Study plan

Name of study plan: Open Informatics - Data Science

Faculty/Institute/Others: Faculty of Electrical Engineering Department: Branch of study guaranteed by the department: Welcome page Garantor of the study branch: Program of study: Open Informatics Type of study: Follow-up master full-time Required credits: 85 Elective courses credits: 35 Sum of credits in the plan: 120 Note on the plan:

Name of the block: Compulsory courses in the program Minimal number of credits of the block: 49 The role of the block: P

Code of the group: 2018_MOIDIP Name of the group: Diploma Thesis Requirement credits in the group: In this group you have to gain 25 credits Requirement courses in the group: In this group you have to complete 1 course Credits in the group: 25 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
BDIP25	Diploma Thesis	Z	25	22s	L	Р

Characteristics of the courses of this group of Study Plan: Code=2018_MOIDIP Name=Diploma Thesis

enalaetenietiee ei						
BDIP25	Diploma Thesis	Z	25			
Independent final comp	Independent final comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or her branch of study, which will					
be specified by branch	department or branch departments. The diploma thesis will be defended in front of the board of examiners for the compreher	sive final examination	ation.			

Code of the group: 2018_MOIP

Name of the group: Compulsory subjects of the programm Requirement credits in the group: In this group you have to gain 24 credits Requirement courses in the group: In this group you have to complete 4 courses Credits in the group: 24 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
B4M35KO	Combinatorial Optimization Zden k Hanzálek Zden k Hanzálek (Gar.)	Z,ZK	6	3P+2C	L	Ρ
B4M33PAL	Advanced algorithms Marko Genyk-Berezovskyj, Daniel Pr ša, Ond ej Drbohlav Daniel Pr ša Daniel Pr ša (Gar.)	Z,ZK	6	2P+2C	z	Ρ
B4MSVP	Software or Research Project Ivan Jelínek, Jaroslav Sloup, Ji í Šebek, Martin Šipoš, Drahomíra Hejtmanová, Jana Zichová, Petr Pošík, Martin Hlinovský, Katarína Žmolíková, Ivan Jelínek Ivan Jelínek (Gar.)	κz	6		Z,L	Ρ
B4M01TAL	Theory of Algorithms Marie Demlová, Natalie Žukovec Marie Demlová Marie Demlová (Gar.)	Z,ZK	6	3P+2S	L	Р

Characteristics of the courses of this group of Study Plan: Code=2018_MOIP Name=Compulsory subjects of the programm

The goal is to show the prol the courses on linear algeb algorithms and state space	ombinatorial Optimization blems and algorithms of combinatorial optimization (often called discrete optimization; th rra, graph theory, and basics of optimization, we show optimization techniques based or search methods. We focus on application of optimization in stores, ground transportation res, message routing, scheduling in parallel computers.	n graphs, integer I	inear progra	e term oper mming, heu	iristics, appro	kimation
	dvanced algorithms I graph representation. Combinatorial algorithms. Application of formal languages theory	/ in computer scie	ence - patter		Z,ZK	6
	oftware or Research Project		nee pater		KZ	6
	heory of Algorithms			Z	Z,ZK	6
of algorithms. Further it is c	cal background of the theory of algorithms with the focus at first on the time and space of lealt with the theory of complexity; the classes P, NP, NP-complete, PSPACE and NPSP, the classes RP and ZZP introduced.					
	ck: Compulsory courses of the specialization of credits of the block: 36 lock: PO					
Code of the grou	ıp: 2018_MOIPO9					
•	up: Compulsory subjects of the branch					
•	edits in the group: In this group you have to gain 36	credits				
	urses in the group: In this group you have to comple		202			
•			563			
Credits in the gro	•					
Note on the grou		r	1	[1	[
	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their			•		_ .
Code	members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
B4M36DS2	Database Systems II Yuliia Prokop Yuliia Prokop Yuliia Prokop (Gar.)	Z,ZK	6	2P+2C	Z	PO
B4M36OSW	Ontologies and Semantic Web Petr K emen, Michal Med Petr K emen Petr K emen (Gar.)	Z,ZK	6	2P+2C	Z	PO
BE4M33SSU	Statistical Machine Learning Jan Drchal, Vojt ch Franc Vojt ch Franc Vojt ch Franc (Gar.)	Z,ZK	6	2P+2C	Z	PO
B4M36SAN	Statistical Data Analysis Ji í Kléma Ji í Kléma Ji í Kléma (Gar.)	Z,ZK	6	2P+2C	Z	PO
B4M36SMU	Symbolic Machine Learning Filip Železný, Ond ej Kuželka, Gustav Šír Ond ej Kuželka Ond ej Kuželka (Gar.)	Z,ZK	6	2P+2C	L	PO
B4M39VIZ	Visualization Ladislav molík Ladislav molík (Gar.)	Z,ZK	6	2P+2C	L	PO
Characteristics of th	e courses of this group of Study Plan: Code=2018_MOIPO9 Nar	ne=Compuls	orv subi	ects of tl	ne branch	
	atabase Systems II	•	, ,	_	Z,ZK	6
	v trends in database systems to students. We will focus primarily on the current issues of	0		•		•
processing of data. We will data files.	introduce a so-called basic types of NoSQL databases and also the related issue of clo	ud computing, da	ta storage a	nd distribute	ed computation	ns over large
B4M36OSW O	ntologies and Semantic Web			Z	Z,ZK	6
0	d Semantic Web" will guide students through current trends and technologies in the sen			0	0 1	0,
-	n a suitable formal language, querying them and creating semantic web applications on t I data and other selected topics.	heir top. The seco	nd part of th	e course wi	l be devoted to	o the efficient
	tatistical Machine Learning			Z	,ZK	6
	ine learning is to develop systems (models and algorithms) for learning to solve tasks gi	ven a set of exan	nples and so	1	, ,	it the task.
	in speech and image recognition. The course has the following two main objectives 1. to					
how they can be learned by	tion and Bayesian learning including their theoretical aspects, 2. to consider important s / those concepts.	date-or-the-art mo		ssincation a	nd regression	and to show
· · ·	tatistical Data Analysis			Z	Z,ZK	6
	kills developed in introductory statistics courses. It is practically oriented and gives an intr			It mainly air	ns at multivaria	
analysis and modelling, i.e. machine learning and data	, the methods that help to understand, interpret, visualize and model potentially high-dia	mensional data. It	can be see	n as a pure	y statistical co	ounterpart to
	ymbolic Machine Learning			7	Z,ZK	6
	r parts. The first part of the course will explain methods through which an intelligent age	nt can learn by in	teracting wit			
-	s will include deep reinforcement learning. The second part focuses on Bayesian networ				-	
	ttural language learning, starting from the basics and ending with state-of-the-art archite to from the computational learning theory, including the online and batch learning setting		anstormer. F	inally, the la	ast part will pro	ovide an
	isualization	<i></i>		Z	Z,ZK	6
In this course, you will get t	he knowledge of theoretical background for visualization and the application of visualization		-	The visualiz	ation methods	
	ower of computer technologies and the characteristics (and limits) of human perception. hat are not evident at the first glance. This in turn enables a more precise analysis of the				•	
problem represented by the			a acepei li			Partiouidi

Code of the group: 2018_MOIH Name of the group: Humanities subjects 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
B0M16FIL	Peter Zamarovský Peter Zamarovský Peter Zamarovský (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16HVT	History of science and technology 2 Marcela Efmertová, Jan Mikeš Marcela Efmertová Marcela Efmertová (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16HSD1	History of economy and social studies Marcela Efmertová	Z,ZK	5	2P+2S	Z,L	V
B0M16PSM	Psychology Jan Fiala Jan Fiala Jan Fiala (Gar.)	Z,ZK	5	2P+2S	Z,L	V
B0M16TEO	Theology Vladimír Sláme ka Vladimír Sláme ka Vladimír Sláme ka (Gar.)	Z,ZK	5	2P+2S	Z,L	V

Characteristics of the courses of this group of Study Plan: Code=2018_MOIH Name=Humanities subjects

	Z,ZK	5
History of science and technology 2	Z,ZK	5
rical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stir	nulate students' interest in t	the history and
while highlighting the developments in technical education and professional organizations, the process of shaping s	cientific life and the influence	ce of technical
History of economy and social studies	Z,ZK	5
he history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representatio	n, its aims and achieved res	sults as well as
evelopment and coexistence of the various ethnical groups in the Czech countries.		
Psychology	Z,ZK	5
Theology	Z,ZK	5
students the basic orientation in christian theology and requires no special previous education. After short philosoph	nic lecture the basic theolog	gic disciplines
	l to ones who want to get kn	ow Christianity
	brical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stir while highlighting the developments in technical education and professional organizations, the process of shaping s History of economy and social studies the history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representatio levelopment and coexistence of the various ethnical groups in the Czech countries. Psychology Theology o students the basic orientation in christian theology and requires no special previous education. After short philosoph	History of science and technology 2 Z,ZK brical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate students' interest in the will highlighting the developments in technical education and professional organizations, the process of shaping scientific life and the influence History of economy and social studies Z,ZK the history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representation, its aims and achieved restevelopment and coexistence of the various ethnical groups in the Czech countries. Z,ZK Psychology Z,ZK o students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture the basic theologue/ubject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who want to get known.

Code of the group: MTV

Name of the group: Physical education

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
TVV	Physical education	Z	0	0+2	Z,L	V
TV-V1	Physical education	Z	1	0+2	Z,L	V
TVV0	Physical education	Z	0	0+2	Z,L	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V
TVKLV	Physical Education Course	Z	0	7dní	L	V

Characteristics of the courses of this group of Study Plan: Code=MTV Name=Physical education

TVV	Physical education	Z	0
TV-V1	Physical education	Z	1
TVV0	Physical education	Z	0
TVKZV	Physical Education Course	Z	0
TVKLV	Physical Education Course	Z	0

Code of the group: 2018_MOIVOL

~The offer of elective courses arranged by departments can be found on the website https://fel.cvut.cz/en/education/volitelne-predmety.html\\

List of courses of this pass:

	Name of the course	Completion	Credits
B0M16FIL		Z,ZK	5
B0M16HSD1	History of economy and social studies	Z,ZK	5
This subject deals	with the history of the Czech society in the 19th - 21th centuries. It follows the forming of the Czech political representation, its aims ar the social and cultural development and coexistence of the various ethnical groups in the Czech countries.	nd achieved result	s as well as
B0M16HVT		Z,ZK	5
	History of science and technology 2		
-	bject, while highlighting the developments in technical education and professional organizations, the process of shaping scientific life a engineers		-
B0M16PSM	Psychology	Z,ZK	5
B0M16TEO	Theology	Z,ZK	5
This subject provi	des to students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture th	ne basic theologic	disciplines
are gone through.	The subject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who - religion from which graws our civilization up.	o want to get know	Christianit
B4M01TAL	Theory of Algorithms	Z,ZK	6
The course brings	theoretical background of the theory of algorithms with the focus at first on the time and space complexity of algorithms and problems	, secondly on the	correctness
of algorithms. Fur	ther it is dealt with the theory of complexity; the classes P, NP, NP-complete, PSPACE and NPSPACE are treated and properties of the	em investigated. P	robabilistic
	algorithms are studied and the classes RP and ZZP introduced.		
B4M33PAL	Advanced algorithms	Z,ZK	6
Basic	graph algorithms and graph representation. Combinatorial algorithms. Application of formal languages theory in computer science - p	attern matching.	
B4M35KO	Combinatorial Optimization	Z,ZK	6
-	v the problems and algorithms of combinatorial optimization (often called discrete optimization; there is a strong overlap with the term op		
	inear algebra, graph theory, and basics of optimization, we show optimization techniques based on graphs, integer linear programming		
algorithms and s	state space search methods. We focus on application of optimization in stores, ground transportation, flight transportation, logistics, pla	anning of human re	esources,
D (1400D 00	scheduling in production lines, message routing, scheduling in parallel computers.		
B4M36DS2	Database Systems II	Z,ZK	6
	duce new trends in database systems to students. We will focus primarily on the current issues of Big Data and the associated probler . We will introduce a so-called basic types of NoSQL databases and also the related issue of cloud computing, data storage and distrib		-
processing of data		buted computation	s over large
	data tiles		0
B4M36OSW/	data files. Ontologies and Semantic Web	7 7K	
B4M36OSW	Ontologies and Semantic Web	Z,ZK	6
The course "Onto	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de	esigning complex	6 ontologies,
The course "Onto	Ontologies and Semantic Web	esigning complex	6 ontologies,
The course "Onto thesauri, formalizir	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ing them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics.	esigning complex	6 ontologies,
The course "Onto thesauri, formalizir B4M36SAN	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ng them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course	esigning complex will be devoted to Z,ZK	6 ontologies, the efficien 6
The course "Onto thesauri, formalizin B4M36SAN This course builds	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn do ng them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis	esigning complex will be devoted to Z,ZK aims at multivaria	6 ontologies, the efficien 6 te statistica
The course "Onto thesauri, formalizin B4M36SAN This course builds	Ontologies and Semantic Web logies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ing them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly	esigning complex will be devoted to Z,ZK aims at multivaria	6 ontologies, the efficien 6 te statistica
The course "Onto thesauri, formalizin B4M36SAN This course builds	Ontologies and Semantic Web logies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ing them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a po	esigning complex will be devoted to Z,ZK aims at multivaria	6 ontologies, the efficien 6 te statistica
The course "Onto thesauri, formalizir B4M36SAN This course builds analysis and mode B4M36SMU This course con	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ag them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a prachine learning and data mining courses. Symbolic Machine Learning sists of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its e	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical co Z,ZK environment, also l	6 ontologies, the efficien 6 te statistica unterpart to 6 known as
The course "Onto thesauri, formalizin B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ag them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a present machine learning and data mining courses. Symbolic Machine Learning sists of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its examing. This will include deep reinforcement learning. The second part focuses on Bayesian networks, specifically methods for inference	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical co Z,ZK environment, also b ce. The third part	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover
The course "Onto thesauri, formalizin B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn de ag them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a present machine learning and data mining courses. Symbolic Machine Learning sists of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its examing. This will include deep reinforcement learning. The second part focuses on Bayesian networks, specifically methods for inferencies from natural language learning, starting from the basics and ending with state-of-the-art architectures such as transformer. Finally,	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical co Z,ZK environment, also b ce. The third part	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover
The course "Onto thesauri, formalizir B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le fundamental top	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn do ng them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis Introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a present in the learning and data mining courses. Symbolic Machine Learning Ists of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its earning. This will include deep reinforcement learning. The second part focuses on Bayesian networks, specifically methods for inferencies from natural language learning, starting from the basics and ending with state-of-the-art architectures such as transformer. Finally, introduction to several topics from the computational learning theory, including the online and batch learning settings.	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical con Z,ZK environment, also I ce. The third part will p the last part will p	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover rovide an
The course "Onto thesauri, formalizin B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le fundamental top B4M39VIZ	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn do ng them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis Introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a present of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its esarning. This will include deep reinforcement learning. The second part focuses on Bayesian networks, specifically methods for inferencies from natural language learning, starting from the basics and ending with state-of-the-art architectures such as transformer. Finally, introduction to several topics from the computational learning theory, including the online and batch learning settings.	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical con Z,ZK environment, also b ce. The third part the last part will p Z,ZK	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover rovide an 6
The course "Onto thesauri, formalizin B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le fundamental top B4M39VIZ In this course, you	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn do ng them in a suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis Introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a present of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its esarning. This will include deep reinforcement learning. The second part focuses on Bayesian networks, specifically methods for inferencies from natural language learning, starting from the basics and ending with state-of-the-art architectures such as transformer. Finally, introduction to several topics from the computational learning theory, including the online and batch learning settings. Visualization Usualization	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical con Z,ZK environment, also b ce. The third part the last part will p Z,ZK alization methods	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover rovide an 6 are aimed
The course "Onto thesauri, formalizin B4M36SAN This course builds analysis and mode B4M36SMU This course con reinforcement le fundamental top B4M39VIZ In this course, you at exploiting bo	Ontologies and Semantic Web logies and Semantic Web" will guide students through current trends and technologies in the semantic web field. Students will learn do the generation of the suitable formal language, querying them and creating semantic web applications on their top. The second part of the course management of ontological data and other selected topics. Statistical Data Analysis Image: Statistical Data Analysis on the skills developed in introductory statistics courses. It is practically oriented and gives an introduction to applied statistics. It mainly elling, i.e., the methods that help to understand, interpret, visualize and model potentially high-dimensional data. It can be seen as a premachine learning and data mining courses. Symbolic Machine Learning Symbolic Machine Learning sists of four parts. The first part of the course will explain methods through which an intelligent agent can learn by interacting with its estimation to several topics from the basics and ending with state-of-the-art architectures such as transformer. Finally, introduction to several topics from the computational learning theory, including the online and batch learning settings. Visualization Visualization u will get the knowledge of theoretical background for visualization and the application of visualization in real-world examples. The visu th the full power of computer technologies and the characteristics (and limits) of human perception. Well-chosen visualization methods	esigning complex will be devoted to Z,ZK aims at multivaria urely statistical con Z,ZK environment, also b ce. The third part the last part will p Z,ZK alization methods s can help to revea	6 ontologies, the efficien 6 te statistica unterpart to 6 known as will cover rovide an 6 are aimed al hidden
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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 <u>http://bilakniha.cvut.cz/en/f3.html</u> Generated: day 2025-07-21, time 09:26.