK	3
F7PMIPSMB-S	Computer Simulation, Modelling and Chemo/Bioinformatics	Z,ZK	6
F7PMIPAZ	Advanced Algorithms	Z,ZK	5
F7PMIRAST	Robotics and Assistive Technology	Z,ZK	5
F7PMIRPJ1	Year Project I.	KZ	8
F7PMIRPJ2	Year Project II.	KZ	8
F7PMISKJ	Scripting Languages	KZ	2
F7PMISWI-S	Software Engineering	Z,ZK	6
F7PMITBA-S	Biomedical Application Development	Z,ZK	6
F7PMIUMIT	Artificial Intelligence	Z,ZK	4

List of courses of this pass:

Code	Name of the course	Completion	Credits
17BOZP	Occupational Safety and Health, Fire Protection and First Aid	Z	0
F7PMIARVD	Analysis and Recognition of Multidimensional Data	Z,ZK	4
F7PMIAS1	Signal Analysis I.	Z,ZK	4
F7PMIAS2	Signal Analysis II.	Z,ZK	4
F7PMIBD	Big Data	Z,ZK	4
F7PMIBLGC-S	Human Biology	ZK	2
F7PMIBMD-S	Safety at Work with Biomedical Dates	KZ	5
F7PMIBSB	Biological Signals and Biometrics	Z,ZK	2
F7PMIBST	Biostatistics	Z,ZK	4
F7PMIDP1	Diploma Thesis I.	KZ	8
F7PMIDP2	Diploma Thesis II.	Z	14
F7PMIDWT	Database and Web Technologies	Z,ZK	4
F7PMIELD-S	Electronic Medical Record and Medical Documentation	Z,ZK	2
F7PMIIMA-S	Image Analysis	Z,ZK	6
<p>The course aims to acquaint students with methods of image processing and analysis. The course is taught in English. The course will teach students how to process and analyze images on a computer. We will explain digital image processing methods where we do not have semantic knowledge about the image's content. We will also study image analysis procedures, where we can segment objects from the background according to semantics, describe them with features and recognize them. We will build on the student's knowledge of mathematical analysis, linear algebra, and signal theory.</p>			
F7PMILEG	Legislation and Safety of Biomedical Software and Data	ZK	2
F7PMINUR	Design of User Interfaces	Z,ZK	2
F7PMIOOP	Object-Oriented Programming	Z,ZK	3
F7PMIPAZ	Advanced Algorithms	Z,ZK	5
F7PMIPSMB-S	Computer Simulation, Modelling and Chemo/Bioinformatics	Z,ZK	6
F7PMIRAST	Robotics and Assistive Technology	Z,ZK	5
F7PMIRPJ1	Year Project I.	KZ	8
F7PMIRPJ2	Year Project II.	KZ	8
F7PMISKJ	Scripting Languages	KZ	2
F7PMISWI-S	Software Engineering	Z,ZK	6
F7PMITBA-S	Biomedical Application Development	Z,ZK	6
F7PMIUMIT	Artificial Intelligence	Z,ZK	4

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

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