

Required Courses of Department of Electrical Engineering

Applicable to Students Enrolled in School Year 2026

Subject Category		Course Name	1st Year		2nd Year		3rd Year		4th Year	
			Semester							
			1	2	3	4	5	6	7	8
General Education Course	Language Literacy	National Languages (Critical thinking and expression in Chinese)	3							
		General English *Choose in 1st Year and above.	3							
		English Proficiency Standard	0							
	Inter-college Electives	Inter-college Electives *Choose in 1st Year and above. *Three credits must take EAP/ESP course.	8							
	Liberal Arts Courses	Liberal Arts Courses	13							
	Practical Experience courses	Primer on College Life: A Lecture Series *Take six sessions of lectures approved by Si Wan College by the end of the 3rd year.	0							
		Service Learning *Should be completed by the end of the 3rd year.	1							
	Sport & Health courses	Sport & Health courses	1	1	1	1				
		Calculus (I)	3							
		Calculus (II)		3						
		General Physics (I)	3							
		General Physics (II)		3						
		Introduction to Computers	3							
		Design of Digital Systems	3							
		Computer Programming	3							
		Linear Algebra		3						
		Differential Equations		3						
		Circuit Theory (I)		3						

	Course Name	1st Year		2nd Year		3rd Year		4th Year	
		Semester							
		1	2	3	4	5	6	7	8
Department of Electrical Engineering Course	Required Courses			3					
	Signals and Systems			3					
	Electronics (I)			3					
	Electrical Engineering Lab. (I)			1					
	Circuit Theory (II)			3					
	Electromagnetic Theory (I)			3					
	Electronics (II)				3				
	Electrical Engineering Lab. (II)				1				
	Electrical Machines				3				
	Electromagnetics (II)				3				
	Probability Theory				3				
	Control Systems					3			
	Communication Systems					3			
	Electrical Engineering Lab. (III)					1			
Required Courses - Core Elective Courses	[A]: One of the following subjects must be taken								
	Independent Studies in Electronic Practice						2		
	Independent Studies in Control Practice						2		
	Independent Studies in AI & Network						2		
	Independent Studies in Electric Power Practice						2		
	Independent Studies in Wave Practice						2		
	Independent Studies In Communication Practice						2		
	Independent Studies in System-on-Chip Design						2		
	Independent Studies in Biomedical Signal Processing & Instrumentation						2		

Minimum
graduation
credits

132

1. General Education Course: 28 credits (Sport & Health courses 4 credits are required but are not included in the minimum graduation credits.)

*Students must complete the General Education requirements in accordance with the University's Course Structure of General Education and the credit requirements for each category.

2. Department of Electrical Engineering - Required Courses: 65 credits

3. Department of Electrical Engineering - Elective Courses: at least 26 credits, including a minimum of 2 credits of EE elective lab courses

*Advanced Electrical Engineering Project is not considered an EE elective lab course; however, its credits may be counted toward the departmental elective credit requirement.

4. Other elective course: at least 13 credits. Students can choose any courses they are interested in.

5. Electrical Engineering Laboratory (I), (II), and (III) should be taken in English.

6. Core Elective Courses [A]:

(1) Students of 2 to 3 form a group studying under a professor. The students usually have regular meeting with their supervisor.

(2) Depending on the topics of their projects, the students may have either hardware or software oriented tasks to complete in one semester. A project report is required to complete the course.

7. For students in the English Track (EMI Program), all departmental required courses must be taken in English. Among the 26 credits of departmental elective courses, at least 12 credits must be completed through English-taught courses.

8. Should meet at least one of the following "International or Interdisciplinary Studies" graduation requirements.

(1) International Study: At least one semester of exchange (or training abroad) or completion of at least 2 credits of the foreign study program (or foreign study program at least 36 hours of study) approved by EE department.

(2) Interdisciplinary Study: A minor, double major, or education program from NSYSU or another university, or a microprogram offered by NSYSU (The program or faculty must be an inter-institutional collaboration), Integrated or Interdepartmental professional programs.