國立虎尾科技大學材料科學與工程系材料科學與綠色能源工程碩士班科目表

National Formosa University Department of Materials Science and Engineering Curriculum for Master's Degree

（115學年度入學適用）115年3月10日114學年度第2學期第1次系課程會議通過
115年5月5日114學年度第2學期第2次系務會議通過
115年5月27日114學年度第3次院課程會議通過
115年6月18日114學年度第4次教務會議通過

第一學年First Academic Year

	First Semester			Second Semester		
	Course	Credit	Hour	Course	Credit	Hour
必修 Required Courses	書報討論（一） Seminar I	0	2	書報討論（二） Seminar II	0	2
核心必修 Core Courses	固態熱力學 Thermodynamics of Solids	3	3	結晶繞射學 Diffraction and Crystal Structure	3	3
	實用物理冶金 Practical Physical Metallurgy	3	3	相變態學 Phase Transformation	3	3
選修 Elective Courses	擴散學 Diffusion Theory	3	3	材料表面分析 Surface Analysis of Materials	3	3
	固態物理學 Solid State Physics	3	3	燃料電池 Fuel Cells	3	3
	電化學原理與技術 Theory and Technology of Electrochemistry	3	3	半導體元件物理 Physics of Semiconductor Devices	3	3
	綠色能源工程 Green Energy Engineering	3	3	金屬材料特論 Special Topics in Metallic Materials	3	3
	實驗設計 Experiment Design	3	3	特殊合金與製程 Special Alloy and Manufacturing Processes	3	3
	光電陶瓷材料 Electro-optics Ceramic Materials	3	3	材料破損分析 Fracture Analysis of Materials	3	3
	燒結理論 Sintering Theory	3	3			
	鋰離子電池原理與技術 Principle and Technology of Lithium Ion Battery	3	3			
	電子顯微鏡原理與實作 Practical Electron Microscopy	3	3			

國立虎尾科技大學材料科學與工程系材料科學與綠色能源工程碩士班科目表

National Formosa University Department of Materials Science and Engineering Curriculum for Master's Degree

第二學年Second Academic Year						
	First Semester			Second Semester		
	Course	Credit	Hour	Course	Credit	Hour
必修 Required Courses	書報討論（三） Seminar III	0	2	書報討論（四） Seminar IV	0	2
	碩士論文（一） Master Thesis I	3	0	碩士論文（二） Master Thesis II	3	0
選修 Elective Courses	奈米材料製程與檢測技術 Processing and Characterization of Nanomaterials	3	3	複合材料特論 Special Topics in Composite Materials	3	3
	薄膜製程與應用 Thin Film Processes and Applications	3	3	平面顯示器原理與技術 Theory and Technology of Flat Display Panel	3	3
	光電元件 Electro-Optics Device	3	3	專利分析 Patent Analysis	3	3
	太陽能電池原理與技術 Theory and Technology of Solar Cells	3	3	氫能科技 Hydrogen Energy Technology	3	3
	材料接合 Materials Joining	3	3	電子構裝 Electronic Packaging	3	3
	半導體元件與製程 Semiconductor Devices and Processes	3	3	凝固學 Solidification Processing	3	3
	生醫工程 Biological Engineering	3	3	校外實習-產業研發(二) Industrial Research and Development Internship II	1	2
	科技論文導讀與寫作 Reading and Writing of Scientific Paper	3	3			
	校外實習-產業研發(一) Industrial Research and Development Internship I	1	2			

附註(Note)：

1.最低畢業學分：30 學分。含必修學分(碩士論文(一)、碩士論文(二))6學分；非本科系學生須含核心必修6學分(四選二)，本科系生不受此限。（選修學分含跨所選修學分）。

Minimum graduation credits: 30 credits. This includes 6 mandatory credits (Master's Thesis I and Master's Thesis II). Students from non-major departments must include 6 core mandatory credits (choose 2 out of 4), while students from the major department are exempt from this requirement. (Elective credits include credits from cross-departmental electives).

2.表列選修課程僅供參考用，依實際狀況調整。

The listed elective courses are for references only and are subjected to change.

3.經指導教授同意得修習其它系所之開授課程。

If students had gained the permissions from their advisors, elective courses from other departments are permitted.

4.修習校外實習-產業研發（一）（二），可以免修書報討論（三）（四）。

The Courses "Industrial Research and Development Internship 1 and 2" are capable of reaching Seminar 3 and 4 credit hours.

5.外國學生須於畢業前修畢「華語教學(一)」及「華語教學(二)」，相關規定詳「外國學生修讀華語課程實施要點」。

International Students of NFU are required to take and pass "Mandarin (1)" and " Mandarin (2)" courses before graduation. For more details, please refer to "Mandarin Course Requirements for NFU International Students".