

# 114 學年度學士班課程規劃表 Curriculum - BS Program, 114th 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	-	
	數學導論 Introduction to Mathematics	2	2	
	高等微積分(一) Advanced Calculus (I)	4	-	
二年級 Sophomore	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	
	科學計算 Scientific Computing	3	-	
三年級 Junior	演算法 Algorithms	3	-	
	人工智慧概論 Introduction of Artificial Intelligence	-	3	
	-	-	-	
四年級 Senior	-	-	-	

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## 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	圖論 Graph Theory	3	-	

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## 選修課程 Elective Courses

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一年級 Freshman	數學物理入門(三) Introduction to Mathematical Physics (I)	2	-	
	數學物理入門(四) Introduction to Mathematical Physics (IV)	-	2	
	Java程式語言 JAVA Programming Language	3	-	
	C語言 C Language	-	3	
	開始學數學 Start Learning Mathematics	-	3	
	數理及其它邏輯比較與應用 Comparison and Application of Mathematical and Other Logic Systems	-	2	
	動態網頁設計 Dynamic Web Design	-	3	
二年級 Sophomore	線性代數專題(一) Topics in Linear Algebra(I)	2	-	
	線性代數專題(二) Topics in Linear Algebra(II)	-	2	
	計算機組織 Computer Organization	3	-	
	拓樸學 Topics in Topology	2	2	

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三年級 Junior	數理統計 Mathematical Statistics	3	3	
	隨機過程 Stochastic Process	3	-	
	幾何學 Geometry	-	3	
	應用數學專題(一) Topics in Applied Mathematics (I)	2	-	
	應用數學專題(二) Topics in Applied Mathematics (II)	-	2	
四年級 Senior	生醫訊號分析 Biomedical Signal Analysis	3	3	
	產險精算數學 Property and Casualty Actuarial Mathematics	3	-	
	產險精算實務 Property and Casualty Actuarial Practice	-	3	
	多變量分析 Multivariate Statistical Analysis	3	3	
	圖論 Graph Theory		3	
	人工智慧數學理論 Mathematical Theory of Artificial Intelligence	3	3	
	論文研討(一) Colloquium(I)	1	-	
	論文研討(二) Colloquium(II)	-	1	