

# 應用數學系碩士班

114 學年度

最低修業年限	一年
應修學分數	24 學分
應修(應選)課程及符合畢業資格之修課相關規定	<p>共同必修： 至少需通過二學期論文研討。</p> <p>個別必修： 分析與幾何組： 1. 實變函數論(一)(3學分) 2. 下列課程擇一(3學分)：實變函數論(二)，常微分方程(一)，常微分方程(二)，偏微分方程(一)，偏微分方程(二)，近世代數(一)，近世代數(二)，高等機率論。</p> <p>組合數學組： 1. 離散數學專題通過一次。 2. 圖論(3學分)，組合學導論(3學分)，代數學(二)(3學分)，共9學分</p>
備註	入學第一學期結束前完成學術研究倫理教育課程。

## MS Program of the Department of Applied Mathematics

Academic Year 2025

Period of Study	one year
Graduation Credits	24 credits
Compulsory Courses and Graduation Requirements	<p>The Master degree course regulations in the department are as follows:</p> <p>(i) Common Requirement: passing the “Colloquium” at least twice.</p> <p>(ii) Individual Requirements:</p> <p>(a) “Analysis and Geometry” program: Passing the course “Real Analysis(I)” which is of 3 credits. Passing one of the following 3 credits courses: Real Analysis(II), Differential Equations (I), Differential Equations (II), Partial Differential Equations (I), Partial Differential Equations (II), Modern Algebra(I), Modern Algebra(II), Advanced Probability.</p> <p>(b) “Combinatorics” program: Passing the course “Topics in Discrete Mathematics” once; passing the course “Graph Theory” which is of 3 credits; passing the course “Introduction to Combinatorics” which is of 3 credits; passing the course “Algebra(II)” which is of 3 credits..</p>
Remarks	1. Students should study “Academic Ethics Education” program before the end of the first semester after enrollment.

# 應用數學系碩士班(輔所)

114 學年度

應修學分數	12
應修(應選)課程	<p>分析與幾何組：</p> <p>(1)必修 6 學分：本系所開授實變函數論(一)(3 學分)，下列課程擇一(3 學分)： 實變函數論(二)，常微分方程(一)，常微分方程(二)，偏微分方程(一)， 偏微分方程(二)，近世代數(一)，近世代數(二)，高等機率論。</p> <p>(2)選修：本系所開授非專題性課程 2 門共 6 學分。</p> <p>組合數學組：</p> <p>(1)必修 9 學分：本系所開授圖論 3 學分、組合學導論 3 學分、代數學(二)3 學分。</p> <p>(2)選修：本系所開授非專題性課程 1 門共 3 學分。</p>
備註	

## Department of Applied Mathematics(Minor Program)

Academic Year 2025

Minimum Credits	12
Curriculum and Regulations	<p>The requirements for the minor in Applied Mathematics ,must complete a minimum of 12 credits from the following:</p> <p>“Analysis and Geometry” program:</p> <p>(1) Required courses(6 credits):“Real Analysis (I)” which is of 3credits; another 3credits has to be taken and completed from one amount the following list of courses: “Real Analysis (II)”、 Ordinary Differential Equations(I) 、 Ordinary Differential Equations(II) 、 Partial Differential Equations(I) 、 Partial Differential Equations(II) 、 Modern Algebra(I) 、 Modern Algebra(II) 、 Advanced Probability.</p> <p>(2) Elective courses (6 credits): two graduate level courses, which are not conducted in the form of a seminar.</p> <p>“Combinatorics” program:</p> <p>(1) Required courses (9 credits):“Graph Theory” which is of 3 credits; “Introduction to Combinatorics” which is of 3 credits;”Algebra(II) which is of 3 credits.</p> <p>(2) Elective courses (3 credits): one graduate level course, which are not conducted in the form of a seminar.</p>
Note	

# 應用數學系博士班

114 學年度

最低修業年限	三年(特優者得申請二年畢業)
應修學分數	18 學分
直升博士生 應修學分數	碩士生逕行修讀博士學位，必須修滿 30 學分，學士生逕行修讀博士學位，必須修滿 36 學分。
應修(應選)課程及 符合畢業資格之修課 相關規定	<p>1. 至少須選修本系所開課程 12 學分。</p> <p>2. 必修課程</p> <p style="padding-left: 20px;">共同必修：至少需通過4學期論文研討。</p> <p style="padding-left: 20px;">個別必修：</p> <p style="padding-left: 40px;">分析與幾何組：實變函數論二學期，共6學分。</p> <p style="padding-left: 40px;">組合數學組：圖論一學期(3學分)，組合學導論一學期(3學分)，共6學分 及離散數學專題至少需通過2次。</p> <p style="padding-left: 40px;">數學建模與科學計算組：應用數學方法一學期(3學分)， 科學計算導論一學期(3學分)，共6學分。</p>
備註	<p>1. 若於碩士班已修過並及格之實變函數論可向系上申請免修</p> <p>2. 入學第一學期結束前完成學術研究倫理教育課程</p>

## Ph.D Program of Department of Applied Mathematics

Academic Year 2025

Period of Study	three years (Students with outstanding academic performance may apply for graduation after the two-year study.)
Graduation Credits	18 credits
Compulsory Courses and Graduation Requirements	<p>1. Students have to complete at least 18 credits which is include 12 credits must earned from department.</p> <p>2. Compulsory Courses: Compulsory Courses: passing the “Colloquium” at least four times. Individual Requirements:</p> <p style="padding-left: 20px;">Analysis and Geometry program: passing a two-semester course sequence in “Real Analysis” which is of 6 credits. Combinatorics program: passing the course “Topics in Discrete Mathematics” at least <b>two</b> times; passing the course “Graph Theory” which is of 3 credits; passing the course “Introduction to Combinatorics” which is of 3 credits.</p> <p style="padding-left: 20px;">Mathematical Modeling and Scientific Computing program: passing each a semester course sequence in “Methods of Applied Mathematics” and in “Introduction to Scientific Computing” which is of 6 credits.</p>
Other Requirements	<p>1. Students who have passing the course sequence in “Real Analysis” can apply for exemption.</p> <p>2. Students should study “Academic Ethics Education” program before the end of the first semester after enrollment.</p>

# 應用數學系博士班(輔所)

114 學年度

應修學分數	12
應修(應選)課程	<p>分析與幾何組：</p> <p>(1)必修 6 學分：實變函數論(一)(3 學分)，下列課程擇一(3 學分)：實變函數論(二)，常微分方程(一)，常微分方程(二)，偏微分方程(一)，偏微分方程(二)，近世代數(一)，近世代數(二)，高等機率論。</p> <p>(2)選修：本系所開授非專題性課程 2 門共 6 學分。</p> <p>組合數學組：</p> <p>(1)必修 6 學分：本系所開授圖論 3 學分、組合學導論 3 學分。</p> <p>(2)選修：本系所開授非專題性課程 2 門共 6 學分。</p> <p>數學建模與科學計算組：</p> <p>(1)必修 6 學分：本系所開授科學計算導論 3 學分、應用數學方法 3 學分。</p> <p>(2)選修：本系所開授非專題性課程 2 門共 6 學分。</p>
備註	

## Department of Applied Mathematics(Minor Program)

Academic Year 2025

Minimum Credits	
Curriculum and Regulations	<p>The requirements for the minor in Applied Mathematics ,must complete a minimum of 12 credits from the following:</p> <p>“Analysis and Geometry” program:</p> <p>(1) Required courses(6 credits): “Real Analysis (I)” which is of 3credits; another 3credits has to be taken and completed from one amount the following list of courses: “Real Analysis (II)”、Ordinary Differential Equations(I) 、Ordinary Differential Equations(II) 、Partial Differential Equations(I) 、Partial Differential Equations(II) 、Modern Algebra(I) 、Modern Algebra(II) 、Advanced Probability.</p> <p>(2) Elective courses (6 credits): two graduate level courses, which are not conducted in the form of a seminar.</p> <p>“Combinatorics” program:</p> <p>(1) Required courses 6 credits:“Graph Theory” which is of 3 credits; passing the course “Introduction to Combinatorics” which is of 3 credits.</p> <p>(2) Elective courses (6 credits): two graduate level courses, which are not conducted in the form of a seminar.</p> <p>“Mathematical Modeling and Scientific Computing” program:</p> <p>(1) Required courses(6 credits):“Introduction to Scientific Computing (3 credits); “Methods of Applied Mathematics” (3 credits).</p> <p>(2) Elective courses (6 credits):two graduate level courses, which are not conducted in the form of a seminar.</p>