

课程大纲

COURSE SYLLABUS

1.	课程代码/名称 Course Code/Title	转化医学前沿研究进展/ Research Frontiers in Translational Medicine
2.	课程性质 Compulsory/Elective	专业选修课/ Major Elective Courses
3.	开课单位 Offering Dept.	公共卫生及应急管理学院/School of Public Health and Emergency Management
4.	课程学分/学时 Course Credit/Hours	2 32/ Two Thirty-two
5.	授课语言 Teaching Language	中英双语/English&Chinese
6.	授课教师 Instructor(s)	卢洪洲/Hongzhou Lu
7.	开课学期 Semester	秋季/Fall
8.	是否面向本科生开放 Open to undergraduates or not	否
9.	先修要求 Pre-requisites	(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.) 无/None
10.	教学目标 Course Objectives	<p>(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)</p> <p>本课程旨在深化学生对转化医学领域的全面理解, 特别强调培养学生在生物医学研究成果向临床应用转化过程中的关键技能和知识。课程内容将聚焦于转化医学的核心领域, 涵盖“产学研医”模式下的团队合作与创新成果产业化, 以及多个关键的临床研究进展, 包括肝脏移植、神经外科、呼吸系统疾病、HPV 相关肿瘤的转化策略, 以及重症医学和噬菌体治疗的新兴发展。此外, 课程还将探讨疫苗研发、抗病毒药物设计, 以及药物和医疗器械的现代化研发与转化流程, 旨在培养学生从基础研究到临床应用的全面能力。通过参与案例分析、项目实践和实际操作, 学生将获得宝贵的实践经验, 提升他们的批判性思维和问题解决能力。本课程的学习不仅将为学生在未来的生物医学研究、药物开发、临床试验设计等领域的专业发展奠定坚实的理论和实践基础, 还将激发他们对转化医学的热情, 为未来的职业生涯和科技创新做好充分准备。</p> <p>This course is designed to deepen students' comprehensive understanding of the field of translational medicine, with a particular focus on developing key skills and knowledge for the translation of biomedical research outcomes into clinical applications. The course content will concentrate on the core areas of translational medicine, including team collaboration and innovation commercialization under the "industry-academia-research-medicine" model, as well as advancements in key clinical research areas such as liver transplantation, neurosurgery, respiratory diseases, HPV-related tumor translational strategies, and emerging developments in critical care medicine and phage therapy. Additionally, the course will explore vaccine development, antiviral drug design, and the modern research and development and translation pathways for drugs and medical devices, aiming to cultivate students' comprehensive abilities from basic research to clinical application. Through engagement in case analyses, project practice, and hands-on operations, students will gain valuable practical experience and enhance their critical thinking and problem-solving skills. The study of this course will not only lay a solid foundation of theoretical and practical knowledge for students' future professional development in biomedical research, drug development, and clinical trial design but also inspire their passion for translational medicine, preparing them well for future careers and scientific innovations.</p>
11.	教学方法 Teaching Methods	<p>(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)</p> <p>讲授法、讨论法、案例教学法等</p>

Lecture method, discussion method, case study method and so on.

12. 教学内容

Course Contents

(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

Section 1 卢洪洲 2 学时	新质生产力与医学创新成果转化 New Quality Productivity and Commercialization of Medical Innovations
Section 2 钟 林 2 学时	肝脏移植转化研究进展 Advances in Translational Research on Liver Transplantation
Section 3 初 明 2 学时	神经外科与转化医学 Neurosurgery and Translational Medicine
Section 4 陈培芬 4 学时	呼吸系统临床诊治转化研究 Translational Research in Clinical Diagnosis and Treatment of Respiratory System
Section 5 魏兰兰 4 学时	HPV 感染、相关肿瘤及转化研究 Translational Research in HPV Infection and Associated Tumors
Section 6 黄 佳 4 学时	重症医学转化研究进展 Translational Research in Critical Care Medicine
Section 7 周 泐 4 学时	噬菌体临床转化研究 Clinical Translational Research in Bacteriophage Therapy
Section 8 郑明彬 2 学时	仿生纳米药物医学诊治研究 Biomimetic Nanomedicine for Diagnostic and Therapeutic Research
Section 9 杨 扬 4 学时	病毒感染性疾病的疫苗和抗病毒治疗药物研究 Research on Vaccines and Antiviral Drug for Viral Infectious Diseases
Section 10 孟现民 4 学时	药物医疗器械研发现状与转化路径 Research Advances and Translational Pathways in Drug and Medical Device

13. 课程考核

Course Assessment

(①考核形式 Form of examination; ②. 分数构成 grading policy; ③如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

①报告和论文/ Reports and papers; ②课堂参与(30%)、作业和练习(20%)、报告和测试(50%) / Class participation (30%), assignments and exercises (20%), reports and essays (50%)

14. 教材及其它参考资料

Textbook and Supplementary Readings

- 1、刘刚主编著,《转化医学应用》,科学出版社
- 2、Alan I. Leshner 主编,《转化医学的研究与探索, opportunities for advancing clinical and translational research》,科学出版社