



課 綱 Course Outline
應用數學系學士班

中文課程名稱 Course Name in Chinese	微積分（一）				
英文課程名稱 Course Name in English	Calculus (I)				
科目代碼 Course Code	AM_10000	班 別 Degree	學士班 Bachelor' s		
修別 Type	學程 Program	學分數 Credit(s)	4.0	時 數 Hour(s)	4.0
先修課程 Prerequisite	Real numbers, Coordinate systems, Lines, Functions, Trigonometric function				
課程目標 Course Objectives					
學習極限，連續，導數，積分及它們的應用 (Study the limit, continuity, derivative, integration and their applications.)					
系教育目標 Dept.' s Education Objectives					
1	訓練嚴謹思考與推理能力。 To provide a solid training in rigorous thinking and reasoning ability,				
2	奠定理論與應用數學的基礎知識。 To establish well-founded background knowledge in pure and applied mathematics,				
3	具備跨領域學習能力。 To prepare the students for interdisciplinary study in the future.				
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	數學科學組： 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, 統計組： 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	<p>數學科學組： 具備學習數學相關領域的預備知識。 Be knowledgeable about fields related to mathematics,</p> <p>統計組： 具備機率、統計及相關領域的知識與應用能力。 Have the knowledge of probability and statistics and the related field, and the corresponding application ability,</p>	
C	<p>數學科學組： 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.</p> <p>統計組： 具備軟體應用與統計計算能力。 Be able to use computer software for statistical computation in real applications.</p>	
<p>圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated</p>		
<p style="text-align: center;">課程大綱 Course Outline</p>		
<p>1.Limits and continuity of functions(函數的極限，連續) 2.The derivative and its applications. (導數及它的應用) 3.The integral and its applications.(積分及它的應用)</p>		
<p style="text-align: center;">資源需求評估 (師資專長之聘任、儀器設備的配合．．．等) Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)</p>		
<p>本系專任教師。 Faculties of applied math department.</p>		
<p style="text-align: center;">課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods</p>		
<p>上課講授，討論，作業，及期中、期末考 (Lectures, discussions, homework, midterm and final exams)</p>		
<p style="text-align: center;">其他 Miscellaneous</p>		
<p>撰寫人：應用數學系 黃延安 撰寫日：100年4月</p>		