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** *Marek Piorecký **Jan Hejda** Marek Piorecký (Gar.)*	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 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.

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:

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F7ADIBIOC	Biosystem Man	ZK	

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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.			

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