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②國玄東華大學

教學計劃表 Syllabus

						1	
課程名稱(中文) Course Name in Chinese	複變函數論AB				學年/學期 Academic Year/Semester		
課程名稱(英文) Course Name in English	Complex Analysis						
科目代碼 Course Code	AM3180AB	系級 Department & Year	學三	開課單位 Course-Offering Department	應用數學系		
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		3	3.0/3.0		
授課教師 Instructor	/王昆?						
先修課程 Prerequisite	/#高等微積分(一)/#高等微積分(二)						

課程描述 Course Description

介紹複變函數分析方面的基礎與應用。內容涵蓋

- 1. complex numbers
- 2. analytic functions
- 3. elementary functions
- 4. integration in the complex plane
- 5. series
- 6. residues
- 7. applications

課程目標 Course Objectives

本課程目的主要幫助學生以直觀的方式了解複變函數論。

The purpose of this course is to help students to gain an intuitive understanding of the subject.

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	complex numbers	
2	complex functions	
3	analytic functions	
4	analytic functions	
5	analytic functions	10/06中秋假期放假
6	elementary functions	
7	elementary functions	
8	elementary functions	
9	期中考試週 Midterm Exam	11/03期中考
10	integration	
11	integration	
12	integration	

13	series and residues					
14	series and residues					
15	series and residues					
16	applications					
17	期末考試週 Final Exam	12/29日期末考試				
18						
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						
社會責任(Social Responsibility)						
在地實踐Community Practice 產學合作 Industy-Academia Cooperation						
— <u>— — — — — — — — — — — — — — — — — — </u>						
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	配分比例 多元評量方式 Assessments								
Items	Percentage	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 General Performance									
期中考成績 Midterm Exam	30%	~							
期末考成績 Final Exam	30%	~							
作業成績 Homework and/or Assignments	40%		~	>			>		
其他 Miscellaneous									

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.)

Textbook:

J. W. Brown and R. Churchill, Complex Variables and Applications, ninth edition, McGraw-Hill

References:

- 1. J. Bak and D. J. Newman, Complex analysis, Springer
- E. B. Saff and A.D. Snider, Fundamentals of complex analysis, third edition, Pearson.
- 3. D. G. Zill and P. D. Shanahan, A First Course in COMPLEX ANALYSIS with Applications, third edition, Jones and Bartlett Publishers.

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	١
	Supprementar	Thou de trono	,