開課班級: 四生機三A **授課老師: 蔡循恒** **學分數: 3**

課程大綱:

The objective of this course is to introduce the sequential controllers most commonly used in the industry today, which are known for their precision, functionality, low cost, high-temperature resistance, and scalability. The course content includes an introduction to the controller's hardware and software, as well as programming. It also trains students in the practical operation of programmable logic controllers (PLCs) and develops foundational skills in mechatronic integration.

outline:

The purpose of this course is to introduce the most-used programmable controller (PLC) in industries. The advantages of PLC are precision, easy use, anti-hightemp, and easy-expand. The course includes as follow: hardware and software of PLC, programming of PLC, maintaining and installing of PLC.

教學型態:

課堂教學+實習 (校內、校外)

成績考核方式:

平時成績:40%
期中考:30%
期末考:30%
其它:%

本科目教學目標:

Science and Engineering: Possess scientific and engineering knowledge, with the ability to apply logical analysis and empirical methods. Practical Skills: Understand the development trends of the bio-industry and the practical design skills required in mechatronic engineering. Lifelong Learning: Able to self-assess and engage in continuous learning. Humanities and Ethics: Have a fundamental understanding of ethics, technology law, compassion, and social contribution. Global Perspective and Communication: Develop engineering skills aligned with international standards.

參考書目:

課程進度表：

週次	起訖月日	授課單元(內容)	備註
第1週	9.09~9.16	Course Introduction	8日正式上課。8~12日課程加退選，轉學(系)生、復學生及延修生選課，雙主修、輔系申請，12日申辦抵免學分截止日
第2週	9.16~9.23	Control Valve 1	
第3週	9.23~9.30	Control Valve 2	28日(日)孔子誕辰紀念日/教師節(放假),29日(一)補假
第4週	9.30~10.07	Electrical Control Components 1	29日成績優異提前畢業者提出申請截止日
第5週	10.07~10.14	Electrical Control Components 2	6日(一)中秋節(放假)，10日(五)國慶日(放假)
第6週	10.14~10.21	Electrical Circuit Diagram	14日學生宿舍安全輔導暨複合式防災疏散演練。18日多益測驗
第7週	10.21~10.28	Electrical Circuit Design	24日(五)補假，25日(六)光復暨古寧頭大捷日(放假)。
第8週	10.28~11.04	Midterm Exam	30日校課程委員會
第9週	11.04~11.11	FX2 Programmable Logic Controller (PLC) 1	3~9日期中考試
第10週	11.11~11.18	FX2 Programmable Logic Controller (PLC) 2	13日教務會議,16日教師期中成績上網登錄截止日
第11週	11.18~11.25	FX2 Programmable Logic Controller (PLC) 3	
第12週	11.25~12.02	FX2 Programmable Logic Controller (PLC) 4	24~28體育運動週。24日校園路跑。27日運動大會夜間開幕，28日運動大會活動，29日101週年校慶活動日，照常上班
第13週	12.02~12.09	Sequential Commands 1	
第14週	12.09~12.16	Sequential Commands 2	12日申請停修課程截止日
第15週	12.16~12.23	Basic Circuit 1	
第16週	12.23~12.30	Basic Circuit 2	22日校務會議。25日行憲紀念日(放假)
第17週	12.30~1.06	Basic Circuit 3	1日(四)開國紀念日(放假)
第18週	1.06~1.13	Final Exam	5~11日期末考試，10~11日學生退宿