

國立彰化師範大學  
車輛科技研究所碩士班畢業條件表暨課程架構表  
(113學年度入學學生適用)

National Changhua University of Education  
Graduation Requirements and Course Structure for Master's Program of Department of Graduate  
Institute of Vehicle Engineering  
(Applicable for students in 113 academic year)

列印日期(Print Date:2024/04/11)

一. 系必修課程

I. Department's Required Course(s)

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) Seminar I	1/2	1	1
書報討論(二) Seminar II	1/2	1	2
論文指導(一) Thesis Supervision I	3/0	2	1
論文指導(二) Thesis Supervision II	3/0	2	2
論文 Thesis	0/0	2	2

二. 系選修課程

II. Department's Elective Course(s)

課程名稱 Course Name	學分/學時 Credit(s) / Hour(s)	年級 Grade	學期 Semester
動力機械群教學應用與實作 Teaching application and practice of power mechanical group	2/2	1	1
工程倫理 Engineering Ethics	2/2	1	1
動力機械群教學實習 Practicum in Power Mechanical Cluster	2/2	1	1
動力機械群教材教法 Instructional Material and Methods for the Subject of Power Mechanical Cluster	2/2	1	1
車輛振動、噪音控制專題研究(一) Special Topic in Vehicle Vibration and Noise Control (I)	3/3	1	1
先進車輛控制技術 Advanced Vehicle Control Technology	3/3	1	1
全球衛星定位系統與應用 Applications of Global Positioning System	3/3	1	1
機電控制技術與原理 Control Techniques and Theories of Mechatronics	3/3	1	1
數據通訊技術 Data communication Technology	3/3	1	1
嵌入式系統程式設計 Embedded System Programming	3/3	1	1
車輛分散式控制系統 Distributed Control System of vehicles	3/3	1	1

地理資訊系統 Geographical Information Systems(GIS)	3/3	1	1
電腦輔助車輛設計與製造 ComputerAided Design and Manufacturing of Vehicle	3/3	1	1
電腦控制系統 Computer Control Systems	3/3	1	1
汽車性能分析與測試 Analysis and Design of Automotive Performance	3/3	1	1
車輛測試規範 Regulations for Vehicle Test	3/3	1	1
車輛計算流體力學 Computational Fluid Dynamics of Vehicle	3/3	1	1
系統工程導論 Introduction of System Engineering	3/3	1	1
即時系統 Real-Time System	3/3	1	1
機電整合實務 Mechatronics Practice	3/3	1	1
車輛電子檢測系統 Vehicle Electronics Detection System	3/3	1	1
車輛感測器系統 Automotive Sensing Systems	3/3	1	1
車輛行動裝置系統 Vehicle Mobile Systems	3/3	1	1
科技英文寫作 Technical Writing	3/3	1	1
車輛動力系統專題研究(一) Special Topic in power system (I)	3/3	1	1
車輛信號處理與控制專題研究(一) Project study of vehicle signal processing and control I	3/3	1	1
電能轉換系統 Electric energy conversion	3/3	1	1
車輛能源系統 Vehicle Energy System	3/3	1	1
車輛機構設計運動分析 Vehicle Mechanism Design and Motion Analysis	3/3	1	1
替代能源導論 Introduction to Alternative Energy	3/3	1	1
逆向工程分析 Reverse Engineering Technology	3/3	1	1
嚙合理論與應用 Gear theory and application	3/3	1	1
車用電子系統導論 Introduction to Autotronics System Design	3/3	1	1
車用機電子學 Automotive Mechatronics	3/3	1	1
工程分析 Engineering Analysis	3/3	1	1
車載網路系統實務 Practice of In-vehicle Network Systems	3/3	1	1
行車事故鑑定實務 Practice of Traffic Accident Appraisal	3/3	1	1
人工智慧應用 Application of Artificial Intelligence	3/3	1	1

人工智慧與車輛科技 Artificial Intelligence and Vehicle Technology	3/3	1	1
汽車性能分析與設計 Analysis and Design of Automotive Performance	3/3	1	1
車輛新科技 New Technologies of Vehicles	3/3	1	1
車輛電子專題研究(一) Special Topic on Automotive Electronics (I)	3/3	1	1
車輛資訊系統 Automotive Information System	3/3	1	1
車輛電子與電腦控制系統 Automotive Electricity, Electronics, and Computer Control System	3/3	1	1
排污控制與低污染車輛 Emission Control and Low Emission Vehicle	3/3	1	1
車輛動力系統技術 Technology of Vehicle Power System	1/3	1	1
車輛舒適性控制 Vehicle Comfort Control	3/3	1	1
車輛監控專題研究(一) Special Topics on Vehicle Surveillance (I)	3/3	1	1
嵌入式微處理器系統 Embedded Microprocessor System	3/3	1	1
複合動力車輛技術 Hybrid Powertrain Vehicle Technology	3/3	1	1
汽車零組件設計 Vehicle Component Design	3/3	1	1
車輛監控專題研究(二) Special Topics on Vehicle Surveillance (II)	3/3	1	2
車輛底盤與傳動系統技術 Technology of Vehicle Chassis and Transmission System	1/3	1	2
車輛電子專題研究(二) Special Topic on Automotive Electronics (II)	3/3	1	2
車輛振動、噪音控制專題研究(二) Special Topic in Vehicle Vibration and Noise Control (II)	3/3	1	2
車輛動力系統專題研究(二) Special Topic in power system (II)	3/3	1	2
車輛信號處理與控制專題研究(二) Project study of vehicle signal processing and control II	3/3	1	2
書報討論(三) Seminar III	1/2	2	1
書報討論(四) Seminar IV	1/2	2	2

### 三. 先修科目

#### III. Prerequisite Courses

先修課程 Prerequisite Course	後修課程 Subsequent Course
動力機械群教材教法 Instructional Material and Methods for the Subject of Power Mechanical Cluster	動力機械群教學實習 Practicum in Power Mechanical Cluster
動力機械群教材教法 Instructional Material and Methods for the Subject of Power Mechanical Cluster	動力機械群教學應用與實作 Teaching application and practice of power mechanical group

#### 四. 畢業條件

#### IV. Graduation Requirements

1. 凡選修本所開設科目一律採認為本所畢業學分。
2. 本所最低畢業學分數：30學分【不含：論文指導(一)、論文指導(二)、書報討論(一)、書報討論(二)、書報討論(三)、書報討論(四)、基礎科目】。
3. 本所研究生選修其他(含外校)各研究所開設科目，可採認6學分為畢業學分，但本所必修科目除外。
4. 「動力機械群教材教法」、「動力機械群教學實習」及「動力機械群教學應用與實作」等三門為教育學程科目，不採計為畢業學分，並依據本校教育學程修習辦法及相關規定辦理。
5. 依本校106.05.31教務會議通過：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.moe.edu.tw>網路教學平台之「學術研究倫理教育」課程等相關規定。】
6. 本表未盡事宜，悉依本所研究生修業規定及畢業條件辦理。

1. All elective courses offered by our institute will be considered as graduation credits.
2. Minimum number of credits for graduation: 30 credits【excluding: Thesis Supervision I、Thesis Supervision II、Seminar (I)、Seminar (II)、Seminar (III)、Seminar (IV)、Basic Subjects】。
3. Graduate students of our institute can take 6 credits as graduation credits if they take elective courses offered by other institutes (including other universities), except for the required courses of our institute.
4. Three subjects including ‘ ‘Instructional material and methods for the subject of power mechanical cluster’ ’, ‘ ‘Practicum in power mechanical cluster’ ’ and ‘ ‘Teaching application and practice of power mechanical group’ ’ are education course subjects and are not counted as graduation credits. They are based on the university’ s education course practice methods and related regulations.
5. According to the approval of the academic affairs meeting of our institute on 106.05.31: graduate students should study and pass the "AREE (Center for Taiwan Academic Research Ethic Education)" (<https://ethics.moe.edu.tw>) before applying for the degree examination. ). Relevant regulations on the "Academic Research Ethics Education" course are on the online teaching platform.
6. Matters not covered in this table must be handled in accordance with the graduate study regulations and graduation conditions of our institute.