

國立東華大學

材料科學與工程學系

107學年度課程規劃表

博士班國際組最低畢業學分數34學分 1. 專業必修16學分 2. 專業選修18學分					
專業必修		科目代碼	學分	先修科目	備註
1.	專題研究(一) Independent Study (I)	MS_D0010	3.0		1st grade
2.	專題研究(二) Independent Study (II)	MS_D0050	3.0		1st grade
3.	專題研究(三) Independent Study (III)	MS_@0340	3.0		2nd grade
4.	專題研究(四) Independent Study (IV)	MS_@0350	3.0		2nd grade
5.	專題討論(一) Seminar (I)	MS_D0020	1.0		1st grade
6.	專題討論(二) Seminar (II)	MS_D0060	1.0		1st grade
7.	專題討論(三) Seminar (III)	MS_@0360	1.0		2nd grade
8.	專題討論(四) Seminar (IV)	MS_@0370	1.0		2nd grade
專業選修		科目代碼	學分	先修科目	備註
9.	專題研究(五) Independent Study (V)	MS_@0380	3.0		3rd grade
10.	專題研究(六) Independent Study (VI)	MS_@0390	3.0		3rd grade
11.	專題研究(七) Independent Study (VII)	MS_@0400	3.0		4th grade
12.	專題研究(八) Independent Study (VIII)	MS_@0410	3.0		4th grade
13.	專題研究(九) Independent Study (IX)	MS_@0420	3.0		5th grade
14.	專題研究(十) Independent Study (X)	MS_@0430	3.0		5th grade
15.	專題研究(十一) Independent Study (XI)	MS_@0440	3.0		6th grade
16.	專題研究(十二) Independent Study (XII)	MS_@0450	3.0		6th grade
17.	專題研究(十三) Independent Study (XIII)	MS_@0460	3.0		7th grade
18.	專題研究(十四) Independent Study (XIV)	MS_@0470	3.0		7th grade
19.	高等材料科學與工程 Advanced Materials Science and Engineering	MS_@0480	3.0		
20.	高等物理冶金 Advanced Physical Metallurgy	MS_@0490	3.0		

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21.	高等熱動力學 Advanced Thermodynamics and Kinetics	MS__D0030	3.0		
22.	計算材料科學 Calculation in material science	MS__D0040	3.0		
23.	半導體材料與元件特件分析 Characterization of Semiconductor Materials and Devices	MS__@0500	3.0		
24.	化學反應工程 Chemical Reaction Engineering	MS__@0510	3.0		
25.	化合物半導體 Compound Semiconductor	MS__@0520	3.0		
26.	電子陶瓷 Electronic Ceramics	MS__@0530	3.0		
27.	高溫合金與製程 High temperature alloys and processing	MS__@0540	3.0		
28.	微奈米機電製程概論 Introduction to the Processing of Micro- and Nano	MS__@0550	3.0		
29.	表面催化動力學 Kinetics of Surface Catalytic Reactions	MS__@0560	3.0		
30.	磁性材料 Magnetic Materials	MS__@0570	3.0		
31.	材料製程與分析 Materials Processing and Characterization	MS__@0580	3.0		
32.	奈米材料科技 Nanomaterials and Nanotechnology	MS__@0590	3.0		
33.	奈米光觸媒 Nano - Photocatalysts	MS__@0600	3.0		
34.	光電材料與應用 Optoelectronic Materials and Applications	MS__70920	3.0		
35.	有機半導體材料與元件 Organic Semiconductor and Devices	MS__@0610	3.0		
36.	相變態 Phase Transformation	MS__@0620	3.0		
37.	材料物理 Physics of materials	MS__@0630	3.0		
38.	高分子材料科學 Polymer Material Science	MS__@0640	3.0		
39.	粉末冶金 Powder Metallurgy	MS__@0660	3.0		
40.	實用解析式電子顯微鏡學 Practical Analytical Electron Microscopy	MS__@0650	3.0	*穿透式電子顯微鏡/	
41.	半導體元件 Semiconductor Devices	MS__@0670	3.0		
42.	半導體材料 Semiconductor Materials	MS__@0680	3.0		

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43.	半導體製程 Semiconductor Processing	MS__@0690	3.0		
44.	金屬材料特論 Special Topics on Metallic Materials	MS__D0070	3.0		
45.	材料光譜學 Spectroscopy for Material Science	MS__@0700	3.0		
46.	材料結構與顯微分析 Structure and Microstructure Analysis of Materials	MS__@0710	3.0		
47.	英文科技論文寫作 Technical Writing	MS__D0080	3.0		
48.	薄膜科學與技術 Thin Films: Science and Technology	MS__@0720	3.0		
49.	穿透式電子顯微鏡 Transmission Electron Microscopy	MS__@0730	3.0	*高等物理冶金/	
50.	真空與電漿科技 Vacuum and Plasma Science and Technology	MS__@0740	3.0		
51.	真空科學與技術 Vacuum Science and Technology	MS__@0750	3.0		
52.	分子動力學 Molecular dynamics in materials science, physics and chemistry	MS__@0760	3.0		
53.	鋼鐵冶煉學 Steel metallurgy	MS__@0770	3.0		
54.	光通訊材料 Photonic materials	MS__@0780	3.0		

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重要相關規定

I. Credit requirement:

Minimum credits for graduation: 34

Required course credits: 16

Minimum elective course credits: 18

II. Regulations

1. Required courses

(1) Special Topics for Research and Special Topics for Discussion may only be selected once per semester

(2) All students have to select Special Topics for Research. These courses do not count toward the graduation credit requirements for doctoral students in their third year or above.

2. A total of 18 credits of elective courses are required (a maximum of six credits from courses offered at other institutes)

3. Students who directly enroll in PhD programs have to successfully complete a minimum of 39 credits of elective courses (elective courses successfully completed during enrolment in the MA program may be applied to the total number of credits required)

4. The selected electives are reviewed by the supervising professor during registration each semester

5. Doctoral students who have successfully completed PhD-level courses and earned grades of B- or higher during their graduate studies may apply for the transfer of a maximum of 6 credits.

6. The department of students enroll this year, shall take and pass the "Taiwan Academic Ethics Education Resource Center" online platform of "academic research ethics education curriculum" during first semester. Who did not pass, should not apply final oral examination.