

2012 Undergraduate Curriculum for Biomedical Engineering (I)

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0004311	Ethical Conduct and Fundamentals of Law	Exam	3	48	32	0	16		3														School of Marxism		
0000011	Physical Education-1	General Assessment	1	32	32	0	0		1														Department of Physical Education		
0000007	College English (Band One)	Exam	4	64	64	0	0		4														College of Foreign Languages		
0001903	Calculus (Engineering)-1	Exam	5.5	99	64	0	0	35	5.5														College of Applied Sciences		
0004312	Modern Chinese History	Exam	2	32	32	0	0				2												School of Marxism		
0000012	Physical Education-2	General Assessment	1	32	32	0	0				1												Department of Physical Education		
0000008	College English (Band Two)	Exam	4	64	64	0	0				4												College of Foreign Languages		
0000072	University Physics I-1	Exam	4	64	64	0	0				4												College of Applied Sciences		
0001904	Calculus (Engineering)-2	Exam	5.5	99	64	0	0	35			5.5												College of Applied Sciences		
0001908	Linear Algebra (Engineering)	Exam	3	54	48	0	0	6			3												College of Applied Sciences		
0002784	Fundamentals of National Defense	General Assessment	2	32	32	0	0					2											Students' Affairs Office		
0004361	Introduction to Philosophy	Exam	3	48	48	0	0						3										School of Marxism		
0000013	Physical Education-3	General Assessment	1	32	32	0	0						1										Department of Physical Education		
0000009	College English (Band Three)	Exam	4	64	64	0	0						4										College of Foreign Languages		
0000025	Complex Variables and Integral Transforms	Exam	3	54	54	0	0						3										College of Applied Sciences		
0000073	University Physics I-2	Exam	4	64	64	0	0						4										College of Applied Sciences		
0003333	Probability and Statistics (Engineering)	Exam	3	54	50	0	0	4					3										College of Applied Sciences		
0006457	Fundamentals of Chinese Sociology	Exam	4	64	48	0	16								4								School of Marxism		
0000014	Physical Education-4	General Assessment	1	32	32	0	0							1									Department of Physical Education		
0000010	College English (Band Four)	Exam	4	64	64	0	0							4									College of Foreign Languages		
University Requirements		Sub-total	62	1096	984	0	32	80	13.5		19.5	2	18		9										
0007080	Freshmen Seminar Course	General Assessment	1	16	0	0	16		1														College of Life Science and Bioengineering		

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0000111	Fundamentals of Circuits Analysis II	Exam	5	80	60	12	0	8			5												College of Electronic Information and Control Engineering		
0000123	Digital Electronics	Exam	4	64	60	4	0					4											College of Electronic Information and Control Engineering		
0004333	Analog Electronics	Exam	3.5	56	56	0	0					3.5											College of Electronic Information and Control Engineering		
0005622	Anatomy and Physiology	Exam	2.5	40	40	0	0							2.5									College of Life Science and Bioengineering		
0004186	Signal and System I	Exam	4	64	64	0	0							4									College of Electronic Information and Control Engineering		
0000330	Foundation of C Language Programming	Exam	3	48	32	16	0								3								College of Life Science and Bioengineering		
0009016	Principles and Applications	Exam	3	48	48	0	0								3								College of Life Science and Bioengineering		
0009047	Digital Signal Processing II	Exam	3	48	48	0	0								3								College of Life Science and Bioengineering		
0007665	Biomedical Measurement and Sensors	Exam	2	32	32	0	0								2								College of Life Science and Bioengineering		
0005623	The Biomedical Electron and Devices	Exam	2.5	40	40	0	0										2.5						College of Life Science and Bioengineering		
0003639	Biomedical Signal Processing I	Exam	3	48	48	0	0										3						College of Life Science and Bioengineering		
0005626	Medical Image Processing	Exam	3	48	48	0	0										3						College of Life Science and Bioengineering		
Discipline Requirements		Sub-total	39.5	632	576	32	16	8	1		5		7.5		6.5		11		8.5						
0004747	Machine Shop Training B	General Assessment	2	60	0	60	0				2												College of Mechanical Engineering & Applied Electronics Technology		
0004964	Physics Laboratory (Engineering)-1	General Assessment	1	24	2	22	0				1												College of Applied Sciences		
0003087	Practices of National Defense	General Assessment	1	30	0	0	30					1											Students' Affairs Office		
0004594	Laboratory of Electrical Engineering-1	General Assessment	1	24	0	24	0					1											College of Electronic Information and Control Engineering		
0004965	Physics Laboratory (Engineering)-2	General Assessment	1.5	36	0	36	0					1.5											College of Applied Sciences		
0004625	Laboratory of Electrical Engineering-2	General Assessment	2.5	60	0	60	0							2.5									College of Electronic Information and Control Engineering		
0003797	Experiments for Anatomy and Physiology I	General Assessment	1.5	36	0	36	0							1.5									College of Life Science and Bioengineering		
0007069	Social Practices	General Assessment	2	48	0	0	48								2								School of Marxism		
0007115	Cognitive Practice	General Assessment	1	30	0	0	30								1								College of Life Science and Bioengineering		
0006163	Microcontroller Principle and Interface Experiment	General Assessment	1.5	36	0	36	0								1.5								College of Life Science and Bioengineering		
0003799	Experiments for Biomedical Measurement	General Assessment	1.5	36	0	36	0								1.5								College of Life Science and Bioengineering		

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0003798	Experiments of Biomedical Electronion	General Assessment	1.5	36	0	36	0										1.5						College of Life Science and Bioengineering		
0007666	The Curriculum Design of Medical Signal Processing	General Assessment	1.5	45	0	45	0										1.5						College of Life Science and Bioengineering		
0007187	Professional Practice	General Assessment	4	120	0	0	120												4				College of Life Science and Bioengineering		
0007188	Comprehensive Training of Specialty Practice	General Assessment	2	60	0	60	0													2			College of Life Science and Bioengineering		
0007189	Medical Instrument Course Design	General Assessment	3	90	0	90	0													3			College of Life Science and Bioengineering		
0005237	Senior Project	General Assessment	16	480	0	0	480															16	College of Life Science and Bioengineering		
Practical Requirements		Sub-total	44.5	1251	2	541	708		0		3	1	2.5		4	3	3		3	4	5		16		
Discipline Electives			6	96	96				4										2						
Major Requirements			6	96	96											2		2		2					
Major Electives			12	192	160			32	4							4		2		2					
GEESEM:EM			4	64	64											4									
General Education Electives			12	192	192											2		2		8					
Electives		Sub-total	40	640	608			32	8					0		12		8		12					
Total for Theoretical Instruction			141.5	2368	2168	32	48	120	22.5		24.5		25.5		15.5		23		14.5		12				
Total for Practical Instruction			44.5	1251		541	708				3	3	2.5		4	3	3		3	4	5		16		
Innovation Requirements			4	96	0	0	96											2.5		1.5					
Total			190	3715	2168	573	852	120	22.5	0	27.5	3	28	0	19.5	3	26	0	22	4	18.5		16		

Notation: GEESEM:EM is the abbreviation for General Education Electives for Science and Engineering Majors: Economics and Management.

2012 Undergraduate Curriculum for Biomedical Engineering (II)

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0000066	Engineering Graphics V	Exam	3	48	48	0	0		3															College of Mechanical Engineering and Applied Electronics	
0007111	Fundamentals of Information Technology	General Assessment	1	16	16	0	0		1															College of Computer Science	
0007667	Programming with Visual Basic (Chinese/English)	Exam	2	32	32	0	0										2							College of Life Science and Bioengineering	
0007482	Fundamentals of Software Engineering	General Assessment	2	32	32	0	0										2							College of Computer Science	
Discipline Electives		Sub-total	8	128	128	0	0		4								4								
0007162	Medical Information Retrieval (Chinese/English)	General Assessment	2	32	32	0	0		2															College of Life Science and Bioengineering	
0003346	Introduction of Life Science	Exam	2	32	32	0	0		2															College of Life Science and Bioengineering	
0006160	Computer Networks in Medical Application	Exam	2	32	32	0	0								2									College of Life Science and Bioengineering	
0007190	Medical Biophysics	General Assessment	2	32	32	0	0								2									College of Life Science and Bioengineering	
0007191	Modern Medical Equipment	General Assessment	2	32	32	0	0										2							College of Life Science and Bioengineering	
0006161	MATLAB & Its Application in Biomedical Engineering	General Assessment	2	32	0	0	0	32												2				College of Life Science and Bioengineering	
Major Requirements		Sub-total	12	192	160	0	0	32	4						4		2		2						
0003441	Introduction of Base Medicine	General Assessment	2	32	32	0	0								2									College of Life Science and Bioengineering	
0007192	Object-Oriented Programming Design C++	General Assessment	2	32	16	16	0								2									College of Life Science and Bioengineering	
0007193	Medical Device Production and Operation Legislation	Exam	2	32	32	0	0										2							College of Life Science and Bioengineering	
0007194	Medical Biomechanics (Chinese/English)	General Assessment	2	32	32	0	0										2							College of Life Science and Bioengineering	
0004668	Bioinformatics	Exam	2	32	32	0	0													2				College of Life Science and Bioengineering	
0007195	Biomedicine Statistics	Exam	2	32	32	0	0													2				College of Life Science and Bioengineering	
Major Electives		Sub-total	12	192	176	16	0								4		4		4						

Vice-Director:

Vice-President:

Date:

Date: