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## ②國玄東華大學

## 教學計劃表 Syllabus

	名稱(平文 <i>)</i> ame in Chinese	物理冶金(一)			學年/學期 Academic Year/Seme	114/1			
	名稱(英文) ame in English	Physical Metallurgy (I)							
	斗目代碼 urse Code	MS21000	系級 Department & Year	學二	開課單位 Course-Offering Department	材料和	材料科學與工程學系		
	修別 Type	)/3.0	3.0						
	授課教師 Instructor								
	先修課程 Prerequisite								
課程描述 Course Description									
讓學生在修習此一課程後,能對物理冶金的基本理論有全面的了解,以利材料科學知識的建立。									
課程目標 Course Objectives									
	習此一課程後,能	對物理冶金的基	本理論有全面的了	解,以和	<b>划材料科學知識</b>				
的建立。 This course will enable students to gain a comprehensive understanding of the basic theories of physical metallurgy for the building of knowledge in materials science.									
系專業能力 Basic Learning Outcomes							課程目標與系專業能 力相關性 Correlation between Course Objectives and Dept.'s Education Objectives		
	具備材料科學所需的物理、化學及數學的知識。Acquire required basic physical, chemical,								
具備 B know	and mathematic knowledge for materials science and engineering.  具備材料科學的專業知識,並能應用於解決工程上之問題。Acquire required professional								
	日出思紹田中、寧臥執仁、初上總守衛軌據知經之作力。Fauinned with gonabilities of								
D 具備	具備專業道德及青任咸,與良好的灌涌及關隊合作的能力。Acquire professional morality								
E 具備適當的英文能力,應用於學習與交流。Acquire English capability used for learning and interaction.							0		
圖示說明Illustration : ● 高度相關 Highly correlated ○中度相關 Moderately correlated									
授課進度表 Teaching Schedule & Content									
週次Week 內容 Subject/Topics					備註Remarks				
1	1 The structure of metals (1)								
2	2 The structure of metals (2)								
3	Characterization techniques (1)								
4	Characterization techniques (2)								
5	5 Crystal binding (1)								

6	Crystal binding (2)						
7	Introduction to dislocation (1)						
8	Introduction to dislocation (2)						
9	期中考試週 Midterm Exam						
10	校運動會						
11	Dislocations and plastic deformation (1)						
12	Dislocations and plastic deformation (2)						
13	Elements of grain boundaries (1)						
14	Elements of grain boundaries (2)						
15	Vacancies						
16	Annealing						
17	期末考試週 Final Exam						
18	彈性教學						
教學策略 Teaching Strategies							
✓ 課堂講授 Lecture							
	教學創新自評 Teaching Self-Evaluation						
創新教學(Innovative Teaching)							
問題導向學習(PBL) ■ 團體合作學習(TBL) 解決導向學習(SBL)							
■ 翻轉教室 Flipped Classroom							
社會責任(Social Responsibility)							
□ 在地實踐Community Practice □ 產學合作 Industy-Academia Cooperation							
一							
──跨界教學Transdisciplinary Teaching ──跨院系教學Inter-collegiate Teaching							
□ 業師合授 Courses Co-taught with Industry Practitioners							
其它 other:							

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	10%								出席
期中考成績 Midterm Exam	35%	<b>&gt;</b>							
期末考成績 Final Exam	35%	<b>~</b>							
作業成績 Homework and/or Assignments	20%		<b>~</b>						
其他 Miscellaneous ()									

評量方式補充說明

Grading & Assessments Supplemental instructions

## 教科書與參考書目(書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

R. Abbaschian, L. Abbaschian, and R. E. Reed-Hill, Physical Metallurgy Principles, 4th ed., Cengage Learning, 2010, 滄海書局(趙竣), 04-27088787 (0932-597322)

劉偉隆、曾春風、張柳春、洪廷甫譯,物理冶金,SI制第四版,滄海書局(趙竣), 04-27088787 (0932-597322)

課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

東華e學院

其他補充說明(Supplemental instructions)