



CURRICULUM OF BIOMEDICAL ENGINEERING PROGRAM

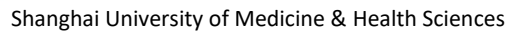


Curriculum of Biomedical Engineering Program

Competence fields	Module	Type	CP	Hours	G1			G2			G3			G4	
					S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11
					CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
Mathematics and natural sciences 34 CPs	Advanced Mathematics	L	10	160	5	5									
	Linear Algebra	L	2	32				2							
	Probability Theory and Mathematical Statistics	L	3	48				3							
	University Physics	L	4	64	2	2									
	University Physics Experiment	P	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						
Foreign Languages 16 CPs	College English (1)	L	4	64	4										
	College English (2)	L	4	64		4									
	College English (3)	L	4	64				4							
	College English (4)	L	4	64					4						
Informatics 5 CPs	C Program Design	L&P	3	48	3										
	Python Program Design	L&P	2	32		2									
Professional Basics 30 CPs	Introduction to Engineering	L	2	32		2									
	Introduction to Biomedical Engineering	L	2	32	2										
	Circuit Theory	L&P	3	48		3									
	Engineering Mechanics	L&P	3	48				3							
	Analog Electronic Technology	L&P	4	64				4							



	Digital Electronic Technology	L&P	3	48					3							
	Mechanical Drawing	L&P	4	64					4							
	Signals and Systems	L&P	3	48						3						
Professional Courses 17 CPs	Biomedical Engineering Research Norms and Ethics	L	1	16						1						
	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					
Electives 14 CPs	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				
	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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Experiments and Practice 10 CPs	Fundamentals and Applications of MATLAB	P	2	64			2										
	Comprehensive Experiment of Analog Electronic Technology	P	1	32						1							
	Comprehensive Experiment of Digital Electronic Technology	P	1	32						1							
	Comprehensive Design of Electronic	P	2	64						2							
	Digital Signal Processing Course Design	P	1	32											1		
	Biomedical Electronics Course Design	P	1	32											1		
	Integrated Biomedical Engineering Design	P	2	64												2	
	Internship	P	1	2W											2		
Undergraduate Graduation Project 10 CPs	Bachelor Thesis	P	8	16W													8
CP SUM = 171.5	CP PER SEMESTER				24.5	29	6	26.75	21.75	4	26.75	26.25	4	8.5	8		
ECTS	(Contact Hours + Self-study Hours) /30 = (2932+20W×32+3124) /30 ≈224																

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