Study plan

Name of study plan: Biomedical Engineering

Faculty/Institute/Others: Department: Branch of study guaranteed by the department: Welcome page Garantor of the study branch: Program of study: Biomedical Engineering 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: F7PMB POV 20 Name of the group: Biomedical Engineering 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 31 courses Credits in the group: 120 Note on the group:

Note on the gr		1		r	· · ·	
Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)				ļ	
F7PMBAM	Applied Mathematics Karel Roubík, Martin Rožánek, Ji í Hozman, Ond ej Fišer Ond ej Fišer Karel Roubík (Gar.)	КZ	4	2P+1C	z	Z
17BOZP	Occupational Safety and Health, Fire Protection and First Aid Petr Kudrna Petr Kudrna Petr Kudrna (Gar.)	Z	0	1P	Z	Z
F7PMBBSC	Biotransport Pavel Ku era, Jana Mat jková, Roman Mat jka Roman Mat jka Pavel Ku era (Gar.)	Z,ZK	5	2P+2L	Z	Z
F7PMBCZT	Certification of Medical Technology Peter Kneppo, Ond ej Gajdoš, Vojt ch Kamenský Vojt ch Kamenský Peter Kneppo (Gar.)	Z,ZK	3	1P+1C	Z	Z
F7PMBCZS	Digital Signal Processing Marek Piorecký, Jan Štrobl, Václava Piorecká Václava Piorecká Václava Piorecká (Gar.)	Z,ZK	5	2P+2C	Z	Z
F7PMBDAE	Product Design and Ergonomy in Health Care Václava Piorecká Václava Piorecká (Gar.)	Z	4	4C	L	Z
F7PMBDP	Diploma Thesis Martin Rožánek Martin Rožánek	Z	12	80ZP	L	Z
F7PMBDS1	Diploma Thesis Seminar I. Martin Rožánek, Ond ej Fišer Ond ej Fišer Martin Rožánek (Gar.)	Z	5	4S	Z	Z
F7PMBDS2	Diploma Thesis Seminar II. Martin Rožánek, Jakub Ráfl Martin Rožánek Martin Rožánek (Gar.)	Z	3	2S	L	Z
F7PMBEMEO	Electrotechnology and Modern Electronic Circuits Ji í Hozman, Roman Mat jka Ji í Hozman Ji í Hozman (Gar.)	Z,ZK	5	2P+2L	L	Z
F7PMBZAO	Image Processing and Analysis Marek Piorecký, Jan Štrobl, Václav Hlavá , Zoltán Szabó, Evgeniia Karnoub Zoltán Szabó Václav Hlavá (Gar.)	Z,ZK	5	2P+2C	z	Z
F7PMBKB	Clinical Biochemistry and Laboratory Diagnostic Methods Martina Turchichová Martina Turchichová (Gar.)	Z,ZK	5	2P+2L	L	Z
F7PMBKST	Quality, Reliability, Testing of Medical Devices Ji í Hozman, Peter Kneppo, Vojt ch Kamenský, Martina Homolková Vojt ch Kamenský Peter Kneppo (Gar.)	ZK	3	2P+1C	L	Z
F7PMBMTB	Fluid Mechanics in Biomedicine Karel Roubík, Václav Ort, Šimon Walzel Karel Roubík Karel Roubík (Gar.)	Z,ZK	5	2P+1C+1L	Z	Z
F7PMBMAR	Measurements and Control in Biomedicine Jana Mat jková, Roman Mat jka Roman Mat jka Peter Kneppo (Gar.)	Z,ZK	5	2P+2L	L	Z

Internation Milos Nesidadek, Josef Sou ek Tomáš Pokorný Miloš Nesidadek (Gar.) Z. I. K. S Zi H C Z <thz< th=""> <thz< th=""> Z</thz<></thz<>					1	[
International per Kaufma Per Kaufma (Sau) L <thl< th=""> L L L<td>F7PMBNPM</td><td>Nanotechnology for Medicine Miloš Nesládek, Josef Sou ek Tomáš Pokorný Miloš Nesládek (Gar.)</td><td>Z,ZK</td><td>3</td><td>2P+1C</td><td>L</td><td>Z</td></thl<>	F7PMBNPM	Nanotechnology for Medicine Miloš Nesládek, Josef Sou ek Tomáš Pokorný Miloš Nesládek (Gar.)	Z,ZK	3	2P+1C	L	Z
Internetion L <thl< th=""> <thl< td=""><td>F7PMBOP1</td><td></td><td>Z</td><td>2</td><td>2 XT</td><td>Z</td><td>Z</td></thl<></thl<>	F7PMBOP1		Z	2	2 XT	Z	Z
Prime Price Price <th< td=""><td>F7PMBOP2</td><td></td><td>Z</td><td>2</td><td>2XT</td><td>L</td><td>Z</td></th<>	F7PMBOP2		Z	2	2XT	L	Z
Financial Dial Price Acguated Medical Devices for Diagnocities (Sec.) R. R. S. In Price R. Z. R. R. S. In Price R. Z. F7PMBPTD Advanced Medical Devices for Diagnocities (Sec.) Z.XK 4 2P+1C Z. Z. F7PMBPTT Advanced Medical Devices for Transport Z.K 3 2P L Z. F7PMBPTT Advanced Medical Devices for Transport Z.K 3 2P L Z. F7PMBPTZ Advanced Methods of Analysis and Data Processing KZ 3 1P+1C L Z F7PMBPTZ Work with Information Sources and Research Methods(Gar.) Z 3 2S L Z F7PMBSPM Software for Mathematical Modeling Extra for Mathematical Modeling Z.ZK 5 2P+2C Z Z F7PMBSPM Software for Mathematical Modeling Extra for Mathematical Modeling Z.ZK 5 2P+2C Z Z F7PMBSPM Software for Mathematical Modeling Extra for Mathematical Modeling Z.ZK 5 2P+2C Z Z Z F7PMBSPM Software for Mathematical Modeling Extremodeling XK 3	F7PMBOP3	Internship III. Petr Kudrna Petr Kudrna Petr Kudrna (Gar.)	Z	2	2XT	Z	Z
FTPMBPTD Martin Rodanes, Park Kudma, Tomás D al Perk Kudma Martin Rodanek, ZLK 4 2P+1C Z 2 FTPMBPTT Advanced Medical Devices for Therapy Kudma Martin Rodanek, Tex Kudma ZK 3 2P L z FTPMBPTD Martin Rodanek, Park Kudma Martin Rodanek, Park Kudma Kudma ZK 3 2P L z FTPMBPMZD Martin Rodanek, Park Kudma Martin Rodanek, Park Kudma KKZ 3 1P+1C L z FTPMBPIZ Work with Information Sources and Research Methodology KZ 4 1P+2C Z z FTPMBSPB Semester Project Martin Rodanek (Gar) Z 3 2S L z FTPMBSPB Statistics for Biomedicine ZK 5 2P+2C Z z FTPMBSPB Statistics for Biomedicine ZK 3 2P L z FTPMBSPD Varia Adamoed, MI Perd ed. J I Perd ed. J I Rodane (Gar) ZK 3 2P Z z FTPMBSPD Varia Adamoed, MI Perd ed. J I Perd ed. J I Rodane (Gar) ZK 3 2P Z z	F7PMBPOD		KZ	3	1P+1C	L	Z
Ministry Martin Rozanok, Fort Kudma Petr Kudma Martin Rozanok (Gar.) Lit. D <thd< th=""> D <thd< th=""> D</thd<></thd<>	F7PMBPPTD	Martin Rožánek, Petr Kudrna, Tomáš Díž al Petr Kudrna Martin Rožánek	Z,ZK	4	2P+1C	Z	z
FTPMBPNZD Marek Ponecky, Machine America Survey, Vaciowa Ponecka Vaciowa KZ 3 1P+1C L Z FTPMBPIZ Work with Information Sources and Research Methodology KZ 4 1P+2C Z z FTPMBRP Semester Project Z 3 2S L z FTPMBSPMM Software for Mathematical Modeling Z.XK 5 2P+2C Z z FTPMBSPB Statistics for Biomedicine Biomotion I Biokup Bortoom J Biologica Survey Z/KK 5 2P+2C Z z FTPMBSPB Statistics for Biomedicine Biomotion I Biokup Bortoom J Biologica Survey Z/K 5 2P+2C Z z FTPMBTVZ Infrastructure and Architecture Infrastructure and Architecture Z/K 3 2P L z FTPMBTVZ Van Adamkod, Bion B ins Jan B izs V in Adamkod (Gar) Z 3 2P Z Z FTPMBTVZ Van Adamkod, Bion B ins Jan B izs V in Adamkod (Gar) Z 3 2P Z Z FTPMBTVZ Van Adamkod, Bion B ins Jan B izs V in Adamkod (Gar) Z 3 2C L Z FTPMBTVZ Vin Adamkod, Bion B ins Jan B izs V in Adamkod (Gar) Z 3 2C L </td <td>F7PMBPTT</td> <td>Advanced Medical Devices for Therapy Martin Rožánek, Petr Kudrna Petr Kudrna Martin Rožánek (Gar.)</td> <td>ZK</td> <td>3</td> <td>2P</td> <td>L</td> <td>Z</td>	F7PMBPTT	Advanced Medical Devices for Therapy Martin Rožánek, Petr Kudrna Petr Kudrna Martin Rožánek (Gar.)	ZK	3	2P	L	Z
Interval Kerrel Rouble, Jaskub Raft, Simon Wateri Jaskub Raft (Gar) Interval <	F7PMBPMZD	Marek Piorecký, Jan Štrobl, Václava Piorecká Václava Piorecká Václava	KZ	3	1P+1C	L	z
F7PMBRP Semester Project Mathem Rodarsk Kond & JF&er Martin Rodanka (Gar.) Z 3 2.8 L z F7PMBSPMM Software for Mathematical Modeling Barxitom J Biskup Bartolom	F7PMBPIZ	Work with Information Sources and Research Methodology Karel Roubík, Jakub Ráfi, Šimon Walzel Jakub Ráfi Jakub Ráfi (Gar.)	KZ	4	1P+2C	Z	Z
F7PMBSPMM Software for Mathematical Modeling Z.ZK 5 2P+2C Z Z F7PMBSPB Market Proceedy, and Standom / Biskup Barolom / Biskup (Gar.) Z,ZK 5 2P+2C Z Z F7PMBSPB Market Proceedy, and Standom / Biskup Barolom / Biskup (Gar.) Z,KK 5 2P+2C Z Z F7PMBSTVZ Technical Equipment for Health Care Facilities, the Infrastructure and Architecture on Baro and B zar V an Addinkod (Gar.) ZK 3 2P Z Z F7PMBVZ Public Health, Management of Medical Facilities ZK 3 2P Z Z F7PMBSZO Pater Kneppo (Gar.) Factor Marketok, and B zar V an Addinkod (Gar.) Z 3 2C L z F7PMBZO Marketok, and B zar V an Addinkod (Gar.) Z 3 2C L z F7PMBZNO Medical Imaging Processing Radim Krupi ka Radim Krupi ka (Gar.) Z 3 2C L z F7PMBZNO Cocupational Safety and Health, Fire Protection and First Aid Z 0 Z/ZK 5 F7PMBSDS Cocupational Safety and Health, Fire Protection and First Aid Z 0 <td< td=""><td>F7PMBRP</td><td>Semester Project</td><td>Z</td><td>3</td><td>2S</td><td>L</td><td>Z</td></td<>	F7PMBRP	Semester Project	Z	3	2S	L	Z
FTPMBSPB Statistics for Biomedicine Raff Area Trichopad (Gar.) Statistics for Biomedicine Raff Area Trichopad (Gar.) Z,ZK 5 2P+2C Z Z FTPMBSTVZ Technical Equipment for Health Care Facilities, the Intrastructure and Architecture U if Hozman, Ji Frede & JI Petra ek JI Pozama (Gar.) ZK 3 2P L Z FTPMBSTVZ Public Health, Management of Medical Facilities V is Admixed, and is a dura B faz V is Admixed (Gar.) ZK 3 2P Z Z FTPMBZPO Public Health, Management of Medical Facilities V is Admixed, and is a dura B faz V is Admixed (Gar.) Z 3 2C L z FTPMBZPO Pater Kneppo (Gar.) Faker Kneppo (Gar.) ZK 3 2C L z Characteristics of the courses of this group of Study Plan: Code=FTPMB POV 20 Name=Biomedical Engineering computsory conc Pater Kneppo (Gar.) KZ 4 2 0 Characteristics of the courses of this group of Study Plan: Code=FTPMB POV 20 Name=Biomedical Engineering KZ 4 TPOMBSTV Occupational Safety and Health, Fire Protection and First Aid Z 0 2,ZK 5 Basic concapts of a systemic aphocab the human body. Functio	F7PMBSPMM	Software for Mathematical Modeling	Z,ZK	5	2P+2C	Z	Z
FTPMBTVZ Infrastructure and Architecture duit Hozman, di Ferder ed. di I Hozman (Gar.) ZK 3 2P L Z FTPMBVZ Public Health, Management of Medical Facilities V an Adamkovd, and b Izo Jan	F7PMBSPB	Statistics for Biomedicine Marek Piorecký, Jan Štrobl, Jakub Ráfl, Marian Rybá , Aleš Tichopád Jakub	Z,ZK	5	2P+2C	Z	z
FTPMBVZ Public Health, Management of Medical Facilities ZK 3 2P Z Z FTPMBZPO Introduction to Law and the Protection of Industrial Property Peter Kneppo, Volt at Namesky, Veder Kalekor/W Volt of Namesky ZK 3 2P Z Z FTPMBZPO Medical Imaging Processing Radim Krupi ka, Iva Bubikovi Radim Krupi ka Radim Krupi ka Radim Krupi ka (Gar.) Z 3 2C L Z Characteristics of the courses of this group of Study Plan: Code=F7PMB POV 20 Name=Biomedical Engineering compulsory cou F7PMBAM Applied Mathematics KZ 4 The course deals with practical applications of mathematics and its demonstrations with examples from the field of biomedical engineering. ZZ 0 F7PMBSC Biotransport Z,K 5 Basic concepts of a systemic approach to the human body. Functional organization of living organisms. Integrated functions and migneturations on moderneach engineers. Principles of experimental and examination methods used in physiology and medicine. Examples of application of modern technologies in medical. Z/ZK 5 The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete fourier transforms, poles and zeros of the system. Frequency response, correlation and convolution, introduction to digital Rigr	F7PMBTVZ	Infrastructure and Architecture	ZK	3	2P	L	z
Introduction to Law and the Protection of Industrial Property Pater Kneppo (Gar.) ZK 3 2P Z Z FTPMBZMO Medical Imaging Processing Radim Krupi ka, hes bublicove Radim Krupi ka Radim Krupi ka (Gar.) Z 3 2C L z Characteristics of the courses of this group of Study Plan: Code=FTPMB POV 20 Name=Biomedical Engineering compulsory cot FTPMBAM Applied Mathematics KZ 4 The course deals with practical applications of mathematics and its demonstrations with examples from the field of biomedical engineering. KZ 4 TBOZP Occupational Safety and Health, Fire Protection and First Aid Z 0 F7PMBSC1 Biotransport Sale: concepts of systemic approach to the human body. Functional organization of living organisms. Integrated functions and importance of yesteme providing applications of mathematics and engineers. Principles of experimental and examination methods used in physiology and medicine. Examples of application of modern technologies in medicale. FTPMBC2T Certification of Medical Technology Z,ZK 3 The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete fourier transition, stochastic, parametrics, sampling and quanization problems, aliasing and Nyquist's theorem, not suppre	F7PMBVZ	Public Health, Management of Medical Facilities	ZK	3	2P	Z	z
Production Radim Krupi ka, Na Bubliková Radim Krupi ka Radim Krupi ka (Gar.) L <thl< th=""> L <thl< th=""> <thl< th=""> L L</thl<></thl<></thl<>	F7PMBZPO	Introduction to Law and the Protection of Industrial Property Peter Kneppo, Vojt ch Kamenský, Václav Kratochvíl Vojt ch Kamenský	ZK	3	2P	Z	z
F7PMBAM Applied Mathematics KZ 4 The course deals with practical applications of mathematics and its demonstrations with examples from the field of biomedical engineering. IZE 4 TBOZP Occupational Safety and Health, Fire Protection and First Aid Z 0 F7PMBBSC Biotransport Z,ZK 5 Basic concepts of a systemic approach to the human body. Functional organization of living organisms. Integrated functions and importance of systems providing applications for biomedical technicians and engineers. Principles of experimental and examination methods used in physiology and medicine. Examples of application of modern technology Z,ZK 3 The course deals with the issue of placing medical devices on the market. The syllabus of the course is designed to cover the main steps in the process of CE marking and market F7PMBCZS Digital Signal Processing Z,ZK 5 The course deals with the following topics - characteristics of signals. linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete domains, AD conversions and convolution, introduction to digital filter design, FIR and IIR filters and application Devices deals with the following topics - the concept of design and trend on experison and convolution, introduction to digital filter design, FIR and IIR filters and application processes, description of signals in continuous and discrete fourier transf	F7PMBZMO		Z	3	2C	L	Z
Basic concepts of a systemic approach to the human body. Functional organization of living organisms. Integrated functions and importance of systems providing applications for biomedical technicians and engineers. Principles of experimental and examination methods used in physiology and medicine. Examples of application of modern technologies in medicine. F7PMBCZT Certification of Medical Technology Z,ZK 3 The course deals with the issue of placing medical devices on the market. The syllabus of the course is designed to cover the main steps in the process of CE marking and market for course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete fourier transforms, efficient FFT estimation methods, other discrete transforms: z-transform, its properties and application DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency demain, coherence and phase characteristics, parametric and non-paramethods, periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the noncept of design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimension: human body, sensations an			biomedical engin	eering.		Z	0
F7PMBCZT Certification of Medical Technology Z,ZK 3 The course deals with the issue of placing medical devices on the market. The syllabus of the course is designed to cover the main steps in the process of CE marking and mark F7PMBC2S Digital Signal Processing Z,ZK 5 The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete domains, A/D conversions and converters, sampling and quantization problems, aliasing and Nyquist's theorem, noi suppression and data preprocessing, fast and discrete fourier transforms, efficient FFT estimation methods, other discrete transforms: z-transform, its properties and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-para methods, periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design analysis. Design and marketing, brand policy. Perspective wiew, geometric forms, problems of shape perception and design process, design methods. Design analysis. Design and marketing, brand policy. Perspective wiew, geometric forms, problems of shape perception and hand becore for ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions	Basic concepts of a systemic biomedical technicians and e	c approach to the human body. Functional organization of living organisms. Integrated f			systems prov	viding applic	ations for
The course deals with the issue of placing medical devices on the market. The syllabus of the course is designed to cover the main steps in the process of CE marking and market F7PMBCZS Digital Signal Processing Z,ZK 5 The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete Fourier transforms, efficient FFT estimation methods, other discrete transforms; z-transform, its properties and application DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-parar methods, periodogram and AR spectrum. Z 4 F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a science design processe, design methods. Design and pace of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, human psychological characteristics, interpresonal relationships, voluntary act, motivation, efficiency, work organization. Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Unit design / Dasing for all. 7 basic principles. Design of medical devices, principles of design in healthcare		rtification of Medical Technology			Z	ZK	3
The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic processes, description of signals in continuous and discrete domains, A/D conversions and converters, sampling and quantization problems, aliasing and Nyquist's theorem, noi suppression and data preprocessing, fast and discrete Fourier transforms, efficient FFT estimation methods, other discrete transforms; z-transform, its properties and application DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-parametends, periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a science design procaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hama and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Unit design / Design for medical devices, principles. Design of	The course deals with the iss	sue of placing medical devices on the market. The syllabus of the course is designed to	o cover the main s	teps in the			nd marketing
processes, description of signals in continuous and discrete domains, A/D conversions and converters, sampling and quantization problems, aliasing and Nyquist's theorem, nois suppression and data preprocessing, fast and discrete Fourier transforms, efficient FFT estimation methods, other discrete transforms: z-transform, its properties and application DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-parar methods periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a scienc design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Unit design / basic principles. Design of medical devices, principles of design in healthcare. F7PMBDP Diploma Thesis Z 12 Independen							
suppression and data preprocessing, fast and discrete Fourier transforms, efficient FFT estimation methods, other discrete transforms: z-transform, its properties and application DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-parameteristics, periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and ist definition, basic concepts of design theory, design classification, function of design. Design as a science composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions: human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Unit design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. Z 12 F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic of the Size common threase is is submitted and defended. The student defends his/her thesis in front of the Size common thematic area							
DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filter spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-paramethods, periodogram and AR spectrum. F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a scienc design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensiom: human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univ design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. Z 12 F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis is submitted and			• •		•		
methods, periodogram and AR spectrum. Z 4 F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a science design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univ design / Design of nell, 7 basic principles. Design of medical devices, principles of design in healthcare. Z 12 F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ comm The student defends his/her thesis in front	DSP, inverse transforms, pol-	es and zeros of the system, frequency response, correlation and convolution, introduct	tion to digital filter	design, Fl	R and IIR filte	ers and adap	otive filters,
F7PMBDAE Product Design and Ergonomy in Health Care Z 4 The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a scienc design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univ design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. Z 12 F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ commor This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5			herence and pha	se characte	eristics, parar	metric and no	on-parametri
The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a science design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univ design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>7</td> <td>4</td>		•				7	4
design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). University of the study of the study, when the student devices, principles of design in healthcare. F7PMBDP Diploma Thesis Z 12 Independent work of the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5		5 6 J	v design classific	ation func	tion of design	1	-
human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Hand Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univ design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ comm This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5						0	
Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). University design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5	composition. Ergonomics - d	efinitions, terms. The role and place of ergonomics in design. Ergonomics in the workp	lace. Human (pat	ient) - its p	hysical chara	cteristics, di	mensions,
design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare. Z 12 F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. Z 5 F7PMBDS1 Diploma Thesis Seminar I. Z 5						0	
F7PMBDP Diploma Thesis Z 12 Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. Z 5 F7PMBDS1 Diploma Thesis Seminar I. Z 5	-		sarety. Interior of n	nedical faci	lity (color, ligh	nting, materi	aıs). Univers
Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5					1	7	40
knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ common This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5	1 1		ndently and comp	rehensivel			
obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ comm This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5					-		-
thematic areas are included in one final evaluation. F7PMBDS1 Diploma Thesis Seminar I. Z 5	• · •		•				
F7PMBDS1Diploma Thesis Seminar I.Z5	This thesis is evaluated by th	ne supervisor and the opponent according to the ECTS grading scale. Subsequently, the	ne evaluation and	the result of	of the final sta	ate examinat	ion from the
	thematic areas are included	in one final evaluation.			<u> </u>		
The diploma seminar serves as a support for the start of work on the diploma thesis. During the semester, students present the intended aims and methods of their thesis and the						1	
	T1 P 1		nrecent the inter	nded aims	and methods	of their thes	is and the
	•						
	partial results of their work.	as a support for the start of work on the diploma thesis. During the semester, students	s present the inter		1		
The Diploma Seminar II is a continuation of the course Diploma Seminar I. The follow-up activity in the solution of the diploma thesis is controlled during the seminar. In particula intermediate results of the diploma thesis are checked, which students present during the semester.	partial results of their work. F7PMBDS2 Dip	as a support for the start of work on the diploma thesis. During the semester, students ploma Thesis Seminar II.				Z	3
אוניוויסאומי ויסאומי ווים עוףיטוומ עובאא מים טובטגבע, אווטו אנעבונא אובארו עעווויץ עוב אוובאבו.	partial results of their work. F7PMBDS2 Dip The Diploma Seminar II is a	as a support for the start of work on the diploma thesis. During the semester, students oloma Thesis Seminar II. continuation of the course Diploma Seminar I. The follow-up activity in the solution of th			ed during the	1	-

The occurs dets shift in following topics is brouge at communication (becommunication (becomment) weight and production and production of any and production of applicable (and compared) weight (becomment) weight and the other of any and production and production of applicable (and compared) weight (becomment) weight	F7PMBEMEO Electrotechnology and Modern Electronic Circuits	Z,ZK	5
an hete provid septe), land appeired, mendante to ender properties, etc. emphasis also plated on the projects and septements of synchronous and exponents of the and the setteme of synchronous period. Bit Development and the setteme of synchronous period. Bit Development and the setteme of synchronous period. Bit Development and the setteme of the synchronous period. Bit Development and the setteme of		which relate mainly	to applications
Inst. SR. 102, Detrifter, USAR (1, corporation to instruction of programmatic investors - Feld, SAL, CPLD, FPA, and a programmatic proceeding of sequences, power driven to motors and cate actuation of headings within a driven to and the sequences (1) to corporate in the sequences (1) to corporate (1) to corpora			
procession, microcentreliers and increpancesce (i.e.d.). Use and 25 be desteadured, systems of patient collation of again and power suppr (patienzagine, inter separation, data sus aparation), and the processing and Annalysis F7PMEXO Image Processing and Annalysis Compared to the pro		-	
and bas segmented, power drivers for motors and other academic of Heidings. Initia and driver Conference (IGIT transition). FZPMEXCO The corner deals with the topics - digital image processing and Analysis transformation, generalize transformation, image into a segment of the topics of the segment of t			-
FPMEX2O Image Processing and Analysis Z/K 5 To cours data with the types - split lange processing is to computer vision, the role of interpreters, neight of lange, mage acquisition for the generatic randomization processing is to acquisition of objects in maging, data interpreters, height regard, the course data with the types - split lange. The height regard		optocoupiers, intea	ai separators,
The optical estimates and esti		Z.7K	5
Iministrance, generate transformation, interpotence, negletation, progenation, controllates, controllates, consistence on constraints, and enterins, and existence or constraints. FTPMKKS Clinical Blochemistry and Laboratory Diagnostic Methods ZZK S Te course data with the toknomy poors, interpotence of reveal taboratory pathways and disorders of these processes, possibilite of the course data with the toknomy poors. FTPMKKS The and the course is to knimice students with appears that allow tank without and taboratory. FTPMKKM The and the course is to knimice students with appears that allow tank without and taboratory pathways and disorders of negletatory and taborators. FTPMKKM The and the course is to knimice students with appears that allow tank without and taborators. FTPMKKM The and the course is to knimice students with appears that allow tank without and taborators. FTPMKKM Measurements and Control in Biomedication and the development were allow taboratory proteins of another taborators. FTPMKKM Measurements and Control in Biomedication and the development were allow taboratory proteins and taborators. FTPMKKM Measurements and Control in Biomedication and the development were allow taboratory proteins and taborators. FTPMKKM Measurements and Control in Biomedication and ton experison of neasurement meeting the vision. with a fusion concreters thereaber, were allowed taborators with the biomedication of the experison of neosurement meeting the vision. With a fusion concreters thereaber, and the taboratory protection of the experison of neosurement meeting the vision. With a fusion concreters thereaber allowed taborators are appeared and taborators and protection allowed taborators and taborators and taborators and taborators and taborators and taborators. FTPMKMM Nessensee and there concreters the protection restored and there appeared in the state and taborators and taborators. FTPMKMM Nessensee and there concreters the protection restored and taborators and taborators. FTPMKMM Nessensee and taborators an		1 ' 1	-
methods, method company Chickel Biochemistry and Laboratory Diagonatis Methods Z.X 5 The course deals with the following types, stocked mittry of the human cognition, important methods and cipaletory pathways and disordies of these processes, possibilities of diagons of these disordies of these chicked methods. Z.K 3 The course disorders and processing of the first the current system, cellstonia full course, proceeding of the first the current system, cellstonia full course, proceeding of the first the current system, cellstonia full course, the current system, cellstonia full course, proceeding of the first the current system, cellstonia full course, proceeding of the first the current system, cellstonia full course, the current system, cellstoni full course, the current system, cellstoni full cour			-
FIPMERK Clinical Biochemistry and Laboratory Diagnostic Methods 2.2.K 5 The course deals with the following poists: inclusional methodican regulatory pathways and disorders of these processes, possibilies of the direct blocking with the following poists: inclusional methodican transmissional methodican poists: CK 3 The aim of the course is to similarize students with associal sets in quilt or methodic and orders. Z/K 3 The aim of the course is to similarize students with associal sets in quilt or insidual management. Neality methodican processing of the course is to similarize students with associal sets in quilt or insidual management in health case. The course will discuss to the restand task with an exploratory task. 5 The course disks with the following poists: massocienter of discuss and in encircle and cardiovascular system, creation of models of responsion your disclosed task and the stocial state and the disclosed task and the stocial state and the disclosed task and the stocial state and the s			
The ocura elabel with the following topics - toothemistry of the human organity minimportant methodical and regulatory pathways and denotes of these processes, possibilities of diagons of these denotes and processes of densities throating - methods and in clinical balancines. F7PMBKST Quality, Reliability, Testing of Madical Devices T7PMBKTM Plug And P		-	
dagoase of heae disorders and picocatures of research laboratory tests, activities of the circuits altoratory. picocating of data from reflocating is a quality manual molitical laboratories. FZPMBKTS FORMENT FURMENT FURM		1 1	
FPMERST Quality, Reliability, Testing of Medical Devices ZK 3 FPMERST Quality, Reliability, Testing of Medical Devices ZK 5 The course device is to furnitize standard standard and the individual methods used in quality narregistering in quality and reliability and testing of medical products. ZZK 5 The course device with the following topics - modeling and measurement of full top in measurement of and cardioxacular system, contation of nucles to furnitizes. ZZK 5 The course device with the following topics - modeling and measurement of bala funds in explanatory care and cardioxacular system, contation of fund topics in secance and and and devices and a care device with a fundation of the secance and and cardioxacular systems and attandards and the compression of devictal and non-electrical quantifies using conventional laboratory instrument, individual AD Convectors and Convecovectors and Convectors a			
The aims the course is to templature surface surface that affect the quality, reliability and creating of medical products, i.e. quality management in healthcare. The course will discuss to the networks and the indivisional medical user quality management of medical products. In quality management in healthcare. The course evaluates ananomic used and the indivisional medical tends of the products of the course of the medical medical course of the medical products. The products of the products of the product of the products of the product of the products of the product of the products of the product of the products of the product		1	
FIPMENTE Full Mechanics in Biomedicine Z.K 5 The ocurre data with the Stolving topics - measurement of data for win respiratory care and cardiovascular system, restation of models of respiratory and cardiovascular system, restation of models of respiratory and cardiovascular system, application of fuild mechanics principles in research and development as well is in clinical practice. 5 The ocurre data with the Stolving topics - measurement of electrical and non-electrical quantities using conventional aboratory instrument, with a locus on camera systems and discuss of mage reception, control will include the fundamenter and stellard the socurements both at the locid of the samore and downer the teaches at and the expression of measurement uncertainty and calibration. Machine vision, and design of trends of the samore and topical baracteristics on the samore and calibration. Machine vision and samore systems and teaches of the samore and topical characteristics. Their outclice the discuss of mage reception of the samore and topical baracteristics on the samore and topical baracteristics on the samore and teaches of the samore and topical baracteristics. Their outclice, their basic characteristics auch as as and thenical proteinal and tangents enclos in nanomediate. The course lactuse baracteristics and the same presented and enclose and and mapeles mechanication. The course lactuse baracteristics and these and the same presented and enclose of the Biomedical and have of a same and the same presented and machine and teaches. FTPMENDPM Nanotechnology for Medicine Z.ZK 3 The course lactuse baracteristic same as a same and the same presented and machine and the same presented and macomediane baracteristic the samore data data same pres		1 1	-
The deture deals with the following topics - modelling and measurement of fluid two in reprincips are and cardiovascular system, creation of models of respiratory and activity activity system, application of Huan dendances princips in research and development at well as in clinical practice. FIPMBMAR Measurements and Control in Biomedicine Z.X 5 The course deals with the following points - masurement of electrical and non-electrical quantifies using conventional laboratory instruments, industrial AD converters and digitaring cards such as DAQ, two-cost solutions with MCUs such as Arduino, as well as factors affecting the accuracy and stability of measurements, addressing transport delay and design of threshold and proportional controlles, denosaring transport delay and design of threshold and proportional controlles, denomatifications, and new trends in measurement, control and automation, using FRA and real-tirting gate array technology. Z.XK 3 The course set with the following points to nanomaterials that can be used in modern analytical and diagnostic methods in nanomedicine. The course loc course how or the dimensities of the course also course how creats for applical characteristics of nanomaterials and the basics of huminescence and procepticals and the adjusticant methods are pointed in anomedicine. Z.ZK 3 The course deals with method in many technology for Medicine Z.ZK 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	discuss both the related standards used and the individual methods used in quality and reliability management of medical devices.		
system, application of huid mechanics principies in research and development as well as in clinical practice. F7PMBDM Measurements and Control in Biomedicine for socks back SN, browcst solations with the following topies - measurement of detectical and non-electical quantities using conventional laboratory interests, industrial AD conventes and diplicing for stacks back DN, browcst solations with MOLS was as as And Advince, as well as find coreacy and stability of measurements both at the feed of the sectoos and diplicing for stacks back DN, browcst solations with MOLS was as as And Advince, as well as find coreacy and stability of weight of that and advince, interest the sector and automatia, and the sector and automatian and sequential automatia, and the sector and automatian and sequential automatia, and the sector and automation using FFGA and real-time gate array chronkogy. F7PMBDM Nanotechnology for Medicine CZK 3 The course hitodoxes students to fanometerist back to the use of in motion analytical and diagnostic methods in nanometicine. The course indocurse, the analytical stude to and automation weight of the sector biometical ageing attrace diverses to and a state and characteristics of nanomaterist the back otherwise-course and photometeristics. In the Biometical and ageing of these and a back attrace threfolds in nanometicine. The course indocurse, transport and a state 30 hours in the formation weight of the sector and transport of the sector and tra	F7PMBMTB Fluid Mechanics in Biomedicine	Z,ZK	5
FZPMBMAR Measurements and Control in Biomedicine Z.K 5 The course data with the following points: - measurement is delicing and non-electrical quantities using conventional laboratory instruments, industrial AD convertes and digitizing cards such as DAQ, low-cost colloors with KGUs such as Arduno, as well as factors affecting the accuracy and tablity of measurements but athe level of the sensor and converting in thread-bet and the accuracy and tablity of measurement incompation. Machine wison, with a hocus on cames systems and sandbacks, and the basics of image rozgnition, control will include the fundamentals of automation, design of statu and sequential automation. Using FRGA and real-time gate array technology. FZPMBNPN Nanotechnology for Machine Z.ZK 3 The course entrol/costs students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomaderice of theracetristics of nanomaterials for anomaterials and tagenostic methods and surface fundamental. Z Z FZPMBNPH Intermeship 1. Z 2 Z<		is of respiratory and	d cardiovascular
The course including topics - measurement of electrical and non-electrical quantities using conventional laboratory intervalues in the level of the senses and converters and digitaring cardies using back low-cost solutions with CAD scales and scale and the expression of measurement uncertainty and calibration, Martine vision, with a focus on carner systems and sandraffs, and the basics of imager reception, control with include the fundamentals of automation, design of states and adsecuptinal automata, addressing transport delay and design of transport delay and design transport delay and design of the solution of these data and the expression of measurement uncertainty and calibration, Martine vision, With a focus on carner systems and sandraffs, and the basics of imager reception, control with include the fundamentals of automaticin, design of state and sequential automata, addressing transport levels, their bear solution to nonsport levels, their bear and the basics of the course, memory levels, and the basics of mager represented and transport levels, their bear and the basics of the course, memory levels and the basics of the advectory of the course, memory levels and the basics of the advectory and subtrator fundamental states and the course of the advectory and subtrator fundamental states and with the presented and received and nano-NEG and the basics of the advectory and subtratory fundamental states and with a device and nano-NEG and the states of the state of the st			
cards such as DAQ, low-cess solutions with MCUs such as Arduine, as well as factors affecting the accuracy and stability of massurements both at the level of the sensors and convertes thermekers, are well as the correct interpretation of these data and the expression of measurement uncertainty and dustications. Moline viscos, with a focus on cancern systems and or threadold and proportional controllers, demonstrations on biomedical applications, and new trends in measurement, control and automation. aiddressing transport delay and design of threadold and proportional controllers. How the dist is measurement, control and automation. The Curus Returns focus on nanoparticles, their basics of turninescence and phosphorescence principles and their detection unique control and principles. In the last part of the curuse, magnetic properties of nanoparticles and nano-NUR detection methods are presented and examples used for ophical and tagnostic methods in nanomedicine to detection of targeted nanoparticles. The basics of turninescence and phosphorescence principles and their detection unique controls and sufficies of the advection tageted in advection in the advection in the advection in the distribution. Specifically in routine clinical operation. The professional Practice is designed to the advection tageted and advection in their advection is the advection at least 20 hours in practical part of the Biomedical Engineering programme. Students get to kow in practice and nanopartice is designed to the distribution is predically in routine clinical operation. The professional Practice is designed to the detail to advicible and work of a biomedical engineer in medical devices including transport degree and takes at the advection at the method and their details that activity and their details and their details and their details and their detade advection in their details and advection and thead t		1 1	
themselves, na well as the correct interpretation of these data and the expression of measurement uncertainty and calibration, Medices varies dates and the basics of imager recognition, corted will include the fundamentale of automation, design of states and sequential automata, addressing transport delay and design of the early technology. F7PMBOPM The course introduces students to manomaterials that contained and protection methods and automation using FPGA and real-time gate array technology. F7PMBOPM The course introduces students to manomaterials that contained and automation using FPGA and real-time gate array technology. F7PMBOPM Internship 1. Province introduces students to manomaterials that contained and automaterials and manoparticles. The course introduces are presented and examples used for optical and magnetic methods in nanomedicine for detaction of the accurse, magnetic presentes of a manoparticles and nanoparticles and magnetic methods in students of the accurse, magnetic presentes of a manoparticle and the activation and the accurse in automatic presentes of a manoparticle and the accurse integritic and the accurse in automatic presentes of a manoparticle and the accurse in automatic presentes of a manoparticle and the accurse in automatic presentes of a manoparticle and the accurse integritic and the accurse in automatic presentes on all texts of the accurse magnetic method with a distribution within and text presented and accurse and text presented an			
standards, and the basics of image recognition, control will include the fundamentate of automation, design of state and sequentiationnation using FPGA and real-line gate arrays technology. F7PMBNPM Nanotechnology for Medicine 2, Z,K 3 The scusse introduces students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomedicine to curse, magnetic properties of nanoparticles, where the sciss characteristics such as size and thenical operation in medical and real-process introduces students to success the operation and their operation methods and surface occurse, magnetic properties of nanoparticles and nano-NNR dedection methods are presented and success to a curse, magnetic properties of nanoparticles and nano-NNR dedection cometods are presented and success to a success the operation of targets and work of a biomedical instandors, specifically in routine diversion training programmes. Students get to korw in practice and innove detail the activities and nano-NNR dedection cometods are presented and success to a success and work of a biomedical instandors, specifically in routine diversion training programmes. Students get to korw in practice and innove detail the activities and work of a biomedical instandors, specifically in orutine diversion student get accuss the workplaces using thespace student specifical process and process to a biomedical advoces including specification of the sale activity in the technical advoces including and devoces including specification of reassaling assets. Compresents and success are back-top proceedings that allow and the sale of the sale activity in thes			
International Z.ZK 3 F7PMBNPM Nanotechnology for Medicing Z.ZK 3 The curse introduces students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomedicine. The curse also covers the optical characteristics of nanomaterials that can be used in modern analytical and surface functionalization. The curse also covers the optical characteristics of nanomaterials and nano-NMR detection methods are presented and examples used for optical and magnetic methods in nanomedicine for detection of taggeted nanoparticles. F7PMBOP1 Internship I. Z 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice adely stores using diagnostic medical devices including imaging methods, at least 20 hours at workplaces using diagnostic medical devices including imaging methods, at least 20 hours at workplaces using diagnostic medical devices and tale tables to bioms at workplaces using diagnostic medical devices and tale tables to bioms at workplaces, local diagnostic, including corrective studies, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technical advects and centenhogies, including corrective studies and equipment including the measuring instruments, implementation of regular calibration or verification of measuring instruments, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technical advects and centenhogies, including corrective subtains, implementation or regular calibration or verification of measuring instruments, implementation oregular calibration or verification of measuring instrumen			
FTPMBNPM Nanotechnology for Medicing Z,K 3 The course introduces students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomedicine. The course also covers the optical characteristics of nanomaterials and the basic of numeromaterials and the basic of uninescence principles and their detection using contocal principles. In the tast part of the course, magnetic properties of nanoparticles and inan-NMR detection methods are presented and examples used to registerial and magnetic methods in nanomedicine for detection of targeted nanoparticles. FTPMBOP1 Internship I. Z 2 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice in more detail the activities and work of a biomedical engineer in medical devices. Induces a sing therapout: medical devices in the activities and work of a sing diagnostic medical devices. The work experience shall alio include at teast 5 hours in the technical and operational section, focusing on medical gases. Compressor statical and presentation of regular safety and technical devices and technologies, including corrective statical devices and technologies, including corrective statical devices and technologies, including corrective advinors. Implementation of regular safety and technical cheves and technologies, including corrective devices in the forded advices and technologies, including corrective advinors. Implementation of the advinors. The work expension, etc. Z FTPMBOP2 Internship II. Z 2 Professional Practice II complements to practical part of the Biomedical Engineering programme and dire	of threshold and proportional controllers, demonstrations on biomedical applications, and new trends in measurement, control and automation usin	g FPGA and real-ti	me gate array
The course introduces students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomaticine. The course lettures focus on nanoparticles, their basic of luminescence and phosphorescence principles and their detection using confocal principles. In the last part of the course, magnetic properties of nanoparticles and mone-Wink detection methods are presented and examples used for optical and magnetic methods in nanometicine for detection of targeted nanoparticles. The PMBOP1 Internship I. Z 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detail the activities and work of a bornedical engineering medical devices including imaging methods, at least 20 hours at workplaces using bargetosis methods are nanometicities to the student spends at least 30 hours in practice in the dash activities at onclusions, specifically in routine chinal ado persion. The professional practice is designed so that the student spends at least 30 hours in practice in the dash activities at a bornedical engineer with activity in clinical operation. The situe of availanting talking studies at least 50 hours in more data devices and teast 10 hours in workplaces using laboratic endical devices and teast 10 hours in workplaces using laboratic endical devices and teast 20 hours at workplaces using laboratic endical devices and teast 10 hours at workplaces using laboratic endical devices and teast 10 hours at workplaces using laboratic endical devices and teast 10 hours at workplaces using laboratic endical devices in the teast 20 hours at workplaces using laboratic endical devices and teast 10 hours at workplaces using laboratic endical devices and teast 10 hours at material endices of medical devices and teast 10 hours at material endic	technology.		
basic characteristics such as size and chemical potential, their preparation methods and surface functionalization. The course, magnetic properties of nanoparticles and nano-kink detection methods are presented and examples used for optical and magnetic methods in nanomedicine for detection of targeted nanoparticles. F7PMBOP1 Internship 1. Z 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detail the activities and work of a biomedical engineer in medical altesist in the during hanging methods, at least 20 hours at workplaces using diaporator medical devices. The work experience shall also include at least 5 hours in the encludes, at least 20 hours in the technical advices and task 10 hours at workplaces using alboratory medical devices. The work experience shall also include at least 5 hours in the enclusion and back-up power supplies, and 5 hours in the encludes), the student signet will be adviced at least 10 hours at workplaces using alboratory medical experiments in struments, implementation of regular safety and technical clecks of medical devices, acceptance of delivered medical experiment including the necessary documentation, etc. Z 2 Professional Practice I toronglements the practical part of the Biomedical Engineering programme and directly follows the practice implementation of regular advices and experimention of the public structure structu		1 1	
and the basics of luminescence and phosphorescence principles and their detection using cortical principles. In the last part of the course, magnetic properties of nanoparticles and nano-NMR detection methods are presented and examples used for optical and magnetic methods in nanomedicine for detection of targeted nanoparticles. F7PMBOP1 Internship I. 2 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detail the activities and work of a biomedical engineerin medical indivicus including imaging methods, at least 20 hours at workplaces using therapeutic medical devices in cluding imaging methods, at least 20 hours at workplaces using therapeutic medical devices in the detail devices and test of 10 hours at workplaces using therapeutic medical gases, compressor stations and back-up power supplies, and 5 hours in the metrology section. Unring the internship, the student will get acquainted with processes and procedures that are ellevicent metatical equipment inducing the necessary documentation, etc. F7PMBOP2 Internship II. Z 2 Professional Practice I body activities of the Biomedical Engineering programme and directly follows the practice implements the tractical part of the Biomedical Engineering programme and directly follows the practice implements of organisations descind beams and the measuring instruments, implementation or selection procedures, etc. An essential part of the robuscional Practice I body activities and the advice and test and second beams and the statical advices and test and second beams and the statical advices and test and second beams and the statical advices and test and to accomplements the practical part of the Biomedical Engineering regrame and directly follows the		-	
nano-NIRK detection methods are presented and examples used for optical and magnetic methods in nanomedicine for detection of targeted nanoparticles. Z 2 Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detail the activities and work of a biomedical engineer in medical divices and work of a biomedical engineer in medical divices and takes 10 hours in the student spends at least 30 hours in practice in health care facilities at workplaces using diagnostic medical divices including imaging methods, at least 30 hours in the relatival existing and at least 10 hours at workplaces using therapeutic medical divices and at least 10 hours in the instance of evaluating taking taking a cuguainted with processes and procedurus that are directly related to the daily activities of a biomedical engineer with activity in clinical operation: the issue of evaluating taking taking a taking and takeng to a solutions, inginementation of regular and takeng 10 µmore and 10 µ			
FTPMBOP1 Internship I. Z 2 Professional Practice omplements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detail the activities and work of a biomedical engineer in medical adjustices, specifically in routine clinical operation. The professional practice is designed so that the student spends at least 30 hours in workplaces using therapeuic medical devices and at least 10 hours at workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 10 hours at workplaces using therapeuic medical devices and at least 30 hours in workplaces using therapeuic medical devices and at least 30 hours in the metrology section. During the internship, the student spendsci ad using therapeuic devices in decidal devices and technologies, including proceedies solutions, implementation or verification or measuring instruments, implementation or regular aaftey and technologies, including the necessary documentation, etc. FTPMBOP2 Internship II. Z 2 2 Professional Practice I loos. Practical part of the Biomedical Engineering programme and directly follows the practice and at least of abiomedical engineering the activity at a biomedical engineering in a stude so or fendation in database systems. NIS, NIS, PACS and patient data security issues. This amy include participation in adatabase systems ususe in healted device and eneasuring instrument			noparticles and
Professional Practice Longhaments the practical part of the Biomedical Engineering programmes. Students get to know in practice and in more detail the activities and version of a biomedical engineer in medical institutions, specifically in routine clinical operation. The professional practice is designed so that the student spends at least 30 hours in workplaces using therapeutic medical devices and at least 10 hours at workplaces using therapeutic medical devices and at least 10 hours in the interchain and operational section, focusing on medical gases, compressors statutions and back-by power supplies, and 6 hours in the metrology section. During the internship, the student will get acquainted with processes and procedures that are directly related to the daily activities of a biomedical engineer with activity in clinical operation: the issue of evaluating full increases and procedures that are directly related to the daily activities of a biomedical engineer with activity in clinical operation. Hours at the charactical checks of medical devices, acceptance of delivered medical equipment including the necessary documentation, etc. F7PMBOP2 Internship II. Z 2 <td< td=""><td></td><td></td><td>2</td></td<>			2
Ineal tear facilities at workplaces using diagnostic medical devices. Including imaging methods, at least 20 hours at workplaces using laboratory medical devices. The work experiences shall assic include at least 5 hours in the technical and operational section, focusing on medical gases, compressor stations and back-up power supplies, and 5 hours in the methology section. During the internship, the student will get acquainted with processes and procedures that are directly related to the daily activities of a biomedical engineer with activity in clinical operation: the issue of evaluating failures of medical devices and technologies, including corrective solutions, implementation of regular safety and technologies, including corrective solutions. PTPMBOP2 Internship II. Z 2 Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between the first and second semesters within the Professional Practice II complements do regularisative or the State Office for Drug Control, etc. During the internship, the student will get acquainted with legislative and administrative processing and the choice of the selection procedures, etc. An essential part of the professional practice I loads of the selection procedures, participation of selection procedures, etc. An essential part of the professional practice I I to attrast at the devices and method devices and the choice of the selection procedures, etc. An essential part of the professional practice I I hours of the information systems wills. KJR, PACS and patient data security issues. This may include participation in adulting activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 2 2		ail the activities and	
Incurs at workplaces using laboratory medical devices. The work experience shall also include at least 5 hours in the technical and operational section, focusing on medical gases, compressor stations and back-up power supplies, and 5 hours in the metrology section. During the internship, the student will get acquainted with processes and procedures that are directly related to the daily activities of a biomedical engineer with activity in clinical operation. The issue of evaluating failures of medical devices and technologies, including corrective solutions, implementation of regular calibration or verification of messuring instruments, implementation of regular safety and technical experiment including the necessary documentation, etc. F7PMBOP2 Internship II. Z 2 Professional Practice I block. Practical part of the Biomedical Engineering programme and directly follows the practice implemente of organisations dealing with administrative processes that are directly related to the activity of a biomedical engineer rine. etc. An essential part of the professional practice II books in the field or biomedical engineer rine, e.g. at the Electrotechnical Testing instrute or the Site of SiteCon procedures, etc. An essential part of the professional practice II is at least 10 hours in the field or medical devices and technologies. 10 a tours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connectian with medical technology, etc. 11 builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block / the internship in a with patient of the course supervisor. 12 Profess	biomedical engineer in medical institutions, specifically in routine clinical operation. The professional practice is designed so that the student spender	s at least 30 hours	in practice in
compressor stations and back-up power supplies, and 5 hours in the metrology section. During the internship, the student will get acquainted with processes and procedures that are directly related to the daily activities of a biomedical engineer with activity in clinical operation: the issue of evaluating failures of medical devices and technologies, including corrective solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technologies, including corrective solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technologies, including corrective solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technologies, including corrective solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular calibration or verification or verification or verification of measuring instruments in the structure of texation or can take place at other departments of organisations dealing with arist and sack-up procedures, section procedures, se			
dreatly related to the daily activities of a biomedical engineer with activity in clinical operation; the issue of evaluating failures of medical devices and technologies, including corrective solutions, implementation of regular safety and technical checks of medical devices, acceptance of delivered medical equipment including the necessary documentation, etc. F7PMBOP2 Internship II. Z 2 Professional Practice I block. Practical training in the second block can confinue in a medical facility or can take place at other departments of organisations dealing with administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will get acquained with legislative processes that are directly related to the activity of a biomedical engineering. The internship, the student will get acquained with legislative processes that are directly related to the activity of a biomedical engineering. The internship is the student of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in adulting activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 Professional Practice II block of professional practice and complements the paratical part of the professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the activity subject to the approval of the course supervisor. F7PMBOP3 Internship III. Z 2 2 <t< td=""><td></td><td>-</td><td>-</td></t<>		-	-
solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technical checks of medical devices, acceptance of delivered medical equipment including the necessary documentation, etc. F7PMBOP2 Internship II. Z 2 Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between the first and second semesters within the Professional Practice II block. Practical training in the second block can continue in a medical facility or can take place at other departments of organisations dealing with administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedures and the choice of technical parameters of the field of medical edupices and measuring instruments registration, especially with emphasis on orientation in database systems used in healthcare and at least 10 hours in the field of medical technology, etc. F7PMBOP3 Internship III. Z 2 2 Professional Practice III buiks on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship may include the implementation of measurements requiring specific equipment or available at the Faculty of Biomedical Engineering. The internship may include the implementation of measurements requiring specific equipment or available at the Faculty of Biomedical Engineering. The implementation of the internship is always subj		-	
F7PMBOP2 Internship II. Z 2 Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between the first and second semesters within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments of organisations dealing with administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer. The issue of selection procedure, participation in the vealuation of selection procedure, selection procedure, participation in the vealuation of selection procedure, selection procedure, participation in the vealuation of selection procedure, selection procedure, selection procedure, selection end to the selection procedure, participation in the vealuation of selection procedure, selection and the adverse and the evaluation of selection procedure, selection and the adverse and the evaluation of selection procedure, selection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The internship may include the internship may lake place in a healthcare facility, government or available at the Faculty of Biomedical Engineering. The internship is always subject to the approval of the course supervisor. F7P		-	-
Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between the first and second semesters within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments of organisations dealing with administrative surces that are directly related to the activity of a biomedical engineering. C. part the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will parameters of medical equipment for the needs of the selection procedure, participation, especially with emphasis on orientation in database systems used in healthcare and at least 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in adulting activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship may include the implementation of measurements requiring specific equipment or shalable at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBOP3 Internship III. Z 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveneses of different entrepreneurial strategies. Fi	delivered medical equipment including the necessary documentation, etc.		
within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments of organisations dealing with administrative issues in the field of biomedical engineering. e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will get acquainted with legislative processes that are directly related to the activity of a biomedical engineer. The issue of selection procedures and the choice of technical parameters of medical equipment for the needs of the selection procedures, and the choice of technical 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government or available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial activity and explace for Diagnostics Z,ZK	F7PMBOP2 Internship II.	Z	2
administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During the internship, the student will get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedures and the choice of technical parameters of medical equipment for the needs of the selection procedure, etc. An essential part of the professional practice II is at least 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The implementation of the internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship Students will get ageneral overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course s			
get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedures and the choice of technical parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part of the professional practice II hours of the field of medical devices and measuring instruments registration, especially with emphasis on orientation in dtabase systems used in healthcare and at I least 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block, the internship may take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare and at I east to available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneuriship to technical standards and specific clinical applications. F7PMBP		•	•
parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part of the professional practice II is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems used in healthcare and at least 10 hours of the infiniteristom systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 Professional practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship imay take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for		•	
10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities, analysis of adverse events in connection with medical technology, etc. F7PMBOP3 Internship III. Z 2 Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial vertures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPTD Advanced Medical Devices for Therapy Z 3 The course deals with the following topics - instrumentation used in			
in connection with medical technology, etc. Z 2 F7PMBOP3 Internship III. Z 2 Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block, the internship may take place in a healthcare facility, government will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPTD Advanced Medical Devices for Diagnostics Z,ZK 4 F7PMBPTD Advanced Medical Devices for Therapy Z,ZK 3 The course deals with advan	is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systemetry of the systemetry	ms used in health	care and at least
F7PMBOP3 Internship III. Z 2 Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTD Advanced Medical Devices for Therapy ZK 3 The course deals with advanced issues focused on diagnostis in medicine. <td< td=""><td></td><td>vities, analysis of a</td><td>dverse events</td></td<>		vities, analysis of a	dverse events
Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme. The third block of internship will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPTD Advanced Medical Devices for Therapy ZK 3 The course deals with advanced issues focused on diagnostics in medicine. Z/ZK 4 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algori			
will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a healthcare facility, government organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneural ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneural strategies. Finally students will be able to specify the basic performance indicators of entrepreneural activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3		1 1	
organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements requiring specific equipment not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervisor. F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. The requires the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysi			•
F7PMBPOD Entrepreneurship KZ 3 Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral arrays (CS			•
Students will get a general overview of the company and its key functional areas. Students will be able to identify the elements of success of entrepreneurial ventures, consider the legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of ANN application on epileptog	not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course supervise	sor.	
legal and financial conditions for starting a business venture, also evaluate the effectiveness of different entrepreneurial strategies. Finally students will be able to specify the basic performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster	F7PMBPOD Entrepreneurship	KZ	3
performance indicators of entrepreneurial activity and explain the importance of marketing and management in businesses. At the end of the course students will interpret their own business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. ZK 3 F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural reco			
business plan. F7PMBPPTD Advanced Medical Devices for Diagnostics The course deals with advanced issues focused on diagnostics in medicine. F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		-	-
F7PMBPPTD Advanced Medical Devices for Diagnostics Z,ZK 4 The course deals with advanced issues focused on diagnostics in medicine. F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		succents will inter	pret their own
The course deals with advanced issues focused on diagnostics in medicine. F7PMBPTT Advanced Medical Devices for Therapy ZK 3 The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. KZ 3 F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		7 7K	4
F7PMBPTTAdvanced Medical Devices for TherapyZK3The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications.ZK3F7PMBPMZDAdvanced Methods of Analysis and Data ProcessingKZ3This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is			т
The course deals with the following topics - instrumentation used in surgical fields and selected therapeutic devices used in various fields of medicine, physical principles of the devices, safety aspects of their operation, including the relationship to technical standards and specific clinical applications. F7PMBPMZD Advanced Methods of Analysis and Data Processing KZ 3 This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		ZK	3
F7PMBPMZDAdvanced Methods of Analysis and Data ProcessingKZ3This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		1 1	-
This course comprehends/deals methods of biosignal generation, biosignal acquisition and basic parameters of biosignals required for diagnostics. Methods and algorithms for biosignal processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is			
processing, analysis and evaluation used for biological signals, mainly electrophysiological signals. Preprocessing, filtering, time and frequency analysis. Use of modern spectral analysis methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		1 1	-
methods. Visualisation of results, topographic mapping, method of compressed spectral arrays (CSA). Adaptive segmentation of non-stationary signals is discussed. Application of methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is		-	-
methods using artificial intelligence. Methods of automated signal classification - supervised/unsupervised, cluster analysis, learning classifier. Artificial neural networks (ANN). Practical application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is			
application of biosignal processing. Case studies of ANN application on epileptogenic recordings and neural recordings in general. Genetic algorithms and simulated annealing is			
presented.			
	presented.		

F7PMBPIZ	Work with Information Sources and Research Methodology	KZ	4
The course deals with the	he following topics - characteristics of research and science, types of research, relation to legislation and financial sources, re	search projects, g	rant applications
and the grant process, I	basic characteristics and specifics of a professional text, content of individual sections, publishing practices, publishing ethics	, citation of sourc	es, information
sources, typographical	rules, mathematical typesetting, proofreading of texts, principles for creating presentations, presentation of results in the form	of tables, graphs	, diagrams and
charts.			
F7PMBRP	Semester Project	Z	3
Within the year-long pro	pject, students choose the topic of an individual project in the field of biomedical engineering, which represents the first stage	of the master's th	nesis. The topics
from which students ch	oose are available in the "Projects" database. Students can also provide their own assignment, which must be approved by th	ne programme su	pervisor and the
Head of Department. Th	ne main objective of the individual project is to generate a suitable thesis topic based on the current state of the art. The outp	ut of the year-long	g project is a
description of the objec	tives of the follow-up thesis, an overview of the planned methods and the expected outputs and contributions in the field of bi	omedical enginee	ering.
F7PMBSPMM	Software for Mathematical Modeling	Z,ZK	5
F7PMBSPB	Statistics for Biomedicine	Z,ZK	5
The course deals with t	he following topics - methods of statistical analysis intended primarily for medical research - clinical, biological, biochemical, l	piophysical and o	ther studies,
methods of descriptive	and inductive statistics, statistical epidemiological methods, hypothesis testing, comparison of groups (parametric and non-pa	arametric method	s), ANOVA,
correlation and simple re	egression analysis, multivariate regression models, multivariate linear models, logistic regression, discriminant analysis, surviv	al analysis, etc, m	odel calculations
and interpretation of res	sults.		
F7PMBTVZ	Technical Equipment for Health Care Facilities, the Infrastructure and Architecture	ZK	3
The course deals with t	he following topics - infrastructure of a medical facility and its architecture, media distribution (utility networks - electrical wirin	g, specifics of cir	cuits, water, gas
distribution, power syste	ems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems)	, practical exercis	es in the area of
project development, fa	miliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic,	which specify all t	he requirements
for various types of prer	mises and equipment, focus on barrier-free healthcare facilities.		
F7PMBVZ	Public Health, Management of Medical Facilities	ZK	3
F7PMBZPO	Introduction to Law and the Protection of Industrial Property	ZK	3
P edm t je koncipován	jako p ehled základních legislativních p edpis 🛛 ve zdravotnictví z oblasti medicínského práva, ochrany duševního vlastnictví.	V rámci p edm ti	u se student
seznámí s nejr zn jším	ii zákony v dané oblasti. P edm t se zabývá následujícími tématy - problematika zdravotnické legislativy, základy práva a spra	ávního procesu, p	rincipy a zásady
zdravotnické legislativy,	st žejní zákony pro biomedicínské inženýrství, nákup zdravotnické techniky, medicínské právo - informovaný souhlas, pou e	ní pacienta, odm	itnutí zdravotní
pé e, ukon ení pé e o	pacienta, pr myslové vlastnictví a jeho ochrana (patenty, vzory), právní ochrana duševního vlastnictví.		
F7PMBZMO	Medical Imaging Processing	Z	3

List of courses of this pass:

17BOZP Occupational Safety and Health, Fire Protection and First Aid Z 0	
F7PMBAM Applied Mathematics KZ 4	
The course deals with practical applications of mathematics and its demonstrations with examples from the field of biomedical engineering.	
F7PMBBSCBiotransportZ,ZK5	
Basic concepts of a systemic approach to the human body. Functional organization of living organisms. Integrated functions and importance of systems providing applications fo	
biomedical technicians and engineers. Principles of experimental and examination methods used in physiology and medicine. Examples of application of modern technologies in medicine.	ו
F7PMBCZSDigital Signal ProcessingZ,ZK5	
The course deals with the following topics - characteristics of signals, linear time invariant systems (LTI), stationary, non-stationary signals, deterministic, ergodic and stochastic	
processes, description of signals in continuous and discrete domains, A/D conversions and converters, sampling and quantization problems, aliasing and Nyquist's theorem, nois	
suppression and data preprocessing, fast and discrete Fourier transforms, efficient FFT estimation methods, other discrete transforms: z-transform, its properties and applications	
DSP, inverse transforms, poles and zeros of the system, frequency response, correlation and convolution, introduction to digital filter design, FIR and IIR filters and adaptive filters	
spectral analysis and spectrum estimation methods, current methods of analysis in time and frequency domain, coherence and phase characteristics, parametric and non-parame methods, periodogram and AR spectrum.	tric
F7PMBCZT Certification of Medical Technology Z,ZK 3	
The course deals with the issue of placing medical devices on the market. The syllabus of the course is designed to cover the main steps in the process of CE marking and marketi	na
F7PMBDAE Product Design and Ergonomy in Health Care Z 4	<u>g</u> .
The subject deals with the following topics - the concept of design and its definition, basic concepts of design theory, design classification, function of design. Design as a science	e.
design process, design approaches, design methods. Design analysis. Design and marketing, brand policy. Perspective view, geometric forms, problems of shape perception and	
composition. Ergonomics - definitions, terms. The role and place of ergonomics in design. Ergonomics in the workplace. Human (patient) - its physical characteristics, dimensions	S,
human body, sensations and perceptions, reflexes, human psychological characteristics, interpersonal relationships, voluntary act, motivation, efficiency, work organization. Handic	ap.
Human and medical product. Aids, instruments and tools. Climate conditions. Lighting. Noise. Vibration and shock. Safety. Interior of medical facility (color, lighting, materials). Univer	rsal
design / Design for all, 7 basic principles. Design of medical devices, principles of design in healthcare.	
F7PMBDP Diploma Thesis Z 12	
Independent work of the student at the end of the study, when the student has to demonstrate the ability to independently and comprehensively process the given topic using the	
knowledge acquired during the study. The student chooses the topic of the thesis from the topics offered by the department that guarantees the study programme. The student is	
obliged to write the thesis at the beginning of the 4th semester. In this semester the thesis is submitted and defended. The student defends his/her thesis in front of the SZZ committ This thesis is evaluated by the supervisor and the opponent according to the ECTS grading scale. Subsequently, the evaluation and the result of the final state examination from the	
thematic areas are included in one final evaluation.	
F7PMBDS1 Diploma Thesis Seminar I. Z 5	
The diploma seminar serves as a support for the start of work on the diploma thesis. During the semester, students present the intended aims and methods of their thesis and the	e
partial results of their work.	- -
F7PMBDS2 Diploma Thesis Seminar II. Z 3	
The Diploma Seminar II is a continuation of the course Diploma Seminar I. The follow-up activity in the solution of the diploma thesis is controlled during the seminar. In particular,	the
intermediate results of the diploma thesis are checked, which students present during the semester.	

F7PMBEMEO Electrotechnology and Modern Electronic Circuits	Z,ZK	5
The course deals with the following topics: sub-blocks of communication (low-current/powe) and power (high-current/power) electrical engineering, which	h relate mainly to a	applications
of modern digital and / or analog-digital circuits or digital-analog circuits especially in the field of drive control and actuator), basic concepts and require	ements for these cir	cuits, such
as their power supply, load capacity, connection to other peripherals, etc., emphasis is also placed on the principles and applications of synchronous and		
lines (SPI, I2C, OneWire, USART), programmable circuits (principles of programmable logic, overview of programmable circuits - PAL, GAL, CPLD, I		-
procedures), microcontrollers and microprocessors (8-bit, 16-bit and 32-bit architecture), systems for galvanic isolation of signal and power supply (op		eparators,
data bus separators), power drivers for motors and other actuators (H-bridges, triac and thyristor control, IGBT transistors		
F7PMBKB Clinical Biochemistry and Laboratory Diagnostic Methods	Z,ZK	5
The course deals with the following topics - biochemistry of the human organism, important metabolic and regulatory pathways and disorders of these diagnosis of these disorders and procedures of relevant laboratory tests, activities of the clinical laboratory, processing of data from methods use		
	ZK	3
F7PMBKST Quality, Reliability, Testing of Medical Devices The aim of the course is to familiarize students with aspects that affect the quality, reliability and testing of medical products, i.e. quality management i	I I	
discuss both the related standards used and the individual methods used in quality and reliability management of medical dev		
F7PMBMAR Measurements and Control in Biomedicine	Z,ZK	5
The course deals with the following topics - measurement of electrical and non-electrical quantities using conventional laboratory instruments, industria		nd digitizing
cards such as DAQ, low-cost solutions with MCUs such as Arduino, as well as factors affecting the accuracy and stability of measurements both at the leve	l of the sensors and	l converters
themselves, as well as the correct interpretation of these data and the expression of measurement uncertainty and calibration, Machine vision, with a f	ocus on camera sy	stems and
standards, and the basics of image recognition, control will include the fundamentals of automation, design of state and sequential automata, addressi	• • •	•
of threshold and proportional controllers, demonstrations on biomedical applications, and new trends in measurement, control and automation using F	PGA and real-time	gate array
technology.		
F7PMBMTB Fluid Mechanics in Biomedicine	Z,ZK	5
The course deals with the following topics - modelling and measurement of fluid flow in respiratory care and cardiovascular system, creation of models of	respiratory and car	diovascular
system, application of fluid mechanics principles in research and development as well as in clinical practice.	771	0
F7PMBNPM Nanotechnology for Medicine	Z,ZK	3
The course introduces students to nanomaterials that can be used in modern analytical and diagnostic methods in nanomedicine. The course lectures		
basic characteristics such as size and chemical potential, their preparation methods and surface functionalization. The course also covers the optical ch and the basics of luminescence and phosphorescence principles and their detection using confocal principles. In the last part of the course, magnetic p		
nano-NMR detection methods are presented and examples used for optical and magnetic methods in nanomedicine for detection of target		
F7PMBOP1 Internship I.	Z	2
Professional Practice I complements the practical part of the Biomedical Engineering programme. Students get to know in practice and in more detai	I – I	
biomedical engineer in medical institutions, specifically in routine clinical operation. The professional practice is designed so that the student spends a		
health care facilities at workplaces using diagnostic medical devices including imaging methods, at least 20 hours at workplaces using therapeutic me		
hours at workplaces using laboratory medical devices. The work experience shall also include at least 5 hours in the technical and operational section		
compressor stations and back-up power supplies, and 5 hours in the metrology section. During the internship, the student will get acquainted with proce	esses and procedu	res that are
directly related to the daily activities of a biomedical engineer with activity in clinical operation: the issue of evaluating failures of medical devices and tec	hnologies, includin	g corrective
solutions, implementation of regular calibration or verification of measuring instruments, implementation of regular safety and technical checks of me	dical devices, acce	otance of
delivered medical equipment including the necessary documentation, etc.		
F7PMBOP2 Internship II.	Z	2
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between	the first and second	semesters
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments	the first and second of organisations de	semesters aling with
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During	the first and second of organisations de the internship, the	aling with student will
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedule	the first and second of organisations de the internship, the ires and the choice	d semesters ealing with student will of technical
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential participation in the evaluation of selection procedures, etc.	the first and second of organisations de the internship, the ires and the choice t of the professiona	d semesters ealing with student will of technical I practice II
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems is at least 10 hours.	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare	a semesters ealing with student will of technical I practice II and at least
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential participation in the evaluation of selection procedures, etc.	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare	a semesters ealing with student will of technical I practice II and at least
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc.	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare	a semesters ealing with student will of technical I practice II and at least
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare es, analysis of adve	d semesters haling with student will of technical I practice II and at least rse events 2
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III.	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare es, analysis of adve	d semesters haling with student will of technical I practice II and at least rse events 2 f internship
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedur parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programme	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go	d semesters haling with student will of technical I practice II and at least rse events 2 f internship vernment
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedur parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a her organizations or even in commercial companies in the field of biomedical engineering. The implementation of the internship is always subject to the approval of the court	the first and second of organisations de the internship, the irres and the choice t of the professiona used in healthcare as, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor.	d semesters haling with student will of technical I practice II and at least rse events 2 f internship vernment
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course of	the first and second of organisations de the internship, the tres and the choice t of the professiona used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor.	d semesters aaling with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4
F7PMBOP2 Internship II. Professional Practice I complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activities in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a her organizations or even in commercial companies in the field of biomedical engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, research and science, types of research, relation to legislation and financi	the first and second of organisations de the internship, the tres and the choice t of the professiona used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a	d semesters aaling with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems in to hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical Engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, r	A second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i	d semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a horganies in the field of biomedical Engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The internship is always subject to the approval of the cours of easa with the following topics - characteristics of research and science, types of research, relation to legisla	A second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i	d semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection proceedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical Engineering. The implementation of the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resear and the grant process, basic characteristics of a professional text, content of individual sections, publishing	the first and second of organisations de the internship, the tres and the choice t of the professiona used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedu parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in adatbase systems in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical Engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics of research and science, types of research, relation of results in the form of charts. F7PMBPIZ Work with Information Sources and Resea	Image: constraint of the second of organisations defined the internship, the second of organisations defined the internship, the second of the professional used in healthcare sets, analysis of advect of the professional used in healthcare sets, analysis of advect of the profession of a second the s	d semesters aaling with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in adatbase systems in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical engineering. The internship is always subject to the approval of the cou F7PMBPIZ Work with Information Sources and Research Methodology The course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics and specifics of a professional text, content of individual sections, publishing practices, publishing ethics, c sources,	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare is se, analysis of adve Z e. The third block o salthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems is 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the cou F7PMBPIZ Work with Information Sources and Research	the first and second of organisations de the internship, the tres and the choice t of the professiona used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern specific	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in adatbase systems in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical engineering. The internship is always subject to the approval of the cou F7PMBPIZ Work with Information Sources and Research Methodology The course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics and specifics of a professional text, content of individual sections, publishing practices, publishing ethics, c sources,	the first and second of organisations de the internship, the tres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f Ise of modern specific s is discussed. App	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems of 0 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a hear available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics of specificing of texts, principles for creating presentations, presentation of results in the form of charts.	the first and second of organisations de the internship, the tres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern spects s is discussed. App eural networks (ANt	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential par is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in additing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a workplace that is closely related to biomedical engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the cours cleas with the following topics - characteristics or research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics and specifics of a professional text, content of individual sections, publishing practices, publishing thics, cosurces, typographical rules, mathematical typesetting	the first and second of organisations de the internship, the tres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern spects s is discussed. App eural networks (ANt	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedu parameters of medical equipment for the needs of the selection procedure, participation in the evaluation of selection procedures, etc. An essential par is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical engineering. The implementation of the internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research. Methodology The course deals with the following topics - characteristics of a professional text, content of individual sections, publishing practices, publishing practices, sources, typographical rules, mathematical typesetting, proofreading of text	the first and second of organisations de the internship, the tres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern spects s is discussed. App eural networks (ANt	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems in to hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in uditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a horganizations or even in commercial companies in the field of biomedical Engineering. The internship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics of secarch and science, types of research, relation to legislation and financial sources, resea and the grant process,	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern speci s is discussed. App eural networks (ANt s and simulated and KZ heurial ventures, co	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical nealing is 3 nsider the
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the valuation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in datbase systems in to hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in adulting activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's therenship is always subject to the approval of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics of segarch and science, types of research, relation to legislation and financial sources, resea and the grant process, basic characteristics of a professional of texts, principles for creating presentations, presentation of ne-sultienties, couropeshinds//deals methods of bi	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go is requiring specific rise supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f lse of modern speci is is discussed. App eural networks (ANI is and simulated and KZ neurial ventures, co I be able to specify	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems is at least 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in additing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering. The internship may include the implementation of measurements not available at the Faculty of Biomedical Engineering. The implementation of the internship may include the implementation of the course deals with the following topics - characteristics of research and science, types of research, relation to legislation and financial sources, resear and the grant process, basic characteristics and specifics of a professional text, content of individual sections, publishing practices, publishing entices, c sources, typographical rules, mathematical typesetting, proofreacing of texts, principles for creating presentat	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go is requiring specific rise supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f lse of modern speci is is discussed. App eural networks (ANI is and simulated and KZ neurial ventures, co I be able to specify	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems i to hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include the implementation in adulting activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a horganizations or even in commercial companies in the field of biomedical engineering. The implementation of the always subject to the approval of the court not available at the Faculty of Biomedical Engineering. The implementation of the internship is always subject to the approval of the court not available at the Faculty of Biomedical engineering. The implementation of legislation and financial sources, publishing entitics, sources, typographical ru	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern speci s is discussed. App eural networks (ANt s and simulated and KZ neurial ventures, co I be able to specify udents will interpre	al semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical nealing is 3 nsider the the basic t their own
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice inplemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems to thorus of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a he organizations or even in commercial companies in the field of biomedical Engineering. The implementation of the internship is always subject to the approval of the cou F7PMBP1Z Work with Information Sources and Research Methoology The course deals with the following topics - characteristics of search and science, types of researds, presentations, presentation of ne-sults in the form of charts. F7P	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of ealthcare facility, go is requiring specific rise supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f lse of modern speci is is discussed. App eural networks (ANI is and simulated and KZ neurial ventures, co I be able to specify	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic
F7PMBOP2 Internship II. Professional Practice I locmplements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation or selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems is 10 hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm will typically take place in a workplace that is closely related to the topic of the student's thesis. In the third block, the internship may take place in a workplace that is closely related to discince, types of research Methodology F7PMBP1Z Work with Information Sources and Research Methodology F7PMBP1Z Work with Information Sources and Research Methodology rbs course deals with the following topics - characteristics of research and sciscnce, types of research, relation to legisla	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block o ealthcare facility, go s requiring specific rse supervisor. KZ rch projects, grant a itation of sources, i t tables, graphs, dia KZ ds and algorithms f lse of modern speci s is discussed. App eural networks (ANt s and simulated and KZ neurial ventures, co I be able to specify udents will interpre Z,ZK	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic t their own 4
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems: 10 hours of familiansation with information systems. NIS, KIS, PACS and patient data security issues. This may include participation in audiling activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering programm into available at the Faculty of Biomedical Engineering. The internship may include the implementation of measurement not available at the Faculty of Biomedical Engineering. The internship is always subject to the approval of the cours dural block, the internship gettics, professional practice, publishing practices, publishing practice	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of pathcare facility, go is requiring specific rise supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f lse of modern specific is discussed. App eural networks (ANIt is and simulated and KZ neurial ventures, co I be able to specify udents will interpre Z,ZK	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic t their own 4 3
F7PMBOP2 Internship II. Professional Practice II complements the practical part of the Biomedical Engineering programme and directly follows the practice implemented between within the Professional Practice I block. Practical training in the second block can continue in a medical facility or can take place at other departments administrative issues in the field of biomedical engineering, e.g. at the Electrotechnical Testing Institute or the State Office for Drug Control, etc. During get acquainted with legislative and administrative processes that are directly related to the activity of a biomedical engineer: the issue of selection procedure, participation in the evaluation of selection procedures, etc. An essential part is at least 10 hours in the field of medical devices and measuring instruments registration, especially with emphasis on orientation in database systems is to hours of familiarisation with information systems, NIS, KIS, PACS and patient data security issues. This may include participation in auditing activitie in connection with medical technology, etc. F7PMBOP3 Internship III. Professional Practice III builds on previous blocks of professional practice and complements the practical part of the Biomedical Engineering The internship may include the implementation of measurement not available at the Faculty of Biomedical Engineering. The internship is always subject to the approval of the courd organizations or even in commercial companies in the field of biomedical engineering. The internship may include the implementation of measurement not available at with the following topics - characteristics of research and science, types of research. Plathodology F7PMBPIZ Work with Information Sources and Research Methodology The course deals with the following to	the first and second of organisations de the internship, the irres and the choice t of the professional used in healthcare es, analysis of adve Z e. The third block of pathcare facility, go is requiring specific rise supervisor. KZ rch projects, grant a itation of sources, i tables, graphs, dia KZ ds and algorithms f lse of modern specific is discussed. App eural networks (ANIt is and simulated and KZ neurial ventures, co I be able to specify udents will interpre Z,ZK	a semesters ealing with student will of technical I practice II and at least rse events 2 f internship vernment equipment 4 applications nformation grams and 3 or biosignal tral analysis lication of N). Practical healing is 3 nsider the the basic t their own 4 3

			1
F7PMBRP	Semester Project	Z	3
Within the year-long pro	roject, students choose the topic of an individual project in the field of biomedical engineering, which represents the first stage of t	he master's thesis	. The topics
from which students ch	hoose are available in the "Projects" database. Students can also provide their own assignment, which must be approved by the p	rogramme superv	isor and the
Head of Department.	. The main objective of the individual project is to generate a suitable thesis topic based on the current state of the art. The output	of the year-long p	oroject is a
description of the	e objectives of the follow-up thesis, an overview of the planned methods and the expected outputs and contributions in the field of	biomedical engine	eering.
F7PMBSPB	Statistics for Biomedicine	Z,ZK	5
The course deals wit	th the following topics - methods of statistical analysis intended primarily for medical research - clinical, biological, biochemical, bio	ophysical and othe	er studies,
methods of descriptiv	ive and inductive statistics, statistical epidemiological methods, hypothesis testing, comparison of groups (parametric and non-par	ametric methods)	, ANOVA,
correlation and simple r	regression analysis, multivariate regression models, multivariate linear models, logistic regression, discriminant analysis, survival an	nalysis, etc, model	calculations
	and interpretation of results.		
F7PMBSPMM	Software for Mathematical Modeling	Z,ZK	5
F7PMBTVZ	Technical Equipment for Health Care Facilities, the Infrastructure and Architecture	ZK	3
The course deals with	the following topics - infrastructure of a medical facility and its architecture, media distribution (utility networks - electrical wiring, s	pecifics of circuits	, water, gas
	and following topico a modelatio of a modelation and a sinteration (allar) for the model and a sinteration (allar)		
	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra		
distribution, power syste	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra	actical exercises ir	n the area o
distribution, power syste		actical exercises ir	the area of
distribution, power syste	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, whic for various types of premises and equipment, focus on barrier-free healthcare facilities.	actical exercises ir	the area of
distribution, power syste project development, fa	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pre amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, whic for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities	actical exercises in ch specify all the re	n the area o equirements
distribution, power syste project development, fa F7PMBVZ F7PMBZAO	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, whic for various types of premises and equipment, focus on barrier-free healthcare facilities.	ch specify all the ro ZK Z,ZK	the area o equirements 3 5
distribution, power syste project development, fa F7PMBVZ F7PMBZAO The course deals with	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pre amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis	zctical exercises in ch specify all the ro ZK Z,ZK transformation, his	the area o equirements 3 5 stogram of
distribution, power system project development, fa F7PMBVZ F7PMBZAO The course deals with brightness, image acquire	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pre amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to	ZK Z,ZK transformation, his g of image, PCA,	the area o equirements 3 5 stogram of brightness
distribution, power syste project development, fa F7PMBVZ F7PMBZAO The course deals with brightness, image acq transformation, geom	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin	ZK Z,ZK transformation, his g of image, PCA, ttection, linear and	the area o equirements 3 5 stogram of brightness d nonlinear
distribution, power system project development, fa F7PMBVZ F7PMBZAO The course deals with brightness, image acquirtansformation, geometry	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance t quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin netric transformations, interpolation, registration, processing in the spatial domain, convolution, correlation, noise filtering, edge de matical morphology, image compression, color images, texture, segmentation of objects in images, description of objects in image	ZK Z,ZK transformation, his g of image, PCA, tection, linear and	the area o equirements 3 5 stogram of brightness d nonlinear
distribution, power syste project development, fa F7PMBVZ F7PMBZAO The course deals with brightness, image acq transformation, geom methods, mathem	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin netric transformations, interpolation, registration, processing in the spatial domain, convolution, correlation, noise filtering, edge de matical morphology, image compression, color images, texture, segmentation of objects in images, description of objects in image Medical Imaging Processing	ZK Z,ZK transformation, his of image, PCA, ttection, linear and s, and their recog	the area o equirements 3 5 stogram of brightness d nonlinear nition.
distribution, power syste project development, fa F7PMBZAO F7PMBZAO The course deals witt brightness, image acc transformation, geom methods, mathen F7PMBZMO F7PMBZPO	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin netric transformations, interpolation, registration, processing in the spatial domain, convolution, correlation, noise filtering, edge de matical morphology, image compression, color images, texture, segmentation of objects in images, description of objects in image Medical Imaging Processing Introduction to Law and the Protection of Industrial Property	ZK Z,ZK Z,ZK transformation, his of image, PCA, etection, linear and es, and their recog Z ZK	a the area o equirements 3 5 stogram of brightness d nonlinear nition. 3 3
distribution, power syste project development, fa F7PMBZAO The course deals with brightness, image aco transformation, geom methods, mathen F7PMBZMO F7PMBZPO P edm t je koncipova	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin netric transformations, interpolation, registration, processing in the spatial domain, convolution, correlation, noise filtering, edge de matical morphology, image compression, color images, texture, segmentation of objects in images, description of objects in image Medical Imaging Processing	ZK Z,ZK Z,ZK transformation, his g of image, PCA, etection, linear and es, and their recog Z ZK rámci p edm tu s	a the area o equirements 3 5 stogram of brightness a nonlinear nition. 3 3 3 3 3 5
distribution, power syste project development, fa F7PMBZAO The course deals with brightness, image acor transformation, geom methods, mathen F7PMBZMO F7PMBZPO P edm t je koncipova seznámí s nejr zn jším	tems, power supplies, drives, compensation, spaces in healthcare - specifics of individual spaces, steam distribution systems), pra amiliarization with the necessary related Czech technical norms and standards of the Ministry of Health of the Czech Republic, which for various types of premises and equipment, focus on barrier-free healthcare facilities. Public Health, Management of Medical Facilities Image Processing and Analysis the the topics - digital image processing vs. computer vision, the role of interpretation, objects in the image, digital image, distance to quisition from the geometric and radiometric point of view, Fourier transform, derivation of the sampling theorem, frequency filterin netric transformations, interpolation, registration, processing in the spatial domain, convolution, correlation, noise filtering, edge de matical morphology, image compression, color images, texture, segmentation of objects in images, description of objects in image Medical Imaging Processing Introduction to Law and the Protection of Industrial Property rán jako p ehled základních legislativních p edpis ve zdravotnictví z oblasti medicínského práva, ochrany duševního vlastnictví. V	ZK Z,ZK Z,ZK transformation, his g of image, PCA, etection, linear and es, and their recog Z ZK rámci p edm tu s ho procesu, princi	a the area o equirements 3 5 stogram of brightness a nonlinear nition. 3 se student py a zásady

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2025-07-04, time 02:50.