



## Graduate Program for Biomedical Engineering

School	College of Materials	Student Type	Master				
Discipline	Biomedical Engineering	Discipline Code	0831				
Subject included							
Length of Study	Master <u>3</u> years;						
Credit Requirements	Master $\geq 23$ credits: $\geq 20$ credits for courses, <u>3</u> credits for other academic sections.						
Program Objectives	This program aims to cultivate innovative talents who (1) are equipped with basic theories of biology, medical science, and engineering science, and academic thoughts; (2) are able to do inter-disciplinary researches, and express their academic views fluently; and (3) are able to conduct researches of academic significance and application value.						
Requirements of Research Ability and Other Aspects	<p>Candidates are required to:</p> <ol style="list-style-type: none"> <li>1. grasp the development, literature, experimental methods and testing techniques of the chosen field, and be of the ability to apply them to their thesis writing;</li> <li>2. be of the ability to design, observe, record, and analyze experiments, and the ability to discover and solve problems;</li> <li>3. be of the ability to process data and search for literature;</li> <li>4. be of the ability to write scientific articles in both Chinese and English.</li> </ol>						
<b>Curriculum</b>							
(*SP-Spring semester; FA-Fall semester; SU-Summer semester; C-Compulsory; O-Optional)							
Category	Course Code	Course Name	Credit	Semester	Master	PhD	Remarks
General Courses: Master <u>4</u> credits	000010201	The First Foreign Language	2	FA,SP	C		
	000010102	Study on the Theory and Practice of Socialism with Chinese Characteristics	1	FA,SP	C		
	000010104	Nature Dialectics	1	FA	C		
Compulsory Courses: Master $\geq 9$ credits	320030201	Concept and Interface of Biomaterials	3	FA	O		3 out of the 4
	320010202	Advanced Molecular Biology	3	FA	O		
	320030203	Drug Delivery System	3	FA	O		
	320010204	Biophysics	3	FA	O		
	320010109	Laboratory Safety Training	0	FA	C		
	320010110	Research Methods and Presentation Skills	2	SU	O		



Optional Courses: Master $\geq 7$ credits	320010111	Scientific-Technical Information Retrieval	1	FA	O	320010109 is a compulsory course for all candidates though there is no credit for it.
	320030131	Functional Polymer Materials	2	SP	O	
	320030205	Nanomolecular Imaging	2	FA	O	
	320030206	Modern Analysis of Biomaterials	2	FA	O	
	320030207	Biocompatibility Assessment of Medical Devices and Materials	2	FA	O	
	320010208	Biological Engineering Technology	2	FA	O	
	320030209	Tissue Engineering	2	FA	O	
Other Requirements	<p>1. Candidates shall design an individual study plan within the first 2 weeks of their first school term. After the study plan is reviewed and approved by the supervisor with signature, candidates shall submit it to the college for the record. Courses selected or quitted will not be valid without the supervisor's approval.</p> <p>2. Candidates shall abide by rules established by the college and the department.</p>					
<b>Other Academic Sections (C-Compulsory; O-Optional)</b>						
Category	C or O	Credit	Requirements	Evaluation (Ways and time)		
Academic Lectures	C	1	<p>Postgraduates shall attend at least 20 academic lectures, or reports on engineering technology, and, every time, shall fill out a form (Candidates can download it from the school website "Download Center") and have it signed by the anchorperson.</p> <p>PhDs are required to deliver reports at least one time in the college, or read their academic papers in national or international conferences. For those who choose to deliver reports, they shall have their reports written and signed by their supervisor, and send it to the college for the record prior to their thesis defense.</p>	<p>Prior to the thesis defense, candidates shall submit a report on attending academic lectures (including academic reports) with at least 1,000 characters.</p>		
Mid-term Assessment	C	1	<p>The mid-term assessment consists of an oral report and a written report. The oral report shall indicate: (1) the objective and significance of the subject; (2) academic outcomes already achieved; (3) existing or potential problems and their corresponding solutions; (4) scheduling. The written report shall be an essay with at least 3,000 characters, containing a preface, experiments, discussions, and a conclusion. Candidates</p>	<p>The assessment is usually organized in the summer term of the second academic year.</p>		



			who have not undertaken the mid-term assessment are not be allowed to apply for the thesis defense; those who fail their assessment are allowed a second chance three months later; if they fail the second time, they will be shunted.	
Literature Review and Research Report	C	1	A thesis proposal consists of an oral report and a written report. The oral report shall indicate: (1) the purpose and the significance of the subject; (2) the status quo of its research at home and abroad; (3)research objectives and its expected purposes; (4) a feasibility analysis of the research; (5)the scheduling; (6) others (e.g. the results of a pilot study). The written report shall be an essay with at least 3,000 characters and at least 30 references, which contains a preface, experiments, discussions, and a conclusion. Candidates who do not report their thesis proposal are not allowed to apply for a thesis defense. Candidates who fail their proposal report are allowed a second chance three months later. Candidates who fail two times will be shunted.	It is usually organized in the summer term of the first academic year by the Department of Biomaterials. Candidates are evaluated as qualified or unqualified. It counts 1 credit.
Thesis	The thesis shall be concise, clear, and innovative. To obtain the degree, candidates are required to (1) publish at least 1 first-author (if the supervisor is the first author, and the candidate is the second, the candidate will be deemed as the first-author.) academic paper relevant to the thesis in journals in SCI, EI, or ISTP (the academic achievements will be recognized on the reception of the letter of acceptance), or obtain a patent.			
Major References and Journals (C-Compulsory; O-Optional)				
No.	Title	Author	Evaluation*	Remarks (C or O)
<p>Evaluation ways: 1. Examination: Knowledge of references and journals to be covered on the examination;</p> <p>2. Examination on thesis proposal or comprehensive examination;</p> <p>3. Reading Report;</p> <p>4. Other specific ways.</p>				