# 國立東華大學

## 課　綱　Course Outline
### 理工學院大數據科學國際學士班學士班

| 中文課程名稱<br>Course Name in Chinese | 程式設計(一) | | | | |
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| 英文課程名稱<br>Course Name in English | Introduction to Computer Programming (I) | | | | |
| 科目代碼<br>Course Code | DS__10000 | 班 別<br>Degree | 學士班<br>Bachelor's | | |
| 修別<br>Type | 學程<br>Program | 學分數<br>Credit(s) | 3.0 | 時 數<br>Hour(s) | 3.0 |
| 先修課程<br>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

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| 1 | 訓練嚴謹思考與推理能力。<br>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。<br>to establish well-founded background knowledge in data science and applied mathematics, |
| 3 | 具備跨領域學習能力。<br>to prepare the students for interdisciplinary study in the future. |

| 系專業能力<br><br>Basic Learning Outcomes | | 課程目標與系專業能力相關性<br>Correlation between Course Objectives and Dept.' s Education Objectives |
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| A | 具備基本資料科學知識及邏輯推理能力。<br>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。<br>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。<br>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 |
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| 課程大綱<br>Course Outline |
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| 1. Introduction to Programming Languages and Computer Systems.<br>2. Basic Concepts of Programming.<br>3. The Program Structure of C Language.<br>4. Basic Data Types and Input/Output.<br>5. Selection Statements and loops.<br>6. Function Design and Parameter Passing. 7. Arrays and Pointers.<br>8. File Input and Output.<br>9. Modular Programming. |

| 資源需求評估（師資專長之聘任、儀器設備的配合···等）<br>Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.) |
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| 需相關專業教師支援教學。<br>Appeals to subject-area specialists for pedagogical support in teaching. |

| 課程要求和教學方式之建議<br>Course Requirements and Suggested Teaching Methods |
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| Lecture and Program Implementation. The Maximum number of students is 40. Grading &<br>Assessments: Midterm Exam, Final Exam, and Homework and Assignments |

| 其他<br>Miscellaneous |
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| 1130306訂定。<br>This course syllabus was approved on March 6, 2024. |