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開課班級：四財金學士學程二A

授課老師：曾昱

學分數：2

課程大綱：

微生物雖然肉眼看不見，但它們幾乎支配了地球上的每一個環境。本課程旨在為學生提供一個關於微生物世界的基礎介紹，讓學生探索微生物生命的奇妙世界。學生將學習到什麼是微生物，以及微生物在農業、健康和環境中所扮演的重要角色。

outline:

Microbes may be invisible to the naked eye, but they dominate nearly every environment on Earth. This course is designed as general introduction for students to explore the amazing world of microbial life. Students will learn about what microbes are and the significant roles microbes play in agricultural, health, and the environment.

教學型態：

課堂教學

成績考核方式：

平時成績:20%

期中考:30%

期末考:30%

其它:Final Report: 20%%

本科目教學目標：

1. Understand the Fundamental Nature and Diversity of Microbes: Students will gain a foundational understanding of what microbes are, including an introduction to various types of microorganisms such as bacteria, fungi, viruses, and nematodes. This includes exploring their characteristics, structures, and the unique roles they play in different ecosystems. 2. Appreciate the Impact of Microbes on Health, Agriculture, and the Environment: The course aims to enlighten students about the dual roles microbes play as both beneficial and harmful entities. Students will learn about the significance of microbes in agricultural productivity, their implications for human and animal health, and their broader environmental impacts, including their potential existence beyond Earth. 3. Develop Skills in Microbial Observation and Understanding Microbial Behavior: Through the course, students will be introduced to various methods for observing and studying microorganisms, enabling them to appreciate the complexity of microbial life. They will explore microbial strategies, the evolutionary arms race between microbes and their hosts, and current hot topics in microbiology, preparing them for further studies or careers in related fields.

參考書目：

Tortora GJ, Funke BR, Case CL, Weber D, Bair W, 2018. Microbiology: an introduction, 13th ed. Pearson.



課程進度表：

週次	起訖月日	授課單元(內容)	備註
第1週	2.19~2.25	Course Introduction	19日正式上課。19~23日加退選，復(轉)學生及延修生選課，雙主修、輔系申請，23日申辦抵免學分截止日
第2週	2.26~3.03	What are microbes: Types of microorganisms	28日和平紀念日(放假)
第3週	3.04~3.10	The invisible realm: Living in a microbial world	
第4週	3.11~3.17	The Germ theory	11日成績優異提前畢業者提出申請截止日,14日第1次校教評會
第5週	3.18~3.24	Introduction to bacteria	
第6週	3.25~3.31	Introduction to fungi	
第7週	4.01~4.07	Introduction to viruses	3日(三)校慶補假(112年11月25(六)日校慶活動日)。4日(四)兒童節、民族掃墓節(放假)，5日(五)民族掃墓節補假
第8週	4.08~4.14	Introduction to nematodes	10日校課程委員會。11日第2次校教評會
第9週	4.15~4.21	Midterm	15~21日期中考試
第10週	4.22~4.28	Microbes as friends or foe	22~26日學士班申請轉系,27~28日四技二專統一入學測驗,28日教師期中成績上網登錄截止日
第11週	4.29~5.05	Seeing microbes: Methods for looking at microscopic organism	
第12週	5.06~5.12	Microbial strategies	11日多益測驗(暫定)
第13週	5.13~5.19	The evolutionary arms race	16日第3次校教評會。19日博士班招生(暫定)
第14週	5.20~5.26	Microbes in agriculture	20~24日體育運動週，22日水上運動會(暫定),24日申請停修課程截止
第15週	5.27~6.02	Microbes in health	27~31日藥物濫用防制宣導週
第16週	6.03~6.09	Microbes beyond earth	3日校務會議。3~9日畢業班(學士)期末考試。
第17週	6.10~6.16	Hot topics in microbiology	10日端午節(放假)，12日畢業班授課教師送交學期成績截止
第18週	6.17~6.23	Final Exam	17~23日期末考試