

115 學年度學士班課程規劃表 Curriculum - BS Program, 115th Academic Year

理工學院 數學學系 資訊數學組

Information Mathematics Section, Department of Mathematics, College of Science and Engineering

備註(Note)：

1. 此為課程規劃表，實際開課課程以教務處公告為準。

This is the course planning table; the actual courses offered are subject to the announcements from the Office of Academic Affairs.

2. 修業規則另有學分規定。

There are other credit regulations in the graduation regulation.

必修課程 Major Required Courses

| 年級 Year | 課程名稱 Course Title | 第一學期 1st semester. | 第二學期 2nd semester. | 學分 Credits |
|------------------|---|-----------------------|-----------------------|--------------------|
| 一年級 Freshman | 微積分(一) Calculus(I) | 4 | - | 53學分 53 credits |
| | 微積分(二) Calculus(II) | - | 4 | |
| | 線性代數(一) Linear Algebra(I) | 3 | - | |
| | 線性代數(二) Linear Algebra (II) | - | 3 | |
| | 程式設計(一) Computer Programming(I) | 3 | - | |
| | 資訊數學導論 Introduction to Information Mathematics | 2 | 2 | |
| 二年級 Sophomore | 高等微積分(一) Advanced Calculus (I) | 4 | - | |
| | 高等微積分(二) Advanced Calculus(II) | - | 4 | |
| | 機率論 Probability Theory | 3 | - | |
| | 統計學 Statistics | - | 3 | |
| | 離散數學 Discrete Mathematics | 3 | - | |
| | 代數學(一) Algebra (I) | 3 | - | |
| | 資料結構 Data Structures | - | 3 | |
| 三年級 Junior | 科學計算 Scientific Computing | 3 | - | |
| | 演算法 Algorithms | 3 | - | |
| | 人工智慧概論 Introduction of Artificial Intelligence | - | 3 | |
| 四年級 Senior | - | - | - | |

必選課程 Elective Courses by Section

| 年級 Year | 課程名稱 Course Title | 第一學期 1st semester. | 第二學期 2nd semester. | 學分 credits |
|------------------|---|-----------------------|-----------------------|--|
| 一年級 Freshman | 程式設計(二) Computer Programming II | - | 3 | 系專業科目至少需選 修15學分。 15 credits must be chosen from elective courses at section. |
| | 行動裝置程式設計 Mobile Device Programming | - | 3 | |
| 二年級 Sophomore | 資料庫 Database Concepts | 3 | - | |
| | 網路概論 Introduction to Computer Networks | 3 | - | |
| | 作業系統 Operating System | - | 3 | |
| | 微分方程 Differential Equations | 2 | 2 | |
| | 代數學(二) Algebra (II) | - | 3 | |
| 三年級 Junior | 複變函數論 Complex Analysis | 2 | 2 | |
| | 密碼學 Cryptography | - | 3 | |
| | 資訊數學專題(一) Topics in Information Mathematics (I) | 2 | - | |
| | 資訊數學專題(二) Topics in Information Mathematics (II) | - | 2 | |
| 四年級 Senior | - | - | - | |

選修課程 Elective Courses

update:2026/5/19

| 年級 Year | 課程名稱 Course Title | 第一學期 1st semester. | 第二學期 2nd semester. | 學分 credits |
|--------------------------------|--|------------------------------|-----------------------|---------------|
| 一年級 Freshman | 數學物理入門(一) Introduction to Mathematical Physics (I) | 2 | - | |
| | 數學物理入門(二) Introduction to Mathematical Physics (II) | - | 2 | |
| | 開始學數學 Start Learning Mathematics | - | 2 | |
| | C語言 C Language | - | 3 | |
| | Java程式語言 JAVA Programming Language | 3 | - | |
| | 行動裝置程式設計 Mobile Device Programming | - | 3 | |
| | 二年級 Sophomore | 動態網頁設計 Dynamic Web Design | - | |
| 計算機組織 Computer Organization | | 3 | - | |
| 三年級 Junior | 隨機過程 Stochastic Process | 3 | - | |
| | 幾何學 Geometry | 3 | - | |
| | 代數專題 Topics in Algebra | 3 | - | |
| | 編碼學 Coding Theory | - | 3 | |
| | 數論 Number theory | 3 | - | |
| 四年級 Senior | 產險精算數學 Property and Casualty Actuarial Mathematics | 3 | - | |
| | 產險精算實務 Property and Casualty Actuarial Practice | - | 3 | |
| | 小波理論與應用 Wavelet Theory and Its Applications | 3 | 3 | |
| | 機器學習與應用 Machine Learning and Its Applications | 3 | - | |
| | 深度學習與實務 Deep Learning and Practice | - | 3 | |
| | 應用數學專題(一) Topics in Applied Mathematics (I) | 3 | - | |
| | 論文研討(一) Colloquium(I) | 1 | - | |
| | 論文研討(二) Colloquium(II) | - | 1 | |