



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese		分析化學(一)			學年/學期 Academic Year/Semester		115/1		
課程名稱(英文) Course Name in English		Analytical Chemistry(I)							
科目代碼 Course Code		CHEM20100	系級 Department & Year	學二		開課單位 Course-Offering Department		化學系	
修別 Type		學程 Program	學分數/時間 Credit(s)/Hour(s)		3.0/3.0				
授課教師 Instructor		/江政剛							
先修課程 Prerequisite									
課程描述 Course Description									
該課程將講述分析化學中古典分析之內容，課程內容將包含FUNDAMENTALS OF ANALYTICAL CHEMISTRY第3章到15章為主。									
課程目標 Course Objectives									
使學生了解各分析方法之原理、操作與近年來新分析方法，化學、生物感測器之發展。									
系專業能力 Basic Learning Outcomes							課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.' s Education Objectives		
A	具備化學基礎知識						●		
B	具備獨立思考及分析解決問題之能						●		
C	具備化學專業知						●		
D	具備執行化學實驗之能力						○		
E	具備國際視野與外語能力						○		
圖示說明Illustration：● 高度相關 Highly correlated ○中度相關 Moderately correlated									
授課進度表 Teaching Schedule & Content									
週次Week		內容 Subject/Topics					備註Remarks		
1		Calculations Used In Analytical Chemistry							
2		Precision and Accuracy of Chemical Analysis							
3		Statistical Data Treatment and Evaluation							
4		Aqueous Solutions and Chemical Equilibria							
5		Effect of Electrolytes on Chemical Equilibria							
6		Solving Equilibrium Problems for Complex Systems							
7		Solving Equilibrium Problems for Complex Systems							

8	期中考	
9	Gravimetric Methods of Analysis (I)	
10	Gravimetric Methods of Analysis (II)	
11	Titration in Analytical Chemistry (I)	
12	Titration in Analytical Chemistry (II)	
13	Principles of Neutralization Titrations	
14	Complex Acid/Base Systems (I)	
15	Complex Acid/Base Systems (II)	
16	Applications of Neutralization Titrations	
17	期末考	

彈性 教學 規劃 Flexible Teaching Plan	請勾選(至少需勾選1 個項目): Please tick the box(es). (At least one item is required.): ☒ 問題討論 Problem-based Discussion ☐ 翻轉教學 Flipped Classroom ☐ 展演實作 Performance / Practical Presentation ☐ 校外參訪 Off-campus Visit ☐ 講座活動 Lecture / Seminar ☐ 線上作業 Online Assignments ☐ 自主學習 Self-directed Learning ☒ 課業輔導 Academic Support ☐ 實驗操作 Experiment Operation ☐ 遠距教學(同步) Distance Learning (Synchronous) ☐ 遠距教學(非同步) Distance Learning (Asynchronous) ☐ 其他(請填寫) Others (Please specify.): 備註: 本校學期週數自115 學年度起調整為17 週, 為符合1學分18 小時之原則, 請教師規劃安排彈性教學。 Note: From the 115th academic year, the semester will be 17 weeks. Please include flexible teaching activities to meet the required 18 hours per credit.
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教學策略 Teaching Strategies

- ☒ 課堂講授 Lecture ☐ 分組討論 Group Discussion ☐ 參觀實習 Field Trip
☐ 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學 (Innovative Teaching)

- ☒ 問題導向學習 (PBL) ☐ 團體合作學習 (TBL) ☐ 解決導向學習 (SBL)
☐ 翻轉教室 Flipped Classroom ☐ 磨課師 Moocs

社會責任 (Social Responsibility)

- ☐ 在地實踐 Community Practice ☐ 產學合作 Industry-Academia Cooperation

跨域合作 (Transdisciplinary Projects)

- ☐ 跨界教學 Transdisciplinary Teaching ☐ 跨院系教學 Inter-collegiate Teaching
☐ 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments									
配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績(含出缺席) General Performance (Attendance Record)									
期中考成績 Midterm Exam	35%								共兩次期中考
期末考成績 Final Exam	40%								
作業成績 Homework and/or Assignments	15%								
其他 Miscellaneous (課堂表現)	10%								
評量方式補充說明 Grading & Assessments Supplemental instructions									
教科書與參考書目(書名、作者、書局、代理商、說明) Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.) Text Book: FUNDAMENTALS OF ANALYTICAL CHEMISTRY, 10th edition, SKOOG WEST									
課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址) Teaching Aids & Teacher's Website(Including online teaching information. Personal website can be listed here.)									
其他補充說明 (Supplemental instructions)									