

National Chung Cheng University
Department of Chemical Engineering Year 2025/Fall
Course Syllabus

Course title:	Material Science
Course number:	4252800
Instructor:	Yuan-Yao Li (Engineering Building II, Room 403, phone: 05-2720411 ext: 33403, chmyyl@ccu.edu.tw)
Class schedule:	Wednesday and Friday 08:45-10:00, Engineering Building II, Room 118
Required textbook:	Materials Science and Engineering, William D. Callister, Jr., 10th edition, 2022, John Wiley & Sons, Inc. SI version.
Supporting materials:	(1) Chemistry: principle, patterns, and applications, B. Averill and P. Eldredge, 2007, Pearson International Edition. (2) Chemistry: structure and dynamics, James N. Spencer, George M. Bodner, Lyman H. Rickard. Hoboken, New Jersey : J. Wiley, 2008.
Course description:	An introduction of material science and engineering to university students. To let students understand the basic fundamentals in a logical order, from the simple to the more complex.
Course topics:	● Atomic structure, bonding & Molecules ● Crystals and Crystal structure ● Imperfections & Defects ● Diffusion ● Phase diagrams ● Materials' properties
Grading policy:	● Attendance: 10 points ● Kahoot: 10 points ● Mid-term exam: 35 points ● Final exam: 45 points