系所課程地圖 Department Curriculum Map

系所概要 Department

系所名稱 Department Name	應用數學系Department of Applied Mathematics
班別 Division	碩士班Master

教育目標 Education Goals

編號 Number	項目內容 Content	
1	培養學生使具有初步的整合能力，能分析問題並架構數學模型與計算方法。	
1	To develop students' ability to analyze problems and formulate mathematical models and calculations with initial integration skills.	
2	具備理論證明能力，能撰寫各種電腦程式語言。	
2	Demonstrated ability to demonstrate theories and write a variety of computer programming languages.	
3	成為數學分析、計算科學或大數據分析之研究或實務專才。	
3	Become a research or practical expert in mathematical analysis, computational science or big data analysis.	

學生核心能力 Student Core Competencies

編號 Number	項目內容 Content	對應教育目標編號 Corresponding Education Goal Number
A	數學專業思維與邏輯推理知識	123
A	Mathematical Thinking and Logic	123
B	數學分析專業知識	123
B	Professional Knowledge in Mathematical Analysis	123
C	計算科學專業知識	123
C	Professional Knowledge in Scientific Computation	123
D	數學與力學之理論解析	123
D	Theory of Mathematical Analysis and Mechanics	123
E	數學模型建構與軟體應用	123
E	Mathematical Modeling and Software Application	123
F	計算與模擬研究	123
F	Research in Computation and Simulation	123
G	外文文獻研討	3
G	Literature Review	3

承辦人簽章Signature of Responsible Person：

規劃單位主管簽章 Head of Planning Division：

系所課程地圖 Department Curriculum Map

系所概要 Department

系所名稱 Department Name	應用數學系Department of Applied Mathematics
班別 Division	碩士班Master

※附註 Note：

1.各系所所屬之班別，含學士班、碩士班、博士班等，請分別填寫。
1.Complete the map separately for each division, including Bachelor's, Master's, and Doctoral program.

例如：資管學士班需填寫表二及表三；資管碩士班也須填寫表二及表三。
For example, Forms 2 and 3 must be completed for Bachelor's program in Management Information Systems, and also for　Master's program in for Bachelor's program in Management Information Systems.

2.教育目標及核心能力之代號皆以英文字母大寫為主。
2.Codes for Education Goals and Core Competencies must be in uppercase English alphabet letters.

3.可依不同班（組）別填寫教育目標及核心能力。
3.Education Goals and Core Competencies can be specific to the division in question.

承辦人簽章Signature of Responsible Person：

規劃單位主管簽章 Head of Planning Division：

應用數學系 Department of Applied Mathematics
□學士班 Bachelor's Program ■碩士班 Master's Program □博士班 Doctoral Program
□碩專班 Master's Degree Program □國際專班 International Program □進修學士班 Bachelor Part-Time Program
課程規畫表 Curriculum Plan

中文課程名稱 Course Title in Chinese	英文課程名稱 Course Title in English	規劃要點 (附註) Plans (Notes)				對應核心能力編號 Corresponding Education Goal Number	建議修課年級 Recommended Course Division	開課單位 Course Offering Unit	備註 Remarks
		1	2	3	4				
院核心課程(若無免填，請加註必修、選修) **College Core Courses (not required if none, otherwise please indicate Required Courses and Elective Courses)**									
必修課程 Required Courses									
碩士論文	Thesis	M	C	Y	6	A20B20C20D20E20	2	應數系 Department of Applied Mathematics	
專題演講（一）	Seminar(I)	M	C	Y	0	A20B20C20D20E20	1	應數系 Department of Applied Mathematics	

※附註：規劃要點填表說明：（1到4各欄位請填正確代表字母）

　Note：Instructions for completing this form are provided below（please provide the correct English alphabet letters in fields 1 to 4）

　　1：U-學士課程、M-碩士課程、D-博士課程。1: U-Bachelor's program, M-Master's program, D-Doctoral program.

　　2：A-正課、B-實習課、C-台下指導之科目如學生講述或邀請演講之專題討論、專題研究……等。

　　2：A-Lecture, B-Internship, C-Subjects with private guidance such as student presentations or invited speeches, topic discussions, topic research, etc.

　　3：S-學期課、Y-學年課。3: S-Semester course, Y-Year-long course.

　　4：科目（全期或全年）總學分數（請填阿拉伯數字）。4: Total course (full-semester or full-year) credits (in Arabic numerals).

承辦人簽章 Signature of Responsible Person：

規劃單位主管簽章 Head of Planning Division：

應用數學系 Department of Applied Mathematics
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		1	2	3	4				
選修課程 Elective Courses									
專題演講（二）	Seminar(Ⅱ)	M	C	Y	0	A20B20C20D20E20	2	應數系 Department of Applied Mathematics	
專題討論	Seminar on Selected Topics	M	C	Y	2	A20B20C20D20E20	1	應數系 Department of Applied Mathematics	
專題研究	Special Topics	M	C	Y	4	A20B20C20D20E20	1	應數系 Department of Applied Mathematics	
泛函分析（一）	Functional Analysis（Ⅰ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
漸近理論（一）	Asymptotic Theory(Ⅰ)	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
應用分析（一）	Applied Analysis(Ⅰ)	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
應用分析（二）	Applied Analysis(Ⅱ)	M	A	S	3	A40B30G30	1	應數系 Department of Applied Mathematics	
實變函數論（一）	Real Analysis（Ⅰ）	M	A	S	3	A50B50	進階課程 advanced courses	應數系 Department of Applied Mathematics	
實變函數論（二）	Real Analysis（Ⅱ）	M	A	S	3	A50B50	進階課程 advanced courses	應數系 Department of Applied Mathematics	
高等數值方法（一）	Advanced Numerical Methods（Ⅰ）	M	A	S	3	A40B30D30	1	應數系 Department of Applied Mathematics	
高等數值方法（二）	Advanced Numerical Methods（Ⅱ）	M	A	S	3	A40B30E30	1	應數系 Department of Applied Mathematics	
應用數學方法（一）	Methods of Applied Mathematics（Ⅰ）	M	A	S	3	A50G50	1	應數系 Department of Applied Mathematics	
應用數學方法（二）	Methods of Applied Mathematics（Ⅱ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
應用數學專題（一）	Special Topics in Applied Mathematics（Ⅰ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
應用數學專題（二）	Special Topics in Applied Mathematics（Ⅱ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
高等偏微分方程（一）	Advanced Partial Differential Equation（Ⅰ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
高等偏微分方程（二）	Advanced Partial Differential Equation（Ⅱ）	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
凸性分析	Convex Analysis	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
高等常微分方程(一)	Advanced Ordinary Differential Equation（Ⅰ）	M	A	S	3	A50B50	進階課程 advanced courses	應數系 Department of Applied Mathematics	
分析學	Analysis	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
應用代數專題	Special Topics in Applied Algebra	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
離散數學專題(一)	Special Topics in Discrete Mathematics (I)	M	A	S	3	A50B50	進階課程 advanced courses	應數系 Department of Applied Mathematics	
離散數學專題(二)	Special Topics in Discrete Mathematics (II)	M	A	S	3	A50B50	1	應數系 Department of Applied Mathematics	
數學影像處理	Fundamentals of Image Processing	M	A	S	2	B40D30E30	進階課程 advanced courses	應數系 Department of Applied Mathematics	
SAP實務學習與數據分析	SAP Experiential Learning and Data Analysis	M	A	S	2	C20E30F30G20	進階課程 advanced courses	應數系 Department of Applied Mathematics	
前瞻資料科學（一）	Advanced Data Science（I）	M	A	S	1	A80D20	1	應數系 Department of Applied Mathematics	
前瞻資料科學（二）	Advanced Data Science（II）	M	A	S	1	A80D20	1	應數系 Department of Applied Mathematics	
前瞻資料科學（三）	Advanced Data Science（III）	M	A	S	1	A80D20	1	應數系 Department of Applied Mathematics	
隨機過程	Stochastic Processes	M	A	S	3	C50E50	進階課程 advanced courses	應數系 Department of Applied Mathematics	
數據分析數學	Mathematical Analysis to Data Science	M	A	S	3	A20B20C20E20F20	1	應數系 Department of Applied Mathematics	

※附註：規劃要點填表說明：（１到４各欄位請填正確代表字母）
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		1	2	3	4				
選修課程 Elective Courses									

2：A-正課、B-實習課、C-台下指導之科目如學生講述或邀請演講之專題討論、專題研究……等。

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