### 國立彰化師範大學

## 機電工程學系碩士在職專班畢業條件表暨課程架構表 (110學年度入學學生適用)

National Changhua University of Education

Graduation Requirements and Course Structure for Master's Program of Mechatronics Engineering (Applicable for students in 110 academic year)

列印日期(Print Date:2025/11/10)

### 一.系必修課程

### **I.Department Required Courses**

課程名稱 Course Name	學分/學時 Credit(s)/ Hour(s)	年級 Grade	學期 Semester
書報討論(一)	2/2	1	1
Seminar I	<u> </u>		
書報討論(二) Seminar II	2/2	1	2
機電專題(一) Mechatronics Project I	2/2	1	2
機電專題(二) Mechatronics Project II	2/2	2	1
論文 Thesis	0/0	2	2
論文指導 Thesis Supervision	4/0	2	2
論文寫作 Thesis Writing	2/2	2	2

# 二.系選修課程

### **II.Department Elective Courses**

課程名稱 Course Name	學分/學時 Credit(s)/ Hour(s)
人工智慧物聯網系統設計	3/3
AIoT	
人工智慧感測與控制技術	3/3
Artificial Intelligence Sensing and Control	3,3
互聯網系統設計	3/3
Internet System Design	3/3
光電半導體元件	3/3
Optoelectronic Semiconductor Devices	5/3
光電半導體材料與物理	2/2
Optoelectronic Semiconductor Materials and Physics	3/3
光學微影與蝕刻	2./2
Photolithography and Etching	3/3
	2/2
Nanostructure Fabrication	3/3
科技英文	2/2
English for Science and Technology	3/3

微波積體電路設計與應用	3/3
Microwave Integrated Circuit Design and Applications	
微電子材料與製程	3/3
Microelectronic Matericals and Processes	
微機電技術與實務	3/3
MEMS technology and practice	
微機電製程	3/3
MEMS Processes	
精密機械與光電量測	3/3
Precision Machine Tool and Photoelectric Measurement	
機電產業實務與管理	3/3
Practice and Management of Mechatronic Industry	
應用電子學	3/3
Applied Electronics	
薄膜製程與應用	3/3
The flim processes and applications	
PCI 介面電路設計	3/3
PCI Interface Circuitry Design	
工程設計與系統分析	3/3
Engineering Design and System Analysis	
光機系統設計	3/3
Opto-mechanical Systems Design	·
有限元素法	3/3
Finite Element Method	
<b>系統設計與動態分析</b>	3/3
System Design and Dynamics	
奈米機電系統 	3/3
Nano-Electro-Mechanical Systems	
氣體潤滑理論與應用	3/3
Air Lubrication Theory and Application	
現代控制工程	3/3
Modern Control Engineering	
結構動態與控制工程	3/3
Dynamics and Control of Structures	·
結構設計與振動分析	3/3
Structural Design and Vibrational Analysis	, -
雷射加工系統設計	3/3
Design of the Laser Processing Systems	-,-
電子儀器與量測	3/3
Electronic Instrument and Measurement	-,-
影像處理與應用	3/3
Image Processing and Application	-,-
數值分析	3/3
Numerical Analysis	-,-
半導體產業與技術	3/3
Semiconductor Industry and Technology	5,5
半導體製程設備	3/3
Equipments of Semiconductor Processes	5,5
平面顯示器技術	3/3
Flat Panel Display Technology	3,5
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	Reliability analysis for mechatronics products	

#### 三.先修科目

#### **III.Prerequisite Courses**

Ì		後修課程
	Prerequisite Course	Subsequent Course

#### 四.畢業條件

#### **IV.Graduation Requirements**

- 1.本班別最低畢業學分為32學分,包含必修14學分、選修18學分,含論文指導4學分,且須通過學位考試。
- 2.凡選修本專班開設科目(不限學期),一律承認為本系畢業學分。
- 3.修課經指導教授同意可選修外系研究所開設科目(不限學期)·至多6學分(選課前送教授同意表至系辦備查)。
- 4.學生除須修滿應修學分外,同時須符合「機電工程學系碩士學位在職進修專班研究生學位考試程序作業辦法」規定,方具備畢業 資格。
- 5.研究生應於申請學位考試前修習通過於「臺灣學術倫理教育資源中心」(https://ethics.nctu.edu.tw/)網路教學平台之「學術研究倫理教育」課程等相關規定。
- 1. The minimum graduation requirement for this program is 32 credits, including 14 credits of required courses, 18 credits of elective courses, and 4 credits for thesis supervision. Students must also pass the degree examination.
- 2. Any courses taken from this specialized program (regardless of semester) will be recognized as part of the department's graduation credits.
- 3.With the approval of the advisor, students may take up to 6 credits of courses offered by other departments (regardless of semester), provided that the consent form is submitted to the department office for record before enrolling in the courses.
- 4.In addition to completing the required credits, students must also comply with the "Procedures for the Master's Degree Examination of the Executive Master's Program in Mechatronic Engineering" to qualify for graduation.
- 5.Graduate students must complete and pass the "Academic Research Ethics Education" course offered by the Taiwan Academic Ethics Education Resource Center (https://ethics.nctu.edu.tw/) on its online teaching platform before applying for the degree examination, among other related requirements.