# 國立台灣科技大學 114學年 第2學期　課程大綱

## Spring 2026 NTUST Course Outline

授課教師：林敬舜

Instructor:Ching-Shun Lin

課程名稱：計算機科學導論

Course Title：Introduction to Computer Science

2026/11/3

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| 課程代號：ET2400701<br>Course Code<br>學分數：3<br>Credits | 必選修：選修/半學年<br>Required/Electve:Elective/Half Yr.<br>先修課程：<br>Prerequisites |
| 節次教室：M6(IB-510-2) M7(IB-510-2) T1(IB-510-2)<br>Time/Location | |
| 專業核心能力：<br>Core Professional Competencies | |
| 課程網址：https://www.et.ntust.edu.tw/et/faculty.php?user=chingshl<br>Course Website | |
| 課程宗旨：<br>Course Objectives | The purpose of this course is to provide students with a basic understanding of the history, principles, development, and coverage of computers. In particular, the software and hardware applications of personal computers, the trends of multimedia and the Internet, and the impact of computers on modern society are introduced and discussed one by one, so that students can have a certain understanding of various fields of information science to cope with computer-related lectures later. |
| 課程大綱：<br>Outline of Lectures | 1. Introduction.<br>2. Data Representation.<br>3. Basic Computer Architectures.<br>4. Input/Output Technologies.<br>5. Storage Devices.<br>6. Operating Systems.<br>7. Basic Data Structure and Algorithms.<br>8. Computer Communications and Networks.<br>9. Databases and Information Management.<br>10. Computers and Society, Information Security, and Information Ethics.<br>11. Multimedia Systems.<br>12. Programming Languages.<br>13. Computer Careers and Certifications. |
| 授課方式：<br>Method of Instruction | 講授 Lecture：80%<br>分組討論 Group discussion：10%<br>案例研討 Case study：5%<br>操做練習 Practical exercises：5%<br>講授 Lecture：Some supplementary materials will be handed out in the lecture.% |
| 教科書：<br>Textbooks | J. Glenn Brookshear and Dennis Brylow, Computer Science: An Overview, Pearson FT Press, 2019. |
| 參考書目：<br>References | |

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| | 1. Behrouz A. Forouzan, Foundations of Computer Science - From Data Manipulation to Theory of Computation, Thomson Brooks/Cole, 2002.<br>2. Robert W. Sebesta, Concepts of Programming Languages, 8th Ed., Addison Wesley, 2007.<br>3. Pauline Cushman and Ramon Mata-Toledo, Schaum's Outline of Introduction to Computer Science, McGraw-Hill, 1999. |
| 修課須知：<br>Notice | Teaching assistant is available. |
| 評量方式：<br>Grading | Midterm: 40 %,<br>Final exam: 40 %,<br>Quiz: 10 %,<br>Attendance and participation: 10 % |
| 備註說明：<br>Notes | Tips for success in this class:<br>• Familiarity with programming, such as the C language, is a plus.<br>• Don't miss class.<br>• Read in advance.<br>• Start homework early.<br>• Don't ignore the homework, and quizzes.<br>• Ask questions.<br>• Don't arrive late for class. |