

課程流水號 Serial Number	24025
課號 Course Number	LS5072
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	轉譯醫學
科目名稱(外文) Course Title(In English or other languages)	Translational Medicine
授課老師(中文) Instructor(in Chinese)	梁筱蘭
授課老師(外文) Instructor(In English or other languages)	Hsiao-Lan Liang
辦公時間(中文) Office Hour(in Chinese)	Wednesday 9:00-12:00
辦公時間(外文) Office Hour(In English or other languages)	Wednesday 9:00-12:00
課程目標(中文) Course Objective(in Chinese)	<p>Translational medicine is a rapid emerging field to apply science discoveries to benefit human health. The advanced of NGS technology and big data analysis further promotes the bidirectional links between bench and bedside. Therefore, the objective of this course is as follows:</p> <ol style="list-style-type: none"> 1. To introduce the background and knowledge to embark translational medicine researches, including drug development, novel treatments and diagnostic tools. 2. To become familiar with various topics of translational researches, as well as cutting-edge approaches though literature discussions 3. To increase the motivation in broadening research domains and exploring potential medical-related medicine.
課程目標(外文)	Translational medicine is a rapid emerging

Course Objective(In English or other languages)	<p>field to apply science discoveries to benefit human health. The advanced of NGS technology and big data analysis further promotes the bidirectional links between bench and bedside. Therefore, the objective of this course is as follows:</p> <ol style="list-style-type: none"> 1. To introduce the background and knowledge to embark translational medicine researches, including drug development, novel treatments and diagnostic tools. 2. To become familiar with various topics of translational researches, as well as cutting-edge approaches though literature discussions 3. To increase the motivation in broadening research domains and exploring potential medical-related medicine.
授課內容(中文) Course Description(in Chinese)	<ol style="list-style-type: none"> 1. Introduction and background 2. General concepts of translational medicine 3. Genomics and cancer medicine I: CNV and SNP 4. Genomics and cancer medicine II: GWAS 5. Drug development and animal models 6. Clinical drug trials 7. Precision and personal medicine 8. Advances in Omics Science 9. Mid-term Exam 10. To be or not to be? Gene–editing 11. A new hope for detection? Liquid biopsy 12. The more the merrier? Antioxidants and cancer 13. Modeling cancer in Fly (I) 14. Modeling diabetics in Fly (II) 15. Gut microbes and metagenomics in Health and diseases 16. Bioengineering (Invited speaker) 17. Student presentation 18. Final Exam
授課內容(外文) Course Description(In English or other languages)	<ol style="list-style-type: none"> 1. Introduction and background 2. General concepts of translational medicine 3. Genomics and cancer medicine I: CNV and SNP 4. Genomics and cancer medicine II: GWAS 5. Drug development and animal models 6. Clinical drug trials 7. Precision and personal medicine

	8. Advances in Omics Science 9. Mid-term Exam 10. To be or not to be? Gene–editing 11. A new hope for detection? Liquid biopsy 12. The more the merrier? Antioxidants and cancer 13. Modeling cancer in Fly (I) 14. Modeling diabetics in Fly (II) 15. Gut microbes and metagenomics in Health and diseases 16. Bioengineering (Invited speaker) 17. Student presentation 18. Final Exam
教科書/參考書(中文) Textbook/References(in Chinese)	Translational medicine: Tools and Techniques, 1st Edition, Aamir Shahzad Scientific papers
教科書/參考書(外文) Textbook/References(In English or other languages)	Translational medicine: Tools and Techniques, 1st Edition, Aamir Shahzad Scientific papers
自編教材比例 Self-compiled Textbook/References Proportion	
授課方式 Requirements	講授Lecture
評量配分比重(中文) Grading(in Chinese)	Mid-term: 25% Final: 25% Presentation: 30% Participation: 20%
評量配分比重(外文) Grading(In English or other languages)	Mid-term: 25% Final: 25% Presentation: 30% Participation: 20%
課程所屬學制 Educational System	博士班(Doctoral Programme)
課程領域 Course Domain	基礎學科 進階學科 生物科技 醫藥 生物資訊
跨系課程領域 Cross Department Course Domain	

<div>強度指數</div> <div>Overall Rating</div> <div>系所核心能力</div> <div>Core Competencies of Department</div>	0 不 具 備 Zero	1 非 常 低 Very Low	2 低 Low	3 普通 Medium	4 高 High	5 非 常 高 Very High	評量方式 Corresponding Assessments
高等生物專業知識 Advanced Biological Sciences	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input checked="" type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量 (Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評 (Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)

<p>創新及整合研究 Innovative and integrative research</p>	●	●	●	●	●	●	<ul style="list-style-type: none"> <input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量 (Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評 (Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
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<p>專業寫作與表達 Professional writing and presentation</p>	●	●	●	●	●	●	<ul style="list-style-type: none"> <input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量 (Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評 (Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
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<p>國際觀 International vision</p>	●	●	●	●	●	●	<ul style="list-style-type: none"> <input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量 (Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評 (Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
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