

CURRICULUM OF BIOMEDICAL ENGINEERING PROGRAM

Curriculum of Biomedical Engineering Program

						G 1			G2		G3			G	4
Competence fields	Module	Туре	СР	Hours	S1	S2	S3	S4	S5	S6	S7	S8	S9	S 10	S 11
					СР	СР	СР	СР	СР	СР	СР	S7 S8 S9 S S 10 12 CP	СР		
	Advanced Mathematics	L	10	160	5	5									
	Linear Algebra	L	2	32				2							
Mathematics and natural sciences 34 CPs	Probability Theory and Mathematical Statistics	L	3	48				3							
	University Physics	L	4	64	2	2									
	University Physics Experiment	Р	0.5	16		0.5									
	Medical Chemistry (Organic)	L	1	16		1									
	Medical Chemistry (Inorganic)	L	1	16		1									
	Preclinical Medicine Theories	L&P	8	128				4	4						
	Principal of Clinical Medicine	L&P	2	32							2				
	Medical Statistics	L&P	2	32					2						
	College English (1)	L	4	64	4										
Foreign Languages	College English (2)	L	4	64		4									
16 CPs	College English (3)	L	4	64				4							
	College English (4)	L	4	64					4						
Informatics	C Program Design	L&P	3	48	3										
5 CPs	Python Program Design	L&P	2	32		2									
	Introduction to Engineering	L	2	32		2									
	Introduction to Biomedical Engineering	L	2	32	2										
Professional Basics 30 CPs	Circuit Theory	L&P	3	48		3									
	Engineering Mechanics	L&P	3	48				3							
	Analog Electronic Technology	L&P	4	64				4							



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	Digital Electronic Technology	L&P	3	48					3					
	Mechanical Drawing	L&P	4	64					4					
	Signals and Systems	L&P	3	48							3			
	Biomedical Engineering Research Norms and Ethics	L	1	16							1			
Professional Courses 17 CPs	Biomedical Sensors	L	2	32							2			
	Application Technique of Single Chip Microcomputer	L&P	3	48							3			
	Artificial Intelligence and Medical Applications	L&P	2	32							2			
	Digital Signal Processing	L	2	32								2		
	Biomedical Electronics	L	2	32								2		
	Principle and Application of Medical Instruments	L&P	2	32								2		
	Intelligent Medical Control Technology	L&P	3	48								3		
	Biomedical Optics	L&P	2	32							2			
	Principles of Medical Imaging	L&P	2	32							2			
	Medicine and Humanities	L&P	2	32							2			
	Biomechanics	L&P	2	32								2		
	Biomedical Ultrasound Technology	L&P	2	32								2		
	Virtual Medical Instrument Design	L&P	2	32								2		
	Mathematical Modeling	L&P	2	32								2		
Electives 14 CPs	Principle and Application of Embedded System	L&P	2	32									2	
	Microcomputer Principle and Application	L&P	4	64								4		
	Medical Image Processing and Analysis	L&P	2	32									2	
	Medical Laboratory Instruments and Technology	L&P	2	32									2	
	Medical Device	L&P	2	32							2			



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	Regulatory Science												
	Biomedical Materials	L&P	2	32						2			
	Biomedical Detection Technology	L&P	2	32						2			
	Human body Function Replacement Device	L&P	2	32							2		
	Introduction to Brain Science	L	2	32							2		
	Morality and Law	L&P	3	48		3							
	Outline of Modern Chinese History	L&P	3	48	3								
	Basic Principles of Marxism	L	3	48				3					
	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	L&P	3	48					3				
	Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	L&P	3	32					2				
General Courses	Situation and Policy	L	2	32	0.5	0.5		0.5	0.5				
43 CPs	Military Theory &	L&P	4	2W			4						
	Physical Education	L&P	5	144	1	1		1	1	0.5		0.5	
	Mental health education for university students	L&P	2	32		2							
	Career Planning and Employment Guidance	L&P	1	16				0.2 5	0.2 5	0.2 5	0.2 5		
	College Chinese	L&P	2	32	2								
	Public electives	L&P	6	96	1	1		1	1	1	1		
	Social practice	Р	2	128									
	Labor education	Р	2	32									
	Innovation and entrepreneurship	Р	2	64									



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Shangharoni	Fundamentals and Applications of MATLAB	Р	2	64			2								
Experiments and Practice 10 CPs	Comprehensive Experiment of Analog Electronic Technology	Р	1	32						1					
	Comprehensive Experiment of Digital Electronic Technology	Р	1	32						1					
	Comprehensive Design of Electronic	Р	2	64						2					
	Digital Signal Processing Course Design	Р	1	32									1		
	Biomedical Electronics Course Design	Р	1	32									1		
	Integrated Biomedical Engineering Design	Р	2	64										2	
	Internship	Р	1	2W									2		
Undergraduate Graduation Project 10 CPs	Bachelor Thesis	Р	8	16W											8
CP SUM = 171.5	CP PER SEMESTER						6	26. 75	21. 75	4		26. 25	4	8.5	8
ECTS	5 75 75 75 25													4	

(Note: CP-Credit Point, G-Grade, S-Semester, L-Lecture, P-Practice, W-Week)