國立東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	傅氏分析AB			學年/學期 Academic Year/Semester	114/2
課程名稱(英文) Course Name in English	Fourier Analysis				
科目代碼 Course Code	AM__4010AB	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)	3.0/3.0		
授課教師 Instructor	/王昆?				
先修課程 Prerequisite					

課程描述 Course Description

We will cover the following topics in lecture:

1. Introduce some background;
2. The Discrete Fourier Transform;
3. Wavelets on Z_N;
4. Wavelets on Z;
5. Wavelets on R
6. Wavelets and Differential Equations

課程目標 Course Objectives

介紹傅氏級數及相關應用。
We want to introduce the Fourier series and related applications.

	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	具備基本數學知識及邏輯推理能力。Have well-founded background in mathematics and be capable of logical reasoning.	●
B	具備學習數學相關領域的預備知識。Be knowledgeable about fields related to mathematics.	●
C	具備軟體應用與科學計算能力。 Be able to use mathematics software and scientific computation skill in problem-solving.	○

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	Introduction Ch. 1	
2	Ch. 1	
3	Ch. 1	
4	Ch. 2	

5	Ch. 2	
6	Ch. 3	
7	Ch. 3	
8	Ch. 3	
9	期中考試週 Midterm Exam	
10	Ch. 4	
11	Ch. 4	
12	Ch. 4	
13	Ch. 5	
14	Ch. 5	
15	Ch. 5	
16	Ch. 6	
17	期末考試週 Final Exam	
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 ☐ 磨課師 Moocs

社會責任(Social Responsibility)

☐ 在地實踐Community Practice ☐ 產學合作 Industy-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	25%	✓							
期末考成績 Final Exam	25%	✓							
作業成績 Homework and/or Assignments	50%		✓	✓					
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.)

Lecture notes by lecturer in title:

Lecture Notes on An Introduction to Wavelets,

which will be provided in class

Reference: An Introduction to Wavelets Through Linear Algebra, M. Frazier, Springer, 2001

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)