

國立勤益科技大學 114 年度 機械工程系「精密機械產業碩士專班」(春季班)學分計畫表  
Curriculum of 2025 Master Program of Department of Mechanical Engineering Master's  
Program in Precision Machinery (Spring Semester)

113.11.12 所課程及 113.11.13 所務會議審議通過

113.11.19 院課程會議審議通過

113.12.5.校課程委員會會議及 113.12.24.臨時教務會議審議通過

科目	Subjects	上學期 First Semester		下學期 Second Semester	
		學分 Credits	學時 Hour	學分 Credits	學時 Hour
<b>必修科目(10 學分) Required Courses (10credits hours)</b>					
<b>第一學年 First Year</b>					
專題研究與實習 (一)	Project Study and Practice (I)	1	2		
專題研究與實習 (二)	Project Study and Practice (II)			1	2
<b>第二學年 Second Year</b>					
專題研究與實習 (三)	Project Study and Practice (III)	1	2		
專題研究與實習 (四)	Project Study and Practice (IV)			1	2
論文	Thesis	3	3	3	3
<b>專業選修科目 Professional Required Courses</b>					
<b>第一學年 First Year</b>					
精密加工	Precision Machining	3	3	3	3
精密機械特論	Special Topics on Precision Machinery	3	3	3	3
材料科學特論	Special Topics on Materials Science	3	3	3	3
創新研發特論	Special Topics on Innovation Research	3	3	3	3
創意性產品設計	creative product design	3	3	3	3
科技管理	Management of Technology	3	3	3	3
微機電系統	Microelectromechanical Systems (MEMS)	3	3	3	3
實驗設計	Design of Experiment	3	3	3	3
精密機械設計	Design of Precision Machinery	3	3	3	3
進階熱處理	Advanced Heat Treatments	3	3	3	3
奈米材料特論	Special Topics on Nanotechnology	3	3	3	3
切削特論	Special Topics on Metal Cutting	3	3	3	3
最佳化方法與應用	Optimization with Applications	3	3	3	3
壓電元件原理與應用	Principles and Applications of piezoelectric devices	3	3	3	3
機器視覺	Machine Vision	3	3	3	3
創意機構設計	Creative Design of Mechanisms	3	3	3	3
感測器原理與應用	Principles and Applications of Sensors	3	3	3	3
複合材料特論	Process and Inspection of Composite Materials	3	3	3	3
機器學習原理與應用	Theory and application of machine learning	3	3	3	3
<b>第二學年 Second Year</b>					
微系統製造技術	Fabrication Technologies of Micro-systems	3	3	3	3
先進材料分析與應用	Advanced Materials Analysis with Applications	3	3	3	3
創新發明與專利佈局	Innovative invention and patent layout	3	3	3	3
深度學習	Deep Learning	3	3	3	3
多軸加工原理與應用	Principles and applications of Multi-axis Machining Tool	3	3	3	3
精密機械量測	Precision Mechanical Measurement	3	3	3	3
科技論文寫作	Technical Thesis Writing	3	3	3	3
系統性產品創新設計	Innovative Design of Systemic Products	3	3	3	3
電腦輔助工程分析	Computer Aided Engineering Analysis	3	3	3	3
自動化光學檢測	Automated Optical Inspection	3	3	3	3
自動化生產系統	Automatic production systems	3	3	3	3

備註 Note:

- 畢業至少應修 31 學分：必修 10 學分(含論文 6 學分、專題研究與實習 4 學分)，選修 21 學分(專業選修至少 21 學分)。  
Before graduation, each student should complete at least 31 credits including 10 required credits (6 credits for Thesis and 4 credits for Project Study and Practice) and 21 elective credits (at least 21 credits should be completed from professional elective courses).
- 學生應於申請學位考試前至「教育部臺灣學術倫理教育資源中心」網路平臺完成學術研究倫理教育課程，至少 6 小時課程。  
Students need to complete the academic research ethics education course for at least 6 hours before the final defence application.
- 研究生至少需於本系所教師開課科目中修畢 21 學分(不含論文及書報討論)。因研究需要，經指導教授及系主任同意，得選修他所開授之科目計入此 21 學分中，但最多以 6 學分為限。  
Graduate students have to complete at least 21 credits offered by the teachers in the department (not including Degree Thesis and Project Study and Practice courses). For research needs, ones can take courses offered by other departments after the approvals of supervisor and director of department, which are counted in 21 graduate credits where at most 6 credits is adopted.
- 研究生必須通過碩士班論文口試方准予畢業。畢業時，依法授予工學碩士學位。  
Graduate students have to pass the oral defense for graduation. Once graduation, ones are awarded Master Degrees of Science in Engineering.

5. 以同等學力或非相關科系畢業而考取者，依需要加修大學部相關學系開授之科目，其學分不得列入畢業學分之計算。

One granting an admission with the same educational level or non-major related graduation should add to the roll of related courses offered in the undergraduate department as needed, in which earned credits are not included in the graduate credit calculation.

6. 為因應法規變更、評鑑建議或政府計畫規定等外在因素，本系保有調整學分計畫之權利。若有修訂，將於學期開始前公告，並明確說明修訂內容、影響範圍及相關配套措施，以保障學生權益。

The department reserves the right to adjust the curriculum in response to external factors such as changes in regulations, suggestions of evaluation and accreditation, or government program regulations. If there are any revisions, will be announced before the start of the semester, and the revised content, scope of impact, and related supporting measures will be clearly stated to protect the rights and interests of students.