Study plan

Name of study plan: Prospectus - doktorský

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: Doctoral full-time Required credits: 0 Elective courses credits: 0 Sum of credits in the plan: 0 Note on the plan:

Name of the block: pomocná Minimal number of credits of the block: 0 The role of the block: !

Code of the group: PRO-D-0 Name of the group: Courses that will certainly be open Requirement credits in the group: Requirement courses in the group: Credits in the group: 0 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
F7ADIBM	Biomechanics	ZK		20P+8C	*	!
F7ADIBIOC	Biosystem Man	ZK		20P+8C	*	!
F7ADIZJB	Digital Processing of 1D Signals	ZK		20P+8C	*	!

Characteristics of the courses of this group of Study Plan: Code=PRO-D-0 Name=Courses that will certainly be open

F7ADIBM	Biomechanics	ZK				
The aim of the course is to acquaint students with current trends in the biomechanics. The course offers information about the current possibilities of using the field of biomechanics in						
practice and specific areas of research. Attention is paid mainly to aspects of biomechanics, ergonomics, orthopedic biomechanics, biomechanics of the musculoskeletal system, clinical						
biomechanics and biomechanics of biomaterials.						
F7ADIBIOC	Biosystem Man	ZK				
Basic concepts of system	nic approach to the human organism. Functional organization of living systems. Integrated functions and importance of systems	interesting biome	dical technicians			
and engineers. Principles of experimental and investigative methods used in physiology and medicine. Examples of modern technological contributions to medicine.						
F7ADIZJB	Digital Processing of 1D Signals	ZK				
The subject deals with origins and description of the most important electric and non-electric biological signals. The principles of generation, recording and basic properties are studied						
in all the signals. The studied signals involve native and evoked biosignals, including biological signals of the heart, brain, muscles, nervous system, auditory signals, visual system,						
signals from the gastro-intestinal system etc. Advanced methods of digital biosignal processing, spectrum analysis, modern methods of artificial intelligence, features extraction,						
automatic classification, and graphic presentation of results. Adaptive segmentation, artificial neural networks for signal processing.						

List of courses of this pass:

Code	Name of the course	Completion	Credits				
F7ADIBIOC	Biosystem Man	ZK					
Basic concepts of systemic approach to the human organism. Functional organization of living systems. Integrated functions and importance of systems interesting biomedical technicians							
and engineers. Principles of experimental and investigative methods used in physiology and medicine. Examples of modern technological contributions to medicine.							

Biomechanics

ΖK The aim of the course is to acquaint students with current trends in the biomechanics. The course offers information about the current possibilities of using the field of biomechanics in practice and specific areas of research. Attention is paid mainly to aspects of biomechanics, ergonomics, orthopedic biomechanics, biomechanics of the musculoskeletal system, clinical biomechanics and biomechanics of biomaterials.

F7ADIZJB

Digital Processing of 1D Signals ΖK The subject deals with origins and description of the most important electric and non-electric biological signals. The principles of generation, recording and basic properties are studied in all the signals. The studied signals involve native and evoked biosignals, including biological signals of the heart, brain, muscles, nervous system, auditory signals, visual system, signals from the gastro-intestinal system etc. Advanced methods of digital biosignal processing, spectrum analysis, modern methods of artificial intelligence, features extraction, automatic classification, and graphic presentation of results. Adaptive segmentation, artificial neural networks for signal processing.

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2025-07-27, time 16:02.