國立屏東大學 111學年度第1學期 教學課程綱要

班別：智慧機器人學系三年甲班(CBD310)　　課程學分數：3.00(3.00小時)

授課老師：李健(300595)　　必選修：必

開課序號	1325
科目名稱	機構學(CGC3102)
科目英文名稱	Mechanism
授課語言	英語/全外語授課
主要教學型態	課堂教學
教學目標	This course will give students a mechanical understanding of how mechanisms work and their application to machine and robot design. It will deal with kinematic analysis of mechanisms, which include motion analysis and design of linkage mechanisms, cam-follower, and gear transmission.
每週課程內容及教學方法	1.Basic concept 2.Mechanical movement 3.Introduction of common mechanism 4.Kinematic analysis of Mechanisms - Graphical method 5.Kinematic analysis of Mechanisms - Analytical method 6.Graphical Method of Mechanism Synthesis 7.Cams and Followers 8.Friction-transmission and flexible mechanism 9.Gear 10.Gear train 11.Helical and other movement mechanisms
核心能力	1.基礎理論與應用實務之專業能力 80% 2.團隊合作精神及自我挑戰的能力 0% 3.具備獨立思考與創新能力 20% 4.具備人文素養與國際視野能力 0%
預期學習成果	The course will demonstrate various concepts by working out the problems relevant to real life applications of mechanisms. Students will gain comprehensive knowledges about the nomenclature of mechanism and the realization of kinematic analysis which include direct and inverse kinematics, velocity and acceleration analysis, kinematic path generation.
與預期學習成果搭配的多元評量	1.Class participation and active involvement… 30% 2.Midterm exam… 35% 3.Final exam… 35%
主要讀本	Yi-Hua Fan(范憶華), "Mechanisms", Gau Lih Book(高立圖書) Co., Ltd. (參考此中文書自製英文教材)

參考書目	Michael Rider, " Design and Analysis of Mechanisms ", John Wiley & Sons, Ltd. David Myszka, " Machines & Mechanisms: Applied Kinematic Analysis ", 5th ed., Pearson Education.
其他事項	To protect intellectual property rights, do not illegally photocopy textbooks.(為保護智慧財產權，請勿非法影印教科書。) 課程line群組 https://line.me/R/ti/g/9JP6kzwMGg