

課程流水號 Serial Number	24005
課號 Course Number	LS2002
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	生物化學
科目名稱(外文) Course Title(In English or other languages)	Biochemistry
授課老師(中文) Instructor(in Chinese)	陳世勳,吳沛翊
授課老師(外文) Instructor(In English or other languages)	
辦公時間(中文) Office Hour(in Chinese)	星期四早上8:00~10:00
辦公時間(外文) Office Hour(In English or other languages)	Tuesday morning from 8:00~10:00
課程目標(中文) Course Objective(in Chinese)	讓學生對於新陳代謝與脂質合成有更進一步的了解
課程目標(外文) Course Objective(In English or other languages)	讓學生對於新陳代謝與脂質合成有更進一步的了解
授課內容(中文) Course Description(in Chinese)	<p>Week Date Topics Instructors</p> <p>1 3/4 Chapter 12 Chemical Logic of Metabolism 吳沛翊</p> <p>2 3/11 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway 吳沛翊</p> <p>3 3/18 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway 吳沛翊</p> <p>4 3/25 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway 吳沛翊</p> <p>5 4/1 Chapter 14 Citric Acid Cycle and Glyoxylate Cycle 吳沛翊</p> <p>6 4/8 Chapter 14 Citric Acid Cycle and Glyoxylate Cycle 吳沛翊</p> <p>7 4/15 Chapter 15 Electron Transport, Oxidative Phosphorylation, and Oxygen Metabolism 吳沛翊</p> <p>8 4/22 Chapter 15 Electron Transport, Oxidative Phosphorylation, and Oxygen Metabolism 吳沛翊</p> <p>9 4/29 期中考</p> <p>10 5/06 Chapter 17 Lipid Metabolism I: Fatty Acids, Triacylglycerols, and Lipoproteins 陳世勳</p>

	<p>11 5/13 Chapter 17 Lipid Metabolism I: Fatty Acids, Triacylglycerols, and Lipoproteins 陳世勳</p> <p>12 5/20 Chapter 18 Interorgan and Intracellular Coordination of Energy Metabolism in Vertebrates 陳世勳</p> <p>13 5/27 Chapter 19 Lipid Metabolism II: Membrane Lipids, Steroids, Isoprenoids, and Eicosanoids 陳世勳</p> <p>14 6/3 Chapter 20 Metabolism of Nitrogenous Compounds: Principles of Biosynthesis, Utilization, and Turnover 陳世勳</p> <p>15 6/10 Chapter 21 Metabolism of Nitrogenous Compounds: Amino Acids, Porphyrins, and Neurotransmitters 陳世勳</p> <p>16 6/17 Chapter 22 Nucleotide Metabolism 陳世勳</p> <p>17 6/24 期末考</p>
授課內容(外文) Course Description(In English or other languages)	<p>Week Date Topics Instructors</p> <p>1 3/4 Chapter 12 Chemical Logic of Metabolism PY Wu</p> <p>2 3/11 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway PY Wu</p> <p>3 3/18 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway PY Wu</p> <p>4 3/25 Chapter 13 Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway PY Wu</p> <p>5 4/1 Chapter 14 Citric Acid Cycle and Glyoxylate Cycle PY Wu</p> <p>6 4/8 Chapter 14 Citric Acid Cycle and Glyoxylate Cycle PY Wu</p> <p>7 4/15 Chapter 15 Electron Transport, Oxidative Phosphorylation, and Oxygen Metabolism PY Wu</p> <p>8 4/22 Chapter 15 Electron Transport, Oxidative Phosphorylation, and Oxygen Metabolism PY Wu</p> <p>9 4/29 Mid-term exam</p> <p>10 5/06 Chapter 17 Lipid Metabolism I: Fatty Acids, Triacylglycerols, and Lipoproteins SH Chen</p> <p>11 5/13 Chapter 17 Lipid Metabolism I: Fatty Acids, Triacylglycerols, and Lipoproteins SH Chen</p> <p>12 5/20 Chapter 18 Interorgan and Intracellular Coordination of Energy Metabolism in Vertebrates SH Chen</p> <p>13 5/27 Chapter 19 Lipid Metabolism II: Membrane Lipids, Steroids, Isoprenoids, and Eicosanoids SH Chen</p> <p>14 6/3 Chapter 20 Metabolism of Nitrogenous Compounds: Principles of Biosynthesis, Utilization, and Turnover SH Chen</p> <p>15 6/10 Chapter 21 Metabolism of Nitrogenous Compounds: Amino Acids, Porphyrins, and Neurotransmitters SH Chen</p> <p>16 6/17 Chapter 22 Nucleotide Metabolism SH Chen</p> <p>17 6/24 Final examination SH Chen</p>
教科書/參考書(中文) Textbook/References(in Chinese)	Biochemistry (4 th Ed) by Mathews, Van Holde, Appling, and Anthony-Cahill
教科書/參考書(外文)	Biochemistry (4 th Ed) by Mathews, Van Holde, Appling, and Anthony-Cahill

Textbook/References(In English or other languages)	
自編教材比例 Self-compiled Textbook/References Proportion	50%
授課方式 Requirements	講授Lecture
評量配分比重(中文) Grading(in Chinese)	期中考 40%, 出席與回饋 20%  期末考 40%  期末總成績結算時，授課教師得視學生整體學習情況，統一酌予調整分數
評量配分比重(外文) Grading(In English or other languages)	期中考 40%, 出席與回饋 20%  期末考 40%  期末總成績結算時，授課教師得視學生整體學習情況，統一酌予調整分數
課程所屬學制 Educational System	學士班(Undergraduate Programme)
課程領域 Course Domain	基礎學科
跨系課程領域 Cross Department Course Domain	

系所核心能力 Core Competencies of Department	強度指數 Overall Rating						評量方式 Corresponding Assessments
	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	

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基礎生物專業知識 Basic Biological Sciences	●	●	●	●	●	●	<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 checked="" 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)
發掘問題及實驗能力 Question approaching and experimental skills	●	●	●	●	●	●	<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 checked="" 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)

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邏輯分析 Logical thinking and analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習(Assignments) <input type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input checked="" 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)
電腦應用 Computer application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)

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溝通技巧 Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)
獨立思考與自我學習 Independent thinking and self-learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" 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 checked="" 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 checked="" 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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團隊合作 Team work							<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)
博雅通識 General knowledge							<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input checked="" type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input checked="" type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input checked="" type="checkbox"/> 學習檔案評量(Portfolios Assessment) <input checked="" 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)