



課 綱 Course Outline
理工學院大數據科學國際學士班學士班

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| 中文課程名稱 Course Name in Chinese | 程式設計(一) | | | | |
| 英文課程名稱 Course Name in English | Introduction to Computer Programming (I) | | | | |
| 科目代碼 Course Code | DS_10000 | 班 別 Degree | 學士班 Bachelor's | | |
| 修別 Type | 學程 Program | 學分數 Credit(s) | 3.0 | 時 數 Hour(s) | 3.0 |
| 先修課程 Prerequisite | 無 | | | | |
| 課程目標 Course Objectives | | | | | |
| 介紹程式設計基本觀念、方法與程式發展技術。 In this course, the teacher will introduce the basic concepts and methods of programming and its development techniques. | | | | | |
| 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, | | | | |
| 2 | 奠定資料科學理論與應用數學的基礎知識。 to establish well-founded background knowledge in data science 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 | 具備基本資料科學知識及邏輯推理能力。 have well-founded background in data science and logical reasoning, | | | ● | |
| B | 具備機率、統計、資料科學及相關領域的知識與應用能力。 have the knowledge of probability, statistics, data science and the related fields, and their applications, | | | ● | |
| C | 具備資料科學應用技能與團隊合作，解決問題能力。 be able to utilize data scientific skills for problem solving through cooperation and teamworking. | | | ○ | |

圖示說明Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱
Course Outline

1. Introduction to Programming Languages and Computer Systems.
2. Basic Concepts of Programming.
3. The Program Structure of C Language.
4. Basic Data Types and Input/Output.
5. Selection Statements and loops.
6. Function Design and Parameter Passing. 7. Arrays and Pointers.
8. File Input and Output.
9. Modular Programming.

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.)

需相關專業教師支援教學。
Appeals to subject-area specialists for pedagogical support in teaching.

課程要求和教學方式之建議
Course Requirements and Suggested Teaching Methods

Lecture and Program Implementation. The Maximum number of students is 40. Grading & Assessments: Midterm Exam, Final Exam, and Homework and Assignments

其他
Miscellaneous

1130306訂定。
This course syllabus was approved on March 6, 2024.