

Recommended pass through the study plan

Name of the pass: Information and Communication Technologies 20/21, 21/22, 22/23

Faculty/Institute/Others:

Department:

Pass through the study plan: Information and Communication Technologies

Branch of study guaranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Informatics and Cybernetics in Health Care

Type of study: Bachelor full-time

Note on the pass: Informaci o p edepsaném minimálním po tu PV p edm t pro konkrétní jednotlivé semestry najdete v odpovídajícím studijním plánu specializace.

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: 1

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
F7PBKALP	Algorithmization and Programming Pavel Smr ka, Tomáš Funda, Tomáš Veselý, Lenka Hanáková Tomáš Funda Pavel Smr ka (Gar.)	Z,ZK	6	2P+2C	Z	z
F7PBKAJ1	English I. Eva Maxová, Eva Moty ková Eva Moty ková Eva Moty ková (Gar.)	KZ	2	2S	Z	z
17BOZP	Occupational Safety and Health, Fire Protection and First Aid Petr Kudrna Petr Kudrna Petr Kudrna (Gar.)	Z	0	1P	Z	z
F7PBKKT	Communication Technology Tomáš Funda, Tomáš Veselý, Karel Hána, Martin Vít zník, Markéta Janatová, Aneta Buchtelová, Kate ina Pilátová Tomáš Funda Karel Hána (Gar.)	Z,ZK	3	1P+1C	Z	z
F7PBKLAD	Linear Algebra and Differential Calculus Ji í Neustupa, Jana Urzová Jana Urzová Eva Feuerstein (Gar.)	Z,ZK	6	2P+4C	Z	z
F7PBKLG	Logic Dagmar Brechlerová Dagmar Brechlerová Dagmar Brechlerová (Gar.)	Z,ZK	5	2P+2C	Z	z
F7PBKMAZ	Management and Administration in Health Care Ji í erný Ji í erný Ji í erný (Gar.)	KZ	1	1P	Z	z
F7PBKPND	Presentation Tools and Skills Christiane Malá, Tomáš Kraj a Christiane Malá Christiane Malá (Gar.)	KZ	2	1P+1C	Z	z
F7PBKPR1	Project I. Pavel Smr ka, Karel Hána, Dagmar Brechlerová, Christiane Malá, Tomáš Kraj a, Ond ej Klempí , Radim Kliment, Vít Janovský Karel Hána Karel Hána (Gar.)	KZ	5	1S	Z	z

Number of semester: 2

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
F7PBKAJ2	English II. Eva Maxová	KZ	2	2S	L	z
F7PBKDDS	Data and Data Structures Radim Krupí ka, Jan Kauler Radim Krupí ka Radim Krupí ka (Gar.)	Z,ZK	5	2P+2C	L	z
F7PBKITP	Integral Calculus Eva Feuerstein, Petr Maršálek, Tomáš Parkman Tomáš Parkman Eva Feuerstein (Gar.)	Z,ZK	6	2P+4C	L	z
F7PBKML	Matlab Michal Reimer	KZ	3	2C	L	z
F7PBKOS	Operating Systems Jan Mužík, David Gillar, Dominik Fiala Jan Mužík Jan Mužík (Gar.)	Z,ZK	4	1P+2C	L	z
F7PBKPPP	Programming Tools Pavel Smr ka, Radim Kliment, Michaela Gaea olakovová Pavel Smr ka Pavel Smr ka (Gar.)	KZ	2	2C	L	z

F7PBKPR2	Project II. Pavel Smr ka, Karel Hána, Dagmar Brechlerová, Christiane Malá, Radim Kliment, Jan Kauler, Jan Mužík Karel Hána Karel Hána (Gar.)	KZ	5	1S	L	Z
F7PBKTVR	Telemedicine and Virtual Reality Pavel Smr ka, Karel Hána, Markéta Janatová, Radim Kliment, Vít Janovský, Jiří Brada Karel Hána Karel Hána (Gar.)	KZ	3	2C	L	Z

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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
F7PBKAJ3	English III. Eva Maxová Eva Maxová Eva Maxová (Gar.)	KZ	2	2S	Z	Z
F7PBKDS	Database Systems Michal Reimer Michal Reimer	Z,ZK	4	2P+2C	Z	Z
F7PBKISZ	Information Systems in Health Care Dagmar Brechlerová, Tomáš Kraj a, David Jirsa, Zoltán Szabó, Anna Hor áková, Petr Šmíd Anna Hor áková Zoltán Szabó (Gar.)	Z,ZK	4	2P+2C	Z	Z
F7PBKOOOP	Object Oriented Programming Tomáš Kraj a, Radim Krupi ka Radim Krupi ka Radim Krupi ka (Gar.)	Z,ZK	3	1P+2C	Z	Z
F7PBKPR3	Project II. Pavel Smr ka, Karel Hána, Dagmar Brechlerová, Christiane Malá, Tomáš Kraj a, Jan Mužík, Martin Bejtíc, Pavla Suchánková, Jan Kašpar, Karel Hána Karel Hána (Gar.)	KZ	5	1S	Z	Z
F7PBKUSS-C	Introduction to Systems and Signals Jan Kauler Jan Kauler Jan Kauler (Gar.)	Z,ZK	5	2P+2C	Z	Z
F7PBKZAT-C	Analogue Techniques Fundamentals Pavel Smr ka, Tomáš Funda, Tomáš Veselý, Karel Hána, Martin Vít zník Karel Hána Karel Hána (Gar.)	Z,ZK	5	2P+2C	Z	Z
F7PBKZTM1	Fundamentals of Theoretical Medicine I. Martina Dingová Šlíková Martina Dingová Šlíková Martina Dingová Šlíková (Gar.)	Z,ZK	2	2P	Z	Z

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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
F7PBKAZC-C	Biosignal Algorithms in C Language Pavel Smr ka	Z,ZK	5	2P+2C	L	Z
F7PBKAJ4	English IV. Eva Maxová Eva Moty ková Eva Moty ková (Gar.)	KZ	2	2S	L	Z
F7PBKPTD-C	Advanced Technologies in Diabetology Jan Mužík	KZ	3	2P	L	Z
F7PBKPR4	Project IV. Karel Hána, Dagmar Brechlerová, Christiane Malá, Michal Reimer, Jan Mužík, Martin Bejtíc, Pavla Suchánková, Jan Broulím, Patrik Pluhovský Karel Hána Karel Hána (Gar.)	KZ	5	1S	L	Z
F7PBKTWA	Web Application Development Tomáš Hr za David Jirsa	Z,ZK	3	1P+2C	L	Z
F7PBKZCT-C	Digital Technology Fundamentals Tomáš Funda	Z,ZK	6	2P+2C	L	Z
F7PBKZSI	Software Engineering Fundamentals Jan Mužík, David Gillar, Dominik Fiala Jan Mužík Jan Mužík (Gar.)	Z,ZK	4	2P+2C	L	Z
F7PBKZTM2	Fundamentals of Theoretical Medicine II. Ta ána Jarošíková, Jozef Rosina Ta ána Jarošíková Ta ána Jarošíková (Gar.)	ZK	2	2P	L	Z

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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
F7PBKBPD	Data Transmission and Processing Security Dagmar Brechlerová, Martin Stan k Martin Stan k Dagmar Brechlerová (Gar.)	Z,ZK	4	2P+2C	Z	Z
F7PBKMTB-C	Microprocessor Technology in Biomedicine Pavel Smr ka	KZ	5	1P+3C	Z	Z
F7PBKNVM-C	Design and Development of Mobile and Embedded Applications Radim Kliment	KZ	4	1P+2C	Z	Z

F7PBKPPN	Health Legislation and Standards <i>Vojt ch Kamenský, Ond ej Gajdoš, Peter Kneppo Vojt ch Kamenský Peter Kneppo (Gar.)</i>	KZ	2	1P+1C	Z	z
F7PBKPR5	Project V. <i>Pavel Smr ka, Tomáš Veselý, Karel Hána, Christiane Malá, Radim Krupi ka, Michal Reimer, Jan Mužík, Michaela Gaea olakovová Karel Hána Karel Hána (Gar.)</i>	KZ	6	1S	Z	z
F7PBKSF1	Software Engineering <i>Jan Mužík, Dominik Fiala, Pavel Trnka Jan Mužík Jan Mužík (Gar.)</i>	Z,ZK	4	2P+2C	Z	z
F7PBKUIE	Artificial Intelligence and Expert Systems <i>Radim Krupi ka Radim Krupi ka Radim Krupi ka (Gar.)</i>	Z,ZK	5	2P+2C	Z	z

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
F7PBKATR	Assistive Technology and Robotics in Medicine <i>Jan Kauler Jan Kauler Jan Kauler (Gar.)</i>	Z,ZK	5	2P+2C	L	z
F7PBKBP	Bachelor Thesis <i>Pavel Smr ka, Tomáš Veselý, Karel Hána, Christiane Malá, Radim Krupi ka, Michal Reimer, Jan Kašpar, Aleš Tichopád Karel Hána Karel Hána (Gar.)</i>	Z	12	2S	L	z
F7PBKEHT-C	E-Health and Telemedicine	Z,ZK	7	2P+4C	L	z
F7PBKPPN-C	Computer-aided design, development and production of electronic devices <i>Martin Vít zník</i>	KZ	3	2C	L	z
F7PBKSBP	Bachelor Thesis Seminar <i>Karel Hána, Christiane Malá, Radim Krupi ka Radim Krupi ka Radim Krupi ka (Gar.)</i>	Z	3	2S	L	z

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

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
F7PBKAJ1	English I.	KZ	2
F7PBKAJ2	English II.	KZ	2
F7PBKAJ3	English III.	KZ	2
F7PBKAJ4	English IV.	KZ	2
F7PBKALP	Algorithmization and Programming	Z,ZK	6
F7PBKATR	Assistive Technology and Robotics in Medicine	Z,ZK	5
F7PBKAZC-C	Biosignal Algorithms in C Language	Z,ZK	5
F7PBKBP	Bachelor Thesis	Z	12
F7PBKBPD	Data Transmission and Processing Security	Z,ZK	4
F7PBKDDS	Data and Data Structures	Z,ZK	5
F7PBKDS	Database Systems	Z,ZK	4
F7PBKEHT-C	E-Health and Telemedicine	Z,ZK	7
F7PBKISZ	Information Systems in Health Care	Z,ZK	4
F7PBKITP	Integral Calculus	Z,ZK	6
F7PBKKT	Communication Technology	Z,ZK	3
<p>Význam a praktické příklady nasazení informačních a komunikačních technologií ve zdravotnictví. Historie, základní struktura a rozdělení počítače, motherboard, sbírnice, BIOS, autotest, procesor, operační paměť, klasické a SSD pevné disky, paměťové karty, zvukové karty, grafické karty, monitory, klávesnice, myši, tiskárny a skenery, univerzální vstupní a výstupní porty (USB, USB-C, HDMI, DisplayPort, Thunderbolt, HDMI, S/PDIF), RS232 jako virtuální COM port a jeho použití v praxi, modemy, nejčastější sbírnice pro připojování periférií v mikroprocesorových systémech (IIC, SPI), nejčastější sbírnice pro komunikaci počítače a systém ve zdravotnictví, standardizace, operační systémy, mobilní platforma pro snímání, vyhodnocování a přenos dat, rozhraní Bluetooth, NFC, počítačové sítě, LAN, WAN, vrstvý referenční model OSI, základní technické prostředí LAN (Ethernet, WiFi a jejich praktická realizace), Internet - prohlížeče, používané standardy a jazyky, úvod do architektury TCP/IP, protokoly a adresování, propojování lokálních sítí, brány a směrovače, pojem „server“, architektura klient-server, nejčastěji používané protokoly síťové architektury TCP/IP: HTTP, FTP, DNS, DHCP, VPN.</p>			
F7PBKLAD	Linear Algebra and Differential Calculus	Z,ZK	6

F7PBKLG	Logic	Z,ZK	5
F7PBKMAZ	Management and Administration in Health Care	KZ	1
F7PBKML	Matlab	KZ	3
F7PBKMTB-C	Microprocessor Technology in Biomedicine	KZ	5
F7PBKNVM-C	Design and Development of Mobile and Embedded Applications	KZ	4
F7PBKOOOP	Object Oriented Programming	Z,ZK	3
F7PBKOS	Operating Systems	Z,ZK	4
F7PBKPN	Presentation Tools and Skills	KZ	2
F7PBKPPN	Health Legislation and Standards	KZ	2
F7PBKPPN-C	Computer-aided design, development and production of electronic devices	KZ	3
F7PBKPPP	Programming Tools	KZ	2
F7PBKPR1	Project I.	KZ	5
F7PBKPR2	Project II.	KZ	5
F7PBKPR3	Project II.	KZ	5
F7PBKPR4	Project IV.	KZ	5
F7PBKPR5	Project V.	KZ	6
F7PBKPTD-C	Advanced Technologies in Diabetology	KZ	3
F7PBKSBP	Bachelor Thesis Seminar	Z	3
F7PBKSFI	Software Engineering	Z,ZK	4
F7PBKTVR	Telemedicine and Virtual Reality	KZ	3
F7PBKTWA	Web Application Development	Z,ZK	3
F7PBKUIE	Artificial Intelligence and Expert Systems	Z,ZK	5
F7PBKUSS-C	Introduction to Systems and Signals	Z,ZK	5
F7PBKZAT-C	Analogue Techniques Fundamentals	Z,ZK	5
F7PBKZCT-C	Digital Technology Fundamentals	Z,ZK	6
F7PBKZSI	Software Engineering Fundamentals	Z,ZK	4
F7PBKZTM1	Fundamentals of Theoretical Medicine I.	Z,ZK	2
F7PBKZTM2	Fundamentals of Theoretical Medicine II.	ZK	2

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

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