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**国际创新药学院**

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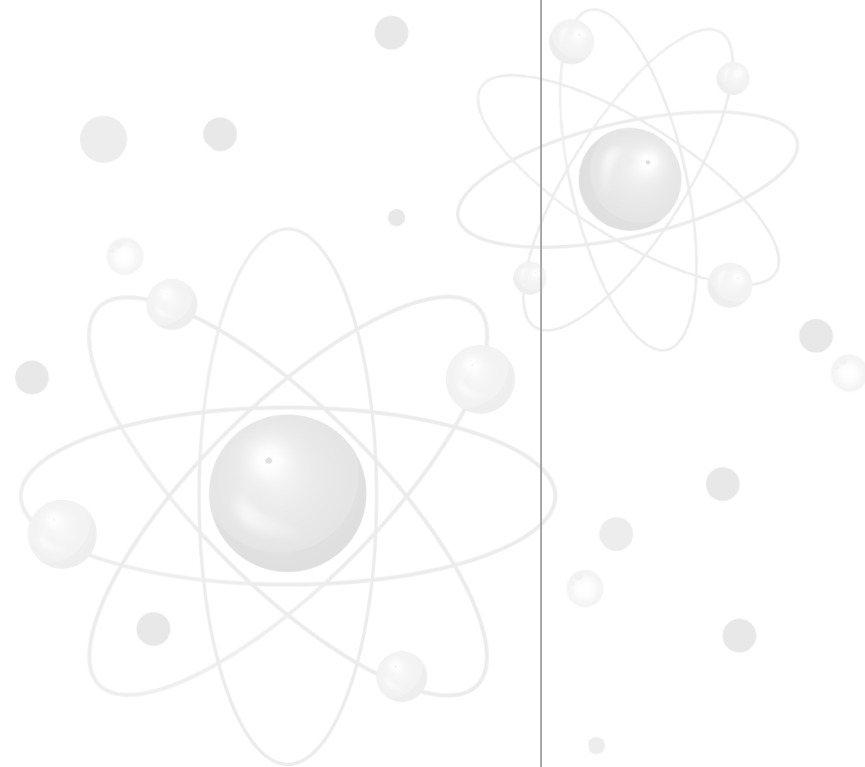




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学院概况

# What is ICPI ?

苏州大学国际创新药学院（ICPI）由苏州大学与爱尔兰皇家外科医学院（RCSI）联合创建，是教育部批准的国内首个专注药学领域的中外合作办学机构。

国际创新药学院坐落于苏州大学吴江未来校区，地处长三角一体化示范区的核心地带。其创建是苏州大学建设一流药学学科，推进世界一流大学建设的重要举措之一，也是构筑产业高地、引领区域发展的创新实践。学院依托苏州大学与RCSI的生物医药相关优势学科，通过强强联合、融合发展、资源嫁接，开展高水平、示范性中外合作办学，建立国际化药学拔尖创新人才培养体系，助力地区生物医药产业升级和区域经济发展，为全球生物医药产业输送紧缺人才。

The International College of Pharmaceutical Innovation (ICPI) is the first Sino-foreign joint educational institute established by Soochow University (SU) and RCSI University of Medicine and Health Sciences. It is located at the Future Campus of Soochow University in Wujiang District. ICPI combines the educational and research pedigree and expertise of SU and RCSI to deliver high-quality international education, aiming to empower the graduates to meet the needs of China's healthcare and pharmaceutical industries.



# 学院沿革 ICPI Developments

苏州大学与爱尔兰皇家外科医学院自2012年起开展科研交流、合作访问、人才联合培养。2015年两校签订合作备忘录，正式确立紧密的合作关系。近年来两校积极开展高层互访、师生学术交流和联合培养项目，累计互派师生交流80余人次，共同申请获得Erasmus+项目资助2次，成功获批国家留学基金委的创新人才培养项目1项。RCSI的John Waddington院士在我校的工作站获批“苏州外籍院士工作站”。基于近10年的合作基础，两校于2020年正式签订合作共建中外合作办学机构的框架协议，2022年正式向教育部递交申请材料，2023年4月苏州大学国际创新药学院正式获批。



Since 2012, Soochow University and RCSI have been engaged in research exchanges, collaborative visits, and joint talent training. In 2015, the two universities signed a memorandum of cooperation, formally establishing a close cooperative relationship. In recent years, the two universities have actively carried out high-level visits, academic exchanges between faculty and students, and joint training programs. More than 80 faculty and student exchanges have taken place, and they have successfully applied for and received funding from the Erasmus+ programme twice, as well as approval for an innovative talent training project from China Scholarship Council. Additionally Professor John Waddington from RCSI was granted a position at the "Suzhou Foreign Academician Workstation" at Soochow University. Based on nearly 10 years of cooperation, the two universities signed a framework agreement for the Sino-foreign joint educational institute in 2020, submitted the application to Ministry of Education in 2022, and got the official approval in April 2023.

# 合作大学 Partner University

## 苏州大学 国家“双一流”建设高校 Soochow University A “Double First-Class” University

苏州大学坐落于素有“人间天堂”之称的历史文化名城苏州，是国家“211工程”“2011计划”首批入列高校，是教育部与江苏省人民政府共建“双一流”建设高校、国家航天局共建高校，是江苏省属重点综合性大学。学校现有1个国家一流学科，4个国家重点学科，20个江苏高校优势学科，6个“十四五”江苏省重点学科。截至目前，学校化学、材料科学、临床医学、物理学、工程学、生物学与生物化学、药理学与毒理学、神经科学与行为学、分子生物与遗传学、免疫学、数学、计算机科学、农业科学、环境科学与生态学、一般社会科学、综合交叉学科、精神病学与心理学、微生物学、植物学与动物学共19个学科进入全球基本科学指标（ESI）前1%，其中，化学、材料科学、临床医学、药理学与毒理学、工程学5个学科进入全球基本科学指标（ESI）前1%。

学校现有教职工6034人，专任教师3518人，其中包括1位诺贝尔奖获得者，10位两院院士，13位发达国家院士，39位国家杰出青年基金获得者，46位国家优秀青年基金获得者，16位“万人计划”领军人才，9位“万人计划”青年拔尖人才等各类国家级人才超350人次。

Soochow University is located in Suzhou, a historical city known as the "Heaven on Earth." It is one of the pioneer universities included in the national "211 Project" and the "2011 Plan." It is jointly funded by the Ministry of Education and the Jiangsu Provincial People's Government. The university is part of the "Double First-Class" initiative and is co-constructed by the National Space Administration. It is a key comprehensive university in Jiangsu Province. The university currently has 1 national first-class discipline, four national key disciplines, twenty advantageous disciplines in Jiangsu universities, and six key disciplines in Jiangsu Province's "14th Five-Year Plan." As of now, nineteen disciplines at Soochow University, including Chemistry, Materials Science, Clinical Medicine, Pharmacology and Toxicology, Physics, Engineering, Biology





苏州大学药学学科在全国第五轮学科评估中跻身第一梯队，药理学与毒理学ESI全球排名前1‰，是江苏省重点学科及优势学科，获批国家级一流本科专业建设点、江苏省高校品牌专业、国际化人才培养品牌专业、药学拔尖人才培养基地，形成了本、硕、博及博士后完整的人才培养体系。苏州大学拥有一流药学研究平台，包括8个国家级和4个省级研究中心，在神经精神疾病、肿瘤、血液疾病、生物药开发、新型药物递送等研究方向均取得了突出成果。

(相关数据统计截止至2024年3月)



and Biochemistry, Pharmacology, Neuroscience and Behavioral Sciences, Molecular Biology and Genetics, Immunology, Mathematics, Computer Science, Agricultural Science, Environmental Science and Ecology, General Social Sciences, Interdisciplinary Studies, Psychiatry and Psychology, Microbiology, and Botany and Zoology, are among the top 1% based on the Essential Science Indicators (ESI) globally, with five disciplines ranking in the top 1‰. The university currently has 6,034 faculty members, including 3,518 full-time teachers, among whom there are 1 Nobel Prize laureate, ten academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, thirteen academicians from developed countries, thirty-nine recipients of the National



Science Fund for Distinguished Young Scholars, forty-six recipients of the National Science Fund for Excellent Young Scholars, sixteen leading talents of the "Ten Thousand Talents Program," and nine outstanding young talents of the "Ten Thousand Talents Program," totaling over 350 national-level talents. The Pharmacy discipline at Soochow University ranks in the top tier in the fifth round of national discipline evaluation, with its Pharmacology and Toxicology ranking in the top 1‰ globally in ESI. It is a key advantageous discipline in Jiangsu Province accredited as a national first-class undergraduate programme, a Jiangsu university brand major, an international talent training brand major, and a base for training top-notch talents in pharmacy. It has formed a complete talent training

system from undergraduate to doctoral and post-doctoral levels. With a first-class pharmaceutical research platform, including eight national-level and four provincial-level research centres, Soochow University has achieved outstanding results in research areas such as neurological and psychiatric diseases, tumors, blood disorders, biopharmaceutical development, and novel drug delivery system.





## 爱尔兰皇家外科医学院 爱尔兰久负盛名的医学院校 RCSI A World-Renowned Medical University in Ireland

爱尔兰皇家外科医学院 (RCSI University of Medicine and Health Sciences) 位于爱尔兰共和国首都都柏林的核心地带。RCSI成立于1784年，距今已有240年的历史，设有医学部、理疗学部和药学部。RCSI是培养高端医学和医疗健康行业人才的国际知名学府，是爱尔兰最大、最具盛名的医学院校。该校在泰晤士高等教育(THE)世界大学排名中位列全球第201-250位，在泰晤士高等教育(THE)世界大学影响力排名中位列第101-200位，其中“健康与社会福祉(Good Health and Well Being)”影响力排名位列全球第一位，“论文引用率”名列爱尔兰第一。RCSI在心血管疾病药物、神经药理、肿瘤药理、再生医学等领域处于世界前沿，药学相关研究论文的领域权重引用影响力达3.01，为世界平均水平的3倍。其研究成果影响世界卫生组织、联合国、欧盟、美国疾控中心等机构的医疗决策。

该校深度开展国际化教育，在巴林、迪拜、马来西亚设有三个海外分校，与美国哥伦比亚大学、宾夕法尼亚大学、塔夫茨大学、约翰·霍普金斯大学、梅奥诊所等世界知名大学与医疗机构开展学生实习和联合培养工作。学校致力于提供以患者为中心全面整合式的教学和研究，鼓励未来的医疗专业人员成为终身学习者，在各自的领域中与时俱进。学校直接参与与爱尔兰药学专业人才培养标准和行业规范的制订，是国际公认的药学教育、研究和创新的前沿机构。

爱尔兰毗邻英国，与英国的教育体制基本相同，

是欧洲除英国以外唯一以英语为母语的国家。随着爱尔兰政府对教育的持续投入，爱尔兰所有大学均名列世界前5%，已成为欧洲受高等教育人口比例最高的国家。爱尔兰高科技产业发达，有“欧洲硅谷”之称。谷歌、苹果、推特、亚马逊及脸书等高科技企业都将自己的欧洲总部设立在爱尔兰。爱尔兰拥有众多国际知名的制药公司以及本土药企，产业链完整，涵盖药品研发、生产、销售等环节。目前以基础医药产品及制剂为主的制药产业已成为其最大的支柱产业，行业产值占其工业生产总产值的40%以上。全球最大的10家制药企业有9家在爱尔兰设厂，包括辉瑞、强生、罗氏、诺华、艾伯维等。医疗与医药产品是爱尔兰第一大出口商品。据欧盟统计局(Eurostat)数据显示，2020年起爱尔兰成为全球第三大药品出口国。



Headquartered in Dublin, Ireland, RCSI University of Medicine and Health Sciences is driven by a deeply rooted sense of professional responsibility for enhancing human health through education, research and service. Founded as the national training body for surgery in Ireland, RCSI has been at the forefront of healthcare education and research since 1784. It is a world-renowned international institution dedicated to training high-end talents. It is Ireland's largest and most prestigious medical school, ranking 201–250 globally in the Times Higher Education (THE) World University Rankings, and 101–200 in THE World University Impact Rankings. It ranks first globally in "Good Health and Well Being" impact and first in Ireland for "paper citation rates". RCSI is at the forefront of cardiovascular pharmacology, neuropharmacology, tumor pharmacology, regenerative medicine, and other fields, with a field-weighted citation impact of 3.01 in pharmaceutical-related research papers, three times the world average. Its research results influence medical decision-making by organizations such as the World Health



Organization, the United Nations, the European Union, and the Centres for Disease Control and Prevention in the United States. RCSI is a highly internationalized university with three overseas campuses in Bahrain, Dubai and Malaysia. It collaborates with world-renowned universities and institutes such as Columbia University, University of Pennsylvania, Tufts University, Johns Hopkins University, and Mayo Clinic for student internships and cooperative training. RCSI is committed to providing patient-centered, comprehensive, integrated teaching and research, encouraging future healthcare professionals to become lifelong learners and stay current in their respective fields. It actively participates in the development of Ireland's pharmacy professional training standards and industry regulations, making it an internationally recognized leading centre for pharmaceutical education, research, and innovation. Ireland is adjacent to the United Kingdom and shares a similar education system. It is the only country in Europe where English is the native language besides the UK. With the Irish government's continued significant

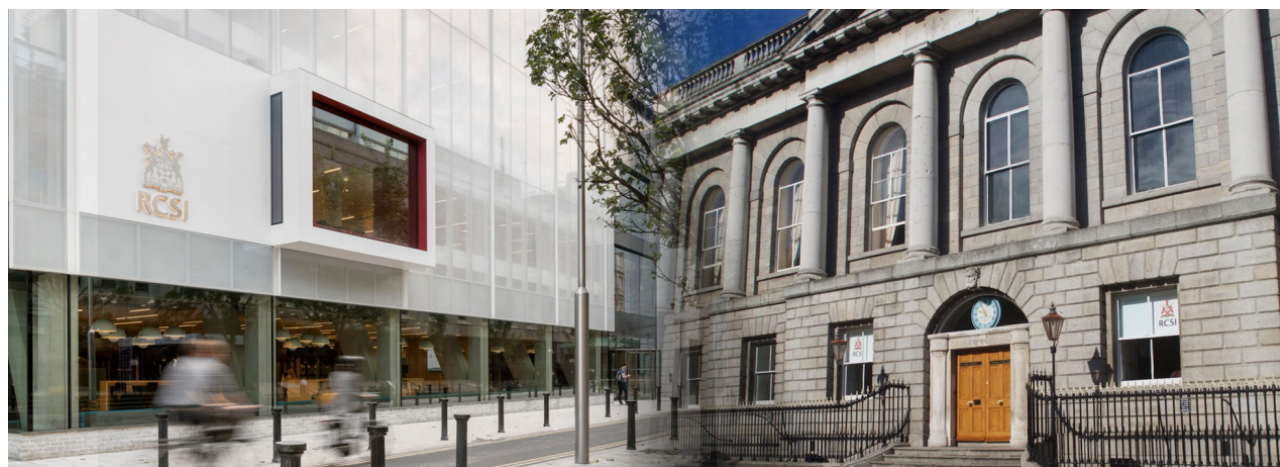




investment in education, all universities in Ireland rank within the top 5% globally, making it the country with the highest proportion of the population receiving higher education in Europe.

Ireland has a well-developed high-tech industry. It is often referred to as the "European Silicon Valley." High-tech companies such as Google, Apple, Twitter, Amazon, and Facebook have established their European headquarters in Ireland. Ireland boasts numerous internationally renowned pharmaceutical companies as well as domestic pharmaceutical enterprises, with a complete industry chain covering drug research and development, production and sales. Currently, the pharmaceutical

industry, primarily focused on basic pharmaceutical products and formulations, has become Ireland's largest pillar industry, accounting for over 40% of its total industrial output value. Nine out of the world's top ten pharmaceutical companies have manufacturing facilities in Ireland, including Pfizer, Johnson & Johnson, Roche, Novartis, and AbbVie. Medical and pharmaceutical products are Ireland's most significant export commodities. According to data from Eurostat (Statistical Office of the European Union), Ireland has become the world's third-largest exporter of pharmaceuticals since 2020.



学院优势

# Why is ICPI ?

## 先进的育人理念 Visions & Management

学院始终秉承创新、合作、卓越的育人理念，坚持“以产业和新技术为导向”引领药学教育转型变革，助推全球健康高质量发展。学院聚焦科学研究前沿，通过引进先进的教育资源和管理机制，营造在地国际化的教育环境，构建国际化的师资队伍，打造国际前沿的科研平台，致力于培养兼具国际视野和专业知识技能的药学拔尖创新人才。

Based on the future industry needs, ICPI has always adhered to the concept of “innovation, cooperation and excellence” in education. The college strives to lead transformative changes in pharmaceutical education and research by focusing on the forefront of scientific research, creating an international education environment, and building a global faculty team. ICPI is committed to developing top-notch innovative pharmaceutical talents with global competence and professional knowledge.

## 双学籍、双学位的办学模式 Dual Registrations & Degrees

学生同时注册苏大和RCSI两校学籍。“4+0”的办学模式，RCSI派遣专业教师授课，学生在苏大完成学习任务。成绩优秀的毕业生可直接申请攻读硕士和博士研究生学位。学院严格执行双学位和毕业证书管理规定。在规定年限内达到两校所在专业的毕业要求及学位授予条件的学生，均可获得苏大颁发的毕业证书、学位证书和RCSI颁发的学位证书。

ICPI takes full advantage of the academic resources of both universities. Students are registered as both SU and RCSI students and can access the resources of both institutions during their four years of study. Students meeting the graduation and degree awarding requirements are eligible to apply for dual degrees.

## 国际化的教学管理运行机制 International Faculty

专业核心课程约50%的师资由RCSI派遣，专业基础课、专业核心课均采用英文授课。两校教师大部分具有博士学位或高级职称，具备国际化背景及丰富的国际教育经验。学院为学生提供英文授课教学环境和日常交流环境，使学生在沉浸式的语言环境里快速提升用英语开展专业学习的能力和跨文化交际能力。

ICPI combines the superior educational resources of SU and RCSI. All the core modules are taught in English and over 50% of them are conducted by RCSI. The teaching system and programme design are combined with the strengths and experience of Chinese students' characteristics in creating new programmes taught mainly in English. Students can quickly improve their English proficiency and learn to think independently and critically in an international and multicultural environment.

## 全方位教学质量保障 Quality Assurance

学院设立联合管理委员会、联合执行委员会、联合学术委员会、联合教学指导工作组和联合科研工作组，定期召开会议，确保学院管理先进高效。所有课程体系和教学效果受中国教育部和爱尔兰质量与资格认证委员会及爱尔兰高教署多重监管，全方位保证教学质量。

ICPI has established the Joint Management Committee, Joint Academic Committee, Joint Implementation Committee and Joint Teaching Guidance Group to ensure the efficient management of the college. All curricula and quality of teaching are overseen by Ministry of Education of China (MOE), Quality and Qualifications Ireland (QQI) and Higher Education Authority of Ireland (HEA).

## “进阶式”的人才培养模式 Progression System

学院采取“进阶式”培养模式，采用欧洲学分体系（ECTS），明确每学年学生阶段性培养目标和学术标准，且英语课程被列为培养方案前置必修课程。学院办学以“知识传授、能力培养、素质提高、视野拓展”为培养目标，强调学科间交叉融合，注重核心素养的培养，以强化学生的未来竞争力。

ICPI adopts the “progression system” and the European Credit System (ECTS), specifying phased training objectives and standards in each academic year. English courses are listed as compulsory courses before the second-year core modules. With the educational objective of “the coordinated development of knowledge, skills and self-improvement”, the college designs a high-quality, distinctive and future-focused curriculum, to strengthen students' career competitiveness.

## 专业介绍

# Programmes

## 药学本科 BSc Pharmacy

### 1、专业概况

该专业聚焦药学领域最新的学术研究和行业实践，采取以器官系统为中心的新型整合药学课程体系，为学生提供变革性的学习体验。学生在现代学习环境中体验与时俱进的创新课程，获得前沿的、广泛的、放眼未来的科学知识和技术技能，以满足当前和未来的医药发展需求。符合双方学位授予条件的毕业生将被同时授予苏州大学和爱尔兰皇家外科医学院（RCSI）的药学理学学士学位。

### 2、课程信息

#### 药学核心课程

“医药化学基础”、“生命细胞基础”、“健康身体与功能”、“药理学与免疫学基础”、“微生物学与感染学基础”、“药物化学”、“药物分析基础”、“药物-药剂学”、“药物-剂量配方”课程涵盖了药学专业相关的化学、生物、生理、药理、免疫、药剂等基础知识，帮助学生为后期深入学习药学理论储备基础知识。

#### 新型整合课程

“胃肠道健康”、“心血管健康”、“呼吸系统健康”、“肌肉骨骼与血液健康”、“中枢神经系统健康”、“肝肾健康”、“免疫与保护组织”、“内分泌健康”、“性别与健康”、“癌症护理”，每个模块囊括系统生理功能，疾病发病机制，代表性药物的设计与合成、剂型设计、药理与毒理机制、成药性分析与评价、质量标准研究等知识，让学生扎实掌握药学理论知识的同时，重点培养学生研究和开发新药的创新思路 and 创新能力。课程内容充分体现了化学、生物学、临床与药学知识的融合，教学重点与难点循序渐进，螺旋式上升。

#### 前沿创新课程

“药物-药品生命周期”讲授现代药物研发、生产、销售各阶段的技术策略和监管规范，使学生系统全面地了解完整的新药研发、生产过程及质量控制，同时熟悉药品生产相关法律法规。“药物-先进疗法”聚焦单克隆抗体药物、基因治疗、免疫细胞治疗等最新疗法，有利于让学生获得最深刻、最前沿的理论知识及技术方法。

#### 专业素养及国际胜任力课程

“生命阶段”、“心理健康”、“临床药学”、“循证医学”课程体现了新兴的以患者为中心的用药理念。“药剂师-开启职业生涯”、“药剂师-专业技能”侧重培养学生的跨领域能力，包括团队合作、沟通、创新和领导能力。“全球公



共卫生”让学生进一步了解当地和全球范围内的健康和疾病，启发学生思考药学专业在改善全球卫生问题方面的关键作用，拓展学生的国际视野。

### 体验式学习模块

“实习”和“研究技能”为体验式学习模块，在医院、药企和学校实验室完成。在体验式学习过程中学生将加强知识的整合和应用，培养职业精神，形成职业认同感。此外，学生的横向技能，如沟通、团队合作和自我管理能力将得到进一步的发展，从而使学生具备更强的职场竞争力。

## 3、职业发展

随着全球人口老龄化和医药科技的不断进步，药专业业的毕业生需求稳定且呈增长趋势。特别是在新药研发、个性化医疗和精准治疗等领域，将会有更多的就业和发展机会。本药学专业毕业生的职业发展方向包括：

- 在世界一流大学或研究机构继续深造。
- 在世界一流大学或研究机构从事前沿学术研究。
- 在跨国制药公司从事新药研发、药物设计、临床试验等工作。
- 在国际药品监管机构从事政策制定和执行、药品安全监测、药品质量控制等工作。
- 在大型医院担任临床药师，提供临床用药指导和药物疗效评价。

## 1.Introduction

This four-year dual degree programme combines clinical and pharmaceutical sciences and will produce workplace-ready graduates who can become leaders in healthcare and innovation. Graduates will be awarded both a Bachelor of Science, Pharmacy from SU and a Bachelor of Science, Pharmacy from RCSI. You will have a unique educational experience, learning from expert academics and an international faculty.

## 2.Course Details

The Pharmacy programme is delivered through a modular system. Early modules provide the foundations, integrating the themes of health, medicines and the pharmacist. Year 2 and year 3 include modules based on the systems of the body. Each systems-based module integrates life sciences, chemical and physical sciences, clinical sciences and practice.

A structured four-month placement occurs in the 7th semester of the programme. This placement provides opportunities to learn across different settings, in leading organizations in the community, hospitals, pharmaceutical

industry, academia and other places where pharmacists make a difference, ensuring that when you graduate, you are ready for practice.

Case-based learning is a key feature of the curriculum. Cases are used in all modules for teaching and assessment. Patient and public involvement in education and inter-professional learning are key features. There is a focus on active learning, appropriately supported by technology-enhanced learning. The teaching and learning strategy gives you the chance to learn in different ways:

- Learning from experts (lectures, small group teaching, patient contact sessions)
- Learning with others (inter-professional learning, group-based activities)
- Learning through making (laboratory practicals, presentations)
- Learning through exploring (research, projects)
- Learning through practising (simulation)

## 3.Your Future

Pharmacists are experts in medicines and their use across various settings. Our Pharmacy programme is designed to offer you a range of career options. After



obtaining your degree, you will be able to work in areas such as:

- Academia
- Design/management of clinical trial protocols
- Analysis of clinical trial data
- The pharmaceutical industry
- Medical research and development
- Patient advocacy
- Regulation
- Medical writing
- Hospital and community pharmacy

We pride ourselves on producing Pharmacy graduates who are both knowledgeable in pharmacy science, and highly skilled practitioners. During your studies with ICPI, you will have a unique educational experience. You will learn from expert academics and an international faculty and study in one of the world-class healthcare education facilities. You will have the opportunity to undertake career-enhancing placements and enhance your laboratory research skills.

# 生物制药本科

## BEng Biopharmaceutical Sciences

### 1、专业概况

该专业以创新药物科学技术为导向，围绕生物医药产业链当下和未来发展创新的需求，突出学科交叉融合，强调前沿生物制药领域的理论和实践，旨在培养学生具备先进技术和综合能力，成为医疗创新和技术领域的高水平人才。符合双方学位授予条件的毕业生将被同时授予苏州大学生物制药工学学士学位和爱尔兰皇家外科医学院的先进治疗技术理学学士学位。

### 2、课程信息

#### 生物制药核心课程

“医药化学基础”、“生命细胞基础”、“健康身体与功能”、“微生物学与感染学基础”、“药理学与免疫学基础”，“药理学与治疗诊断学”、“药物化学”、“药物-药剂学”、“胃肠道健康-药物与病人护理”为专业基础课，这些课程涵盖了药学专业相关的化学、生物、生理、药理、免疫、药剂等基础知识，帮助学生为后期深入学习生物制药理论打好基础。

#### 生物制药前沿课程

“人类遗传学/基因组学”、“高等遗传学与细胞生物学”介绍生物制药领域先进基因工程和细胞工程相关理论技术及其在科学研究及遗传病治疗中的应用。“生物免疫治疗学”、“治疗技术前沿”聚焦单克隆抗体药物、治疗性疫苗、基因治疗、免疫细胞治疗等最新个性化疗法，以让学生获得最深刻、最前沿的理论及技术。“生物制药学”、“药物-药品生命周期”、“法规科学”涵盖现代药物包括生物药的研发、生产、销售各阶段的技术策略和监管规范，使学生系统全

面地了解完整的新药研发、生产工艺及质量控制，同时熟悉药品生产相关法律法规。

#### 大数据与智慧健康课程

“数据分析基础”、“计算生物学”课程介绍生物统计学的基本原理和方法，解析人工智能和大数据在药物全生命周期中的应用，体现学科交叉融合。“互联健康”探讨互联医疗保健在不同疾病领域中的应用，让学生熟悉医疗行业新兴发展方向。

#### 专业素养与创新能力课程

“科学家-专业养成”、“项目管理基础”、“创业与创新”、“领导与管理”侧重培养学生的横向能力，包括团队合作、沟通、创新和领导能力。

#### 体验式学习模块

“实习”和“研究技能”为体验式学习模块，在生物制药企业和学校实验室完成。在体验式学习过程中学生将加强知识的整合和应用，培养职业精神，形成职业认同感。此外，学生的横向技能，如沟通、团队合作和自我管理能力将得到进一步的发展，从而使学生具备更强的职场竞争力。

### 3、职业发展

随着生物技术的快速发展和全球对创新生物药物需求的增长，生物制药行业正面临巨大的发展机遇。本生物制药专业毕业生的职业发展方向包括：

- 在世界一流大学或科研机构继续深造。
- 在国际生物制药公司或科研机构从事生物药的研究与开发工作。
- 在跨国生物制药企业负责药品生产、工艺优化、设备操作及质量控制。
- 在国际生物制药公司或相关组织中处理国际业务、参与跨国项目合作或进行国际市场开拓。
- 在国际药品监督管理机构负责药品管理、政策制定和执行、药品安全监测等。

### 1.Introduction

This four-year dual degree programme fuses digital technology with traditional science. It is focused on the latest scientific discoveries to develop highly sought-after graduates. Upon completing their studies, students will be awarded a Bachelor of Engineering in Biopharmaceutical Sciences from SU and a Bachelor of Science in Advanced Therapeutic Technologies from RCSI.

### 2.Course Details

The BEng BioPharm is a broad, diverse and cutting-edge programme. This new science degree equips graduates with the technical knowledge and power skills to become future leaders in healthcare innovation and technology. The mix of knowledge that programme offers is a key differentiator. Students get a grounding in the basic sciences, cutting-edge technologies, and professional power skills. The Year 3 industry placement will allow students to gain invaluable industry



experience and build their industry networks and contacts to help their future careers.

The programme incorporates active learning techniques with team-based, individual-focused projects and a significant practical focus on laboratory skills and data analysis to ensure workplace readiness. Key areas covered in this programme include:

- Fundamental sciences: The science of how the body works—physiology, biochemistry, chemistry, and anatomy
- Genetics and genomics: The role of genes in disease, patterns of inheritance, genetics for diagnosis and drug selection
- Pharmacology: The science of drugs and how they work in the body
- Computational biology/data analytics: Statistical analysis and interpretation of big datasets generated from healthcare settings using programming languages
- Immunology: How the immune system works in health and disease
- Connected health: Wearable devices, artificial intelligence and machine learning in the context of health
- Pharmaceuticals: The science of drug delivery
- Precision medicine: Therapeutic treatments which are tailored to the individual
- Professional power skills: Develop critical personal power skills in competencies



### 3. Your Future

This innovative future-focused programme has been developed in collaboration with industry experts to address knowledge and skills gaps in (bio)pharmaceutical industries. Graduates are in a position to apply for a range of varied roles in the pharmaceutical industry and related areas, including:

- Industry/academia (scientific research)
- Drug design and development
- Connected medical device design and development
- Data analysis
- Project management
- Quality assurance
- Management consultancy
- Start-ups
- Research funding agencies
- Team leadership

We pride ourselves on producing graduates in Biopharmaceutical Sciences who are both knowledgeable and highly skilled practitioners. During your studies with ICPI, you will have a unique educational experience. You will learn from expert academics and an international faculty and study in one of the world-class healthcare education facilities. You will have the opportunity to undertake career-enhancing placements and enhance your laboratory research skills.

## 药学硕士 MSc Pharmacy

### 1、专业概况

面对人类防病治病的重大需求和随环境变化带来的人类疾病谱改变，药学学科必须不断吸收相关学科的最新理论和技术方法，通过交叉融合，不断完善自身的理论技术体系，同时拓展和建立新的研究领域。基于这一目标，苏州大学和爱尔兰皇家外科医学院(RCSI)携手打造了此药学硕士双学位专业。该专业围绕药学一流专业和优势学科建设，融合双方办学模式，通过特色课程设置和苏大-RCSI双导师制，对学生进行个性化培养，使学生具备成为一名独立科研工作者的必须素养，为全球医药领域输送国际化拔尖创新人才。

### 2、课程信息

#### 核心前沿课程

“现代药学基础（生物方向及化学方向）”、“现代药物分析”、“高等药理学”、“生物技术药物”、“现代药物制剂与新药研发”、“现代生药学”、“高等有机化学”为专业基础课，这些课程涵盖了药理学、药物化学、药剂学、微生物与生化药学、药物分析、生药学、临床药学等方向的基本理论，为学生后期选择相关方向从事课题研究奠定基础。“研究生生物统计学”讲授科研设计、数据采集、分析策略的理论基础，使学生具备完成科研项目所需的数据分析能力。

#### 科研素养课程

“生命医学科研设计和论文写作”、“药学研究前沿实验技术与方法”、“研究伦理与诚信”注重批判性思维习惯的培养，加强对学学生识错、纠错、逻辑思维能力的锻炼，提高学生的沟通能



力，使学生树立正确的科研伦理道德观，充分了解学术规范涵盖的内容，并养成严谨的科研习惯。

#### 创新课题研究

学生还需在药学领域围绕一个关键科学问题，开展论文课题研究。培养环节包括论文开题、中期考核、论文盲审，全部通过后方可进行论文答辩。

### 3、职业发展

随着药学研究的不断深入以及相关技术的进步，药学领域不断涌现新的研究方向和工作机会，尤其是新药研发、个性化医疗领域，对药学专业高层次研究型人才的需求量较大。本药学专业硕士研究生的就业方向包括：

- 在世界一流大学或科研机构继续深造。
- 在世界一流大学或科研机构从事前沿学术研究。
- 在跨国制药企业、生物技术公司或研究机构从事新药开发，包括药物设计、药物合成、药理学研究、临床前研究等。
- 在专业药学信息咨询公司、药品信息服务部门或投资机构提供专业的药学信息分析和评价，为药品研发投资等提供决策支持。

## 1.Introduction

This postgraduate research degree builds on the world-class research in SU and RCSI. It will allow you to enhance your skills, expertise, and specialist knowledge in your chosen field of study in preparation for career pathways across many employment sectors, including higher education, health, and industry and entrepreneurial roles.

## 2.Course Details

At ICPI, we strive to provide you with the very best in clinical and research support and support you in your professional development. As part of that aim, we have developed a range of core modules which you will undertake as part of your research higher degree.

The students will not only learn advanced theories and technologies in pharmaceutical sciences, but also be trained how to succeed in their chosen career path. The Biostatistics module will give the student a basic grounding in statistics and study design, sufficient for them to be able to outline a study design, their project. The Advanced Experimental Techniques and Methods for Pharmaceutical Research aims to provide students with a solid grounding in research and computer skills and a career professional development framework to support them throughout their postgraduate degree and beyond. The



Research Design and Paper Writing in Medicine and Life Science module equip students with the techniques to become excellent researchers and communicators with the added competence of insight and critical analysis skills.

## 3.Your Future

Your MSc degree will equip you with a transferable skill set that is highly valued by employers, particularly for problem-solving, critical reasoning, thinking in-depth, the ability to manage project, and evidence of a range of soft skills, like communication and collaboration.

The career future for a master degree holder in Pharmacy is quite promising. The healthcare sector continuously expands and evolves, resulting in a growing demand for qualified pharmaceutical professionals with advanced knowledge and skills. Here are a few potential career paths for someone with a master's degree in Pharmacy:

- PhD in a related field
- Academic/Research positions
- Pharmaceutical industry
- Entrepreneurship