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：藍振洋

Instructor:Lan, Chen-yang

課程名稱：應用電子學

Course Title：Applied Electronics
(Introduction to Electronics)

2026/11/3

課程代號：ME3409303 Course Code 學分數：3 Credits	必選修：必修/半學年 Required/Electve:Required/Half Yr. 先修課程： Prerequisites
節次教室：R3(TR-411) R4(TR-411) T3(TR-411) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	This course provides a comprehensive introduction to electronics, covering fundamental semiconductor devices, analog and digital circuits, logic design, microprocessors, and industrial control components. Through theoretical lectures and hands-on exercises, students will develop a strong foundation in electronic circuit analysis and applications. Course Objectives： At the end of this course, students should: 1. Understand the basic electrical concept and principles. 2. Be able to apply basic principles and theory for electrical circuit analysis and design, and to interpret the functions of a particular element/circuit. 3. Be able to describe and read specifications and manuals, and to communicate with EE in related projects.
課程大綱： Outline of Lectures	Course Topics： 1. Electrical Circuit Analysis (Voltage、Current、Ohm’s Law、KCL and KVL) 2. Basic Elements (Source、Resistor、Capacitor、Inductor) 3. Circuit Transient Analysis (first order and second order system) 4. Steady-State AC Analysis (phasor and impedance, Frequency Analysis, Bode plot) 5. OP Amplifier 6. Semiconductor (Diode and BJT Transistor) 7. Logic Circuits and Instrumentation (Options) 8. Three Phase Power System (Options)
授課方式： Method of Instruction	講授 Lecture：100% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：Exams and Discussiions%
教科書： Textbooks	S.A. Reze Zekavat, Electrical Engineering Concepts and Applications, 2013, PEARSON.

參考書目： References	Allan R. Hambley, Electrical Engineering - Principles and Applications,6th ed.,2014, PEARSON.
修課須知： Notice	1.Do not be late to the class or leave early during the class. 2.Please formally apply for your absent for a class prior to the lecture with proper excuse. 3.No cheating in the exams tolerated. 4.The seating for exams is randomly assigned by the TA. Your student ID is required for taking those exams. 5.All announcements will be made at the Moodle. Please watch out for those announcements.
評量方式： Grading	Grading Policy： (All dates are tentative.) Attendance：10%；Mid-term：45%(4/16)； Final Exam：45%(6/11)
備註說明： Notes	Prerequisites：None (Engineering Mathematics and Physics.)