



Graduate Program for International Students



Graduate School

2020.07



生命科学与技术学院

School of Life Science and Technology

生物医学国际研究生中英文培养方案

Biomedical International Graduate Programs

一、培养目标 (Program objectives)

培养德、智、体全面发展，在生物医学领域具有创新能力的高层次科学研究人才，学生应满足以下要求：

To cultivate high-level scientific research talents with comprehensive development in morality, intellectual and physical development and innovative ability in the field of biomedicine, and specifically, students will achieve the following:

1. 具备良好的个人素养、社会公德和责任感，热爱自己的专业。

Have a good personal qualities, social morality and sense of responsibility, and love their academic specialization.

2. 掌握坚实宽广的生物医学基础理论和系统深入的专门知识，熟悉所从事研究方向的科学技术发展动态。

Master solidly and broadly the basic theory of biomedicine and systematic detailed specialized knowledge, and be familiar with the progress of development of science and technology in the research area studied.

3. 具有独立进行科学研究的知识、技能、洞察力和理解力，能独立从事生命医学领域及相关交叉学科方向科学研究，取得创新性的研究成果。

With knowledge, skills, insight and understanding needed for scientific research, he can independently conduct scientific research in the field of life science and related interdisciplinary research, and achieve innovative research results.

二、研究方向 (Research fields)

1. 生物医学工程 (Biomedical Engineering) ;
2. 生物学 (Biology) 。

三、学习年限 (Length of programs)

国际硕士研究生学习年限一般为 2-3 年，国际博士研究生学习年限一般为 3-5 年，经批准可适当延长，延长时间不超过 1 年。

The length of Masters' programs is 2 to 3 years, and that of doctoral programs is 3 to 5 years. Prolongation (no more than one year) has to be approved by the university.



四、培养方式 (Program overview)

1. 国际研究生入学后，由指导教师（导师）负责管理，导师应全面关心国际研究生的成长，严格要求和管理，注重在各个环节上培养国际研究生严谨与实事求是的治学态度。

After the international graduate students get registered, the tutor is responsible for management. The tutor should pay full attention to the development of international t graduate students, and pay attention to cultivating them to develop rigorous and down-to-earth work style and attitude.

2. 在指导上采取以导师为主、导师负责和专业系、所集体培养相结合的方法。

In guidance, the tutor takes the main responsibility combined with collective management of the respective department and institute.

3. 导师所在系、所应在国际研究生培养计划的执行、学位论文选题、科研工作及论文撰写、预答辩和答辩等各个环节上积极发挥集体培养的优势并起到监控作用，以提高国际研究生的培养质量。

The department and the institute where the tutor works should closely monitor the students in course work, research and thesis or dissertation writing, pre-oral defense reporting and oral thesis or dissertation defense so as to improve the quality of education.

4. 导师应根据本培养方案和因材施教的原则，于入学后 1 周内，制定出具体的培养计划。检查并督促研究生的课程学习，指导研究生的论文选题、文献查阅、调研、科研工作、论文撰写和答辩。

The tutor should help the students to formulate a specific training plan within one week after the students get registered. Students have to engage in active course work, and the tutor must help the students with thesis or dissertation topic selection, literature search, surveying and other research work. .

5. 国际研究生培养实行资格考核和中期考核，考核由本学科“一级学科研究生培养与学科建设领导小组”组织。中期考核通过，硕士记 3 学分，博士记 6 学分，中期不通过者，硕士予以退学处理，博士可以参加下学期的中期考核，再次考核不通过者予以转硕或退学处理。

The international postgraduate students are subject to qualification assessment and mid-term assessment organized by the “First-level Discipline Directorial Group for Graduate Student Training and Discipline Construction”. When they have their mid-term assessment passed, they get 3 credits for Master's program, or 6 credits for Doctoral programs. Those who do not pass the mid-term assessment will be terminated from their Master's program; but for doctoral candidates, they can re-take the mid-term assessment next semester, and the students who fail again can transfer to the master's program or be terminated from the doctoral program,.

6. 研究生学位论文要由学生独立完成。研究生在完成所有课程学习、实践环节、学位论文并达到学校所要求的毕业和学位申请条件后方可申请毕业答辩和学位答辩，答辩通过并经校学位委员会审核通过后获得毕业证书和学位证书。

The graduate thesis/dissertation should be completed independently by the students. When students satisfy all requirements for graduation and degree granting, they can apply for oral defense of their thesis/dissertation. After they pass the oral defense, they can apply for granting a degree and graduation certificate.



五、课程学习(Course work)

(一) 国际硕士研究生(Master programs)

学术学位硕士生的课程学习应至少取得 24 学分，包括：公共课（汉语（I）2 学分、中国概况（I）2 学分）4 学分、专业学位课至少 8 学分，选修课至少 12 学分。新港报告纳入国际留学生选修课，学生听够 20 场讲座后可记 2 学分。

The academic Master's programs in Science and Engineering require at least 24 credits for course work. Required courses include *Comprehensive Chinese I* (2 credits), *Outline of China I* (2 credits), degree courses (no less than 8 credits), and elective courses (no less than 12 credits). Innovation Harbour Lectures are included in elective courses for international students, 2 credits will be granted after attending 20 Lectures.

必修环节包括：学术活动（讲座）1 学分、中期考核 3 学分。

Other compulsory activities include academic lectures (Masters) (1 credit) and mid-term assessment (3 credits).

国际硕士研究生课程设置和学分要求

Curriculum Design and Credit Requirements of Masters Programs

课程类型 Course Type	序号 No	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credit	备注 Notes
公共学位课 Public Course	1	272003	LITE610112	中国概况 (Outline of China)	2	必修 4 学分 4 credits required
	2	272004	LITE610227	综合汉语 (Comprehensive Chinese)	2	
专业学位课 Degree Course	1	132048	BICH710113	高级生物化学 Advanced Biochemistry	2	至少修 8 学分 A minimum of 8 credits required
	2	133006	BIOL640213	线粒体生物学 Mitochondrial Biology and Medicine	2	
	3	133008	BIME640113	医学统计与临床研究 方法 Medical Statistics and Clinical Research Methods	2	
	4	133010	BIME640313	生物医学超声 Biomedical Ultrasound	2	



课程类型 Course Type	序号 No	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credit	备注 Notes
选修课 Elective Course	1	133011	BIOL740113	疾病基因组学 Disease Genomics	2	至少修 12 学分 A minimum of 12 credits required
	2	133013	BIOL740313	高级神经生物学 Advanced Neurobiology	2	
	3	133012	BIOL740213	蛋白质组学 Proteomics	2	
	4	133015	BIME740213	光学纳米生物传感 Optical Nano-biosensing	2	
	5	133014	BIME740113	功能成像与分子影像 Functional Imaging and Molecular Imaging	2	
	6	133016	BIME740313	康复心理学 Rehabilitation Psychology	2	
	7	133017	BIME740413	机器学习 Machine Learning	2	
必修环节 Compulsory Activities	1	001997	BXHJ600399	学术活动(讲座)(硕) (Lectures) (Masters)	1	必修 4 学分 4 credits required
	2	001983	BXHJ600799	中期考核 (Mid-term Assessment)	3	

(二) 国际博士研究生(Doctoral Programs)

学术学位博士生课程学习应至少取得 12 学分，包括：公共课（汉语（II）2 学分、中国概况（II）2 学分）4 学分、专业学位课至少 4 学分，选修课至少 4 学分。新港报告纳入国际留学生选修课，学生听够 20 场讲座后可记 2 学分。

The academic doctoral programs require at least 12 credits for course work. Required courses include *Comprehensive Chinese II* (2 credits), *Outline of China II* (2 credits), degree courses (no less than 4 credits), and elective courses (no less than 4 credits). Innovation Harbour Lectures are included in elective courses for international students, 2 credits will be granted after attending 20 Lectures.

必修环节包括：学术活动（讲座）2 学分、开题报告 2 学分、中期考核 6 学分。



Other compulsory activities include academic lectures (Doctoral) (2 credits), dissertation proposal (2 credits), and mid-term assessment (6 credits).

国际博士研究生课程设置和学分要求

Curriculum Design and Credit Requirements of Doctoral Programs

课程类型 Course Type	序号 No	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credit	备注 Notes
公共学位课 Public Course	1	272003	LITE610112	中国概况 (Overview of China)	2	必修 4 学分 4 credits required
	2	272004	LITE610227	综合汉语 (Comprehensive Chinese)	2	
专业学位课 Degree Course	1	132067	BIOL610113	高级分子细胞生物学 Advanced Molecular Cell Biology	2	至少修 4 学分 A minimum of 4 credits required
	2	133009	BIME640213	纳米医学 Nanomedicine	2	
选修课 Elective Course	1	133011	BIOL740113	疾病基因组学 Disease Genomics	2	至少修 4 学分 A minimum of 4 credits required
	2	133012	BIOL740213	蛋白质组学 Proteomics	2	
	3	133006	BIOL640213	线粒体生物医学 Mitochondrial Biology and Medicine	2	
	4	132048	BICH710113	高级生物化学 Advanced Biochemistry	2	
	5	133013	BIOL740313	高级神经生物学 Advanced Neurobiology	2	
	6	133008	BIME640113	医学统计与临床研究方法 Medical Statistics and Clinical Research Methods	2	
	7		BIME640313	生物医学超声	2	



课程类型 Course Type	序号 No	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credit	备注 Notes
		133010		Biomedical Ultrasound		
	8	133015	BIME740213	光学纳米生物传感 Optical Nano-biosensing	2	
	9	133014	BIME740113	功能成像与分子影像 Functional Imaging and Molecular Imaging	2	
	10	133016	BIME740313	康复心理学 Rehabilitation Psychology	2	
	11	133017	BIME740413	机器学习 Machine Learning	2	
必修环节 Compulsory Activities	1	001999	BXHJ800399	学术活动(讲座) (博) (Lecture)(Doctor)	2	必修 10 学分 10 credits required
	2	001986	BXHJ800499	开题报告 Dissertation proposal	2	
	3	001994	BXHJ800199	中期考核 (Mid-term Assessment)	6	

六、培养环节 (Compulsory Activities)

1. 学术活动 (讲座) (Lectures)

国际硕士研究生学术活动 (讲座) 分为必听讲座和选听讲座。必听讲座包括“科学道德与学风建设”1 次、“职业生涯发展与规划导论”1 次；选听讲座包括与学科紧密相关的“学科前沿系列专题讲座” (由各二级学科组织若干教授对本学科前沿知识进行讲座，每个讲座由 5 个以上讲座组成) 一个系列和在全校范围内选听“学术讲座”1 次，完成全部 8 个讲座后记 1 学分。

Master students are required to attend 8 lectures, including 2 compulsory lectures (one on Scientific Morality and Construction of Study Style, and one on Introduction to Career Development and Planning), 5 lectures in series regarding discipline-specific frontiers development (organized by respective individual schools), and 1 elective within the university. Students will obtain 1 credit with full



attendance to the 8 lectures.

国际博士研究生学术活动（讲座）分为必听讲座和选听讲座。必听讲座为“科学道德与学风建设”；选听讲座包括与学科紧密相关的“学科前沿系列专题讲座”（由各二级学科组织若干教授对本学科前沿知识进行讲座，每个讲座由 5 个以上讲座组成）一个系列和在全校范围内选听“学术讲座”1 次，自己公开讲座 1 次，完成后记 2 学分。

Doctoral students are required to attend 7 lectures, including a compulsory lecture (one on Scientific Morality and Construction of Study Style), 5 lectures in a series regarding discipline-specific frontiers information (organized by the respective individual schools), and 1 elective within the university. In addition, they are also required to give a lecture. Students will obtain 2 credits by completing the whole series of activities.

2. 开题报告 (Thesis/Dissertation Proposal)

硕士研究生在第三学期结束前完成开题报告，两年毕业的硕士生应在第二学期结束前完成开题报告。研究生入学后应在导师指导下，查阅文献资料，了解学科现状和发展，尽早确定学位论文方向，制定论文工作计划，做好开题报告准备。

The Master's graduate students complete the thesis proposal before the end of the third semester. The Master's students who will graduate in two years should complete the thesis proposal before the end of the second semester. After entering the university, graduate students start literature search, understand the current situation and development of the discipline, determine the topic of the thesis as soon as possible, formulate the thesis research plan, and prepare for the thesis proposal.

硕士研究生开题报告的主要内容包括：选题的科学依据、主要研究内容和方案、研究计划及预期进展。开题报告会由学院或系、所统一组织。硕士生在参加论文选题报告会前应填写《硕士研究生学位论文选题报告》并提交学院。参加选题报告会的评审专家组一般由 3-5 名副高以上（含副高）专家组成。评审专家根据硕士生选题报告的情况给出评审结果，评审结果分“通过”、“修改后通过”或“不通过”三种情况。凡是获得“通过”的硕士生可以按照选题报告研究内容开展研究工作；凡是“修改后通过”的硕士生需按照专家意见修改后开展研究工作；凡是“不通过”的硕士生必须重新开展选题研究，三个月内再次申请进行选题报告，并被确定为质量跟踪对象。

The main contents of the Master's thesis proposal include the scientific basis of the topic selected, main research content, the research plan and the expected results. The thesis proposal will be organized by the inspective school or department. Master's graduate students should fill out the "Master's Thesis Proposal" and submit it to the school before participating in the thesis proposal reporting meeting. The panel of experts participating in the thesis proposal reporting meeting will generally consist of 3-5 experts with academic titles of or above associate professor. The experts will evaluate whether the proposal is qualified or not and label the proposal in one of the three levels: "pass", "pass after improvement" or "Failure". Those who get a "pass" can continue with the research; those who get a "pass after improvement" can continue on with their research after they improve their proposal according to the opinions or suggestions about their proposal; those who get a "failure" will retake the thesis proposal reporting within three months, and will be the target to follow for quality concern..

博士研究生在第二学年内完成开题报告。研究生入学后应在导师指导下，查阅文献资料，了解学科现状和发展，尽早确定学位论文方向，制定论文工作计划，做好开题报告准备。



The doctoral students shall complete the dissertation proposal within the second academic year. After getting registered, students should start literature search, understand the current situation and development of the discipline, determine the area of the dissertation as soon as possible, formulate the work plan for the dissertation, and prepare for the dissertation proposal.

博士研究生开题报告包括：文献综述、选题背景及意义、研究基础、研究内容、工作难点及特色、预期成果以及可能产生的创新点等。开题报告应以学术活动的形式在学院内公开进行，由导师及导师团队成员为主体组成的考核小组（至少 3 名）进行评审。开题报告考核小组鼓励吸收有关教师和研究生参加，交叉培养项目以及跨学科的论文选题应聘请相关学科的专家参加。开题报告由院系组织，一般应在第二学年内完成，具体时间由导师或院系决定，但开题报告通过至申请论文答辩时间一般不少于两年。

The doctoral graduates' dissertation proposal includes literature review, background and significance of the topic, research basis, research content, difficulties and characteristics, expected results and possible innovations. The report shall be open to the public in the form of an academic activity, and the assessment team (consisting of at least 3 members, including the tutor and the experts from the tutor team) shall be review the proposal. The report assessment team encourages the participation of relevant teachers and graduate students; for cross-cultivation projects and interdisciplinary dissertation proposals experts from the relevant disciplines should be included. The reporting activity is organized by the inspective department and should be completed in the second year. The specific time is determined by the tutor or the department, but the time from passing the dissertation proposal to application for degree is generally at least two years.

3. 中期考核 (Mid-term Assessment)

一般硕士研究生中期考核应在第四学期末完成；两年毕业的硕士生中期考核应在第三学期末完成。博士研究生自第三学年起至第四学年末完成博士中期考核。中期考核具体要求按照《西安交通大学关于加强硕士生培养过程质量监控的若干规定》（西交研〔2009〕18 号）执行。

The mid-term assessment of for master's graduate students should be completed at the end of the fourth semester; the mid-term assessment for students who will graduate in two years should be completed at the end of the third semester. Doctoral students complete the mid-term doctoral assessment from the third year to the end of the fourth year. The specific requirements for the mid-term assessment are in accordance with the "Several Provisions of Xi'an Jiaotong University on Strengthening the Quality Control of Master Students' Training Process" (Xi Jiaoyan [2009] No. 18).

4. 预答辩 (Pre-oral Thesis/Dissertation Defense)

国际研究生完成学位论文后须在系（所）单位内组织预答辩。预答辩具体要求按照《西安交通大学学位授予工作暂行办法》（西交研〔2003〕14 号）执行。

After completing the dissertation, international graduate students must undertake a pre-oral thesis/dissertation defense meeting in the department. The specific requirements for pre-oral defense activity are implemented in accordance with Xi'an Jiaotong University Tentative Measures for the Granting of Degrees (Xi Jiaoyan [2003] No. 14).

5. 学位论文 (Thesis/Dissertation)

对国际研究生完成学位论文和导师指导情况提出相关要求，基本内容应包含：论文水平、论



文开展时间、论文选题、申请学位的要求等。(参照《西安交通大学学位授予工作暂行办法》(西交研〔2003〕14号))

Relevant requirements for the completion of dissertations include the level of the thesis, the starting and closing dates of the thesis/dissertation, the topic, and the requirements for applying for a degree. (Refer to the Xi'an Jiaotong University Tentative Interim Measures for the Granting of Degrees (Xi Jiaoyan [2003] No. 14))

硕士学位论文的基本要求如下:

The basic requirements of the Master's thesis are as follows:

(1) 应在指导教师指导下, 由研究生本人独立完成;

The graduate student shall complete the thesis independently under the guidance of the instructor,;

(2) 论文有自己的新见解, 并力求在理论上或实际上, 对社会主义建设具有一定的意义;

The thesis has its own new insights and strives to have significance in theory or in practice for country's development;

(3) 为保证论文质量, 论文工作必须有一定工作量, 在论文题目确定后, 用于硕士学位论文工作的时间一般应有 1 个学年左右。

In order to ensure the quality of the thesis, the work of the thesis must be adequate in workload. After the topic of the thesis is determined, the time for the work of the Master's thesis should generally be about one academic year.

博士学位论文的基本要求如下:

The basic requirements of the doctoral dissertation are as follows:

(1) 应在指导老师指导下, 由研究生本人独立完成;

The graduate student shall complete the thesis independently under the guidance of the instructor;

(2) 论文应在科学或专门技术上做出创造性成果, 并在理论上或实际上, 对社会主义建设有较大的意义;

The thesis should make innovative achievements in science or specialized technology, strives to have significance in theory or in practice for country's development;

(3) 用于博士学位论文的工作时间一般应有 2 个学年左右。

The working time for doctoral dissertations should generally be around 2 academic years.

博士生提交的符合学位申请条件的论文至少 1 篇必须正式出版; 本规定所称“学术论文”是指申请人为第一作者或第二作者(本人为第二作者时, 第一作者应为其导师), 且西安交通大学为第一署名单位的学术研究论文(不包含综述、摘要类); 本规定所称“科研成果”是指西安交通大学为第一完成单位的科研成果; 本规定中的 SCI/SSCI/AHCI、国外期刊 SCI/EI/IM 收录论文以发表在收录源期刊为准, 国内 EI/IM 均以收录后为准, CSSCI 源期刊论文以正式发表为准。

At least one paper submitted by a doctoral student in accordance with the conditions for applying for a degree must be officially published; the term “academic paper” as used in this regulation refers to the applicant being the first author or the second author (when the second author is the author, the first author should be one from Xi'an Jiaotong University which is the first signing unit (excluding the summary and abstract categories); the term “scientific research results” as mentioned in this regulation refers to the scientific research achievements of Xi'an Jiaotong University as the first completing unit;



The SCI/SSCI/AHCI and foreign journals SCI/EI/IM papers are recognized according to the source of journal. The domestic EI/IM is subject to the inclusion, and the CSSCI source journal papers are subject to official publication.

本规定中的“全国核心期刊”、“国际知名学术刊物”、“高水平国际会议”以及“最有学术影响力的国际期刊”由各学院提出，研究生院组织专家审核后确定，并定期修订。

The “National Core Journals”, “Internationally Recognized Academic Journals”, “High-level International Conferences” and “The Most Academically Influential International Journals” in this regulation are proposed by the schools, and are reviewed by the graduate school experts and regularly revised. .

本规定中的盲审是指在学位论文的评审过程中，隐去被评审者及其指导老师、评审专家的姓名，使双方互不知晓。

The blind review stipulated in this regulation refers to the practice that the name of the reviewers and their tutor are kept hidden during the reviewing process, so that the two parties do not know each other.

为确保博士学位授予质量，研究生院负责对博士学位论文实行盲审。申请者须提交送审论文一式三份。具体规定如下：

In order to ensure the quality of the doctoral degree granting, the graduate school is responsible for the blind review of the doctoral dissertation. Applicants must submit a copy of the paper for approval in triplicate. The specific provisions are as follows:

(1) 在所属学科最有学术影响力的国际期刊上发表了学术论文或在国际知名学术刊物上发表 3 篇学术论文的博士生，其三份送审论文中的两份由所在学院送审，其余一份实行盲审；

For a doctoral student who has published academic papers on the Most Academically Influential International Journals or published three academic papers on internationally renowned academic journals, two of the three submitted papers would be sent out by the school for reviewing, and the last one is sent out by the graduate school for a blind review;

(2) 凡是满足《西安交通大学关于研究生学位申请的若干规定》（西交研〔2013〕23 号）第二条第（一）、（二）款规定的博士生，其三份送审论文中的一份由所在学院送审，其余两份实行盲审；

For any doctoral student who meets the requirements of paragraphs (1) and (2) of Article 2 of these Provisions (the "Xi'an Jiaotong University Several Provisions on Application for Doctoral Degrees" (Xi Jiao Yan [2013] No. 23)), one of the 3 submitted copies of dissertation will be sent out by the school while the rest 2 copies will be sent out the graduate school for blind review;

(3) 凡是满足《西安交通大学关于研究生学位申请的若干规定》（西交研〔2013〕23 号）第二条第（三）款规定的博士生，其三份送审论文全部实行盲审。

For doctoral students who meet the requirements of paragraph (3) of Article 2 of these Provisions(the "Xi'an Jiaotong University Several Provisions on Application for Doctoral Degrees" (Xi Jiao Yan [2013] No. 23)), all three copies will be sent out for blind review.

七、培养环节时间节点(Timeline and milestones)



学位类别 Program Type	课程学习 Course Work	开题报告 Thesis/dissertation proposal	中期考核 Mid-term Assessment	预答辩 Pre-oral defense Reporting	论文答辩 Oral Thesis/Dissertation Defense
硕士 Master's program	第一学年 First year	第二学年上半 学期 First half of second year	第二学年下半 学期 Second half of second year	第三学年下半 学期 Second half of the third year	第三学年下半学期 Second half of third year
博士 Doctoral program	第一学年 First year	第二学年 Second year	第三学年起至 第四学年 From third year to fourth year	第四学年下半 学期 Second half of fourth year	第四学年下半学期 Second half of fourth year

