# 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：陳怡伶

Instructor:Yi-Ling Chen

課程名稱：社群網路

Course Title：Social Networks

2026/11/3

| | |
|---|---|
| 課程代號： CS4809304<br>Course Code<br>學分數： 3<br>Credits | 必選修：必修/半學年<br>Required/Electve:Required/Half Yr.<br>先修課程：<br>Prerequisites |
| 節次教室：<br>Time/Location | M6(T3-304) M7(T3-304) M8(T3-304) |
| 專業核心能力：<br>Core Professional Competencies | □具備分析與解讀實驗數據能力<br>□具備發掘與解決問題能力<br>□具備產業實作應用與系統整合能力<br>□增進溝通協調與團隊合作能力 |
| 課程網址：<br>Course Website | https://moodle.ntust.edu.tw/ |
| 課程宗旨：<br>Course Objectives | In this course, we will cover certain important topics and algorithms used in social network analysis, such as link prediction and community detection. Students are expected to implement some of these algorithms as programming assignments. In the final project, students can leverage the skills learned in this course to build interesting and useful applications. |
| 課程大綱：<br>Outline of Lectures | We will first introduce the following important topics, and then provide suitable practices to help students get familiar with the learned materials.<br>1. Introduction to social networks<br>2. Models of social networks<br>3. Ranking tasks in social networks<br>4. Link prediction<br>5. Community detection<br>6. Influence maximization |
| 授課方式：<br>Method of Instruction | 講授 Lecture：70%<br>分組討論 Group discussion：15%<br>案例研討 Case study：0%<br>操做練習 Practical exercises：15%<br>講授 Lecture：% |
| 教科書：<br>Textbooks | (N/A) |
| 參考書目：<br>References | (N/A) |
| 修課須知：<br>Notice | Slides and other course materials will be provided on the Moodle platform. |
| 評量方式：<br>Grading | Programming Assignments: 60% / Final Project: 40% (Final grades will be adjusted based on overall scores.) |

| | |
|---|---|
| 備註說明：<br>Notes | Students are expected to have programming experience (e.g., C, C++, Java, Python, or R). |