Please consult Intellectual Property Rights before making a photocopy. Please use the textbook of copyrighted edition.

②图 i 東華大學 教學計劃表 Syllabus

		4人	一可则仪	Syll	abus				
	課程名稱(中文) wrse Name in Chinese 統計物理AA					ester	113/2		
	名稱(英文) me in English	Introductory Statistical Mechanics							
	·目代碼 rse Code	PHYS3070AA	系級 Department & Year	學三	開課單位 Course-Offering Department	rse-Offering			
	修別 Type	學程 Program	0/3.0	/3.0					
	課教師 tructor	/張俊明							
	先修課程 Prerequisite								
		課	程描述 Course	e Descrip	tion				
從微觀的角	度出發,利用統計;	力學的方法來處理	世大量粒子集合	之系統,並打	准得系統的巨觀熱力學	學性質			
		課	程目標 Cours	se Object:	ives				
系專業能力 Basic Learning Outcomes						Cor	課程目標與系專業能 力相關性 Correlation between Course Objectives and Dept.'s Education Objectives		
4 潘田	7理之基礎背景知識								
# 能運用基本物理知識與邏輯推理,分析解決物理問題Being able to analyze and solve physics problems based on basic knowledge in physics as well as logical reasoning. 對目前測量器材有基礎認識,且具有操作物理實驗儀器的能力Being acquainted with modern equipment and being able to operate them for performing physics experiments.							•		
b 能使用基礎電腦程式語言解決物理問題Being able to use basic computer programming for solving physics problems.							0		
F 善用各	-種資訊平台進行論	文資料蒐集的能力I	_	se various	platforms for data				
collection benefiting a topical research. F 具備科技發展的國際視野以及外語溝通的能力Having an international view of the technology developments and being able to use a foreign language for communications 能整合物理與其它領域知識Being able to integrate the knowledge of physics with that of other fields.									
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	週次Week		內容 Subject/Topics			備註Remar			
1	Preparation &	Introduction &							
2	The kinetic th	neory of gases							
3	Statistical the	ermodynamics							
4	Statistical the	ermodynamics							

5	Classical and quantum statistics						
6	Classical and quantum statistics						
7	The classical statistical treatment of an ideal gas						
8	REVIEW TEST & Discussion of REVIEW TEST						
9	期中考						
10	The heat capacity of a diatomic gas						
11	The heat capacity of a solid						
12	Fermi-Dirac gases						
13	Fermi-Dirac gases						
14	Bose-Einstein Gases						
15	TEST & REVIEW						
16	統物期末考						
17	學校期末考試週 Final Exam						
18	自主學習週						
教學策略 Teaching Strategies							
✓ 課堂講	受 Lecture						
其他Miscellaneous:							
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 磨課師 Moocs							
社會責任(Social Responsibility)							
■ 在地實踐Community Practice ■ 産學合作 Industy-Academia Cooperation							
跨域合作(Transdisciplinary Projects)							
■ 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									
期中考成績 Midterm Exam	35%	>							
期末考成績 Final Exam	35%	~							
作業成績 Homework and/or Assignments	30%	>							
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.)

Textbook: "Classical and Statistical Thermodynamics", Ashley H. Carter (Prentice Hall).

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.)

其他補充說明(Supplemental instructions)