國立成功大學 工資管所

一百一十二學年度第一學期授課大綱（進度）

課程名稱：離散數學
請下載 zuvio 學生版: https://www.zuvio.com.tw/student
課程代碼：108126712
課程網頁 請至 http://moodle.ncku.edu.tw 註冊

授課教師： 王逸琳 I-Lin Wang
ilinwang@mail
http://ilin.iim.ncku.edu.tw/ilin

開課班級： 工資管系大一二三四

教學時地： 授課：一 2-3, 三 2 [61102] Office hr:四 2~3 [61324] or by appointment

教學目標： Train undergraduate students to have better knowledge & skills of discrete mathematics and its applications

課程簡介： We first introduce several combinatorial problems and techniques, then go through basic sets/relations/functions. 2/3 of the semester will be spent on Graph Theory and Algorithms

教 科 書： Discrete Mathematics, by Dossey, Otto, Spence, Vanden Eynden, 5th Edition, Addison Wesley (滄海書局) ISBN: 0-321-30515-9

參考書籍：
1. Discrete Mathematics with Graph Theory, by Goodaire, Parmenter, 4th Edition, Prentice Hall (新月圖書)
2. Introduction to Algorithms, by Cormen, Leiserson, Rivest, 2nd Edition, MIT Press

評分方式：

1.	In-Class Quiz (2 times: **10/02**, **11/13**, each time **20%**)	**40%**
2.	Final Exam (**12/25**)	**30%**
3.	Homework	**25%**
4.	Class Participation	**5%**

先修課程： Know how to count and some logic.

對學生建議事項：
1. This course is NOT for your graduate school entrance exam. It is designed for IM students.
2. There will be some math proofs, so be prepared.
3. This semester we will try to use Python to implement some algorithms.

預計進度：(18 週)
1. Introduction to Combinatorial Problems and Techniques
2. Sets, Relations, and Functions
3. Graphs
4. Trees
5. Counting Techniques
6. Recurrence Relations and Generating Functions
7. Matching
8. Network Flows
9. More about Network Flows

附註： 對於以上內容或修課要求，授課老師可依實際修課情況加以修改。
詳細的評分標準請看「修課作業要求」。

Please register yourself to the following:

1. Teams class group: https://reurl.cc/dDONj6
2. Zuvio with class number: **108126712** (we will use zuvio for in-class quiz)
3. Please fill out this background form: https://forms.gle/Rif4MpEsV6H7NdWv9

修課作業要求

Class Participation (5%)

1. 學期中除第一堂課所發出的「修課學生背景調查」外(佔 1%)，將不定期發出問卷、小考或 簽名等需要同學填寫的文件(共佔 4%)。

2. 若無法當場[10 分鐘內]上課簽到者(e.g.缺席、睡太晚等等)，只有那些在課前有先行向老師打招呼的同學可以在課後 1 天內向老師要來填寫；否則皆以 0 分計。

Quiz/Exam (70% = 2*20% + 30%)

General rules

1. DO NOT try to cheat, or you will not only get 0%, but also get other penalties.
2. Unless you have a very good reason/excuse, a no show means 0%. Make-up exams will only be made for some very special cases. So, please inform the instructor much earlier if somehow you can not take the quiz/exam at that specific time.

2 In-class quizzes (midterm exams) (2023/10/02, 2023/11/13) 2*20%

Final exam (2023/12/25) 30%

Homework (25%)

1. There will be several homework assignments. or programming assignments.
2. Homework will be graded by TA. Copying other's homework is NOT allowed.
3. We may use in-class "small" quizzes as homeworks.

Final Notice & Reminder

Dates	What	Grade (%)
2023/09/04	1st class, 1st questionnaire	1
2023/10/02	1st quiz (midterm exam)	20
2023/11/13	2rd quiz (midterm exam)	20
2023/12/25	Final exam	30
Some times	Homework	25
Some times	Questionnaires, sign-up sheets	4

Percentage	Item	AACSB at IIM Criteria				
		IT	OC	PS	CI	VP
20%	2 Quizzes			34	4	2
30%	Final exam		1	24	4	1
30%	Assignments	5		15	5	5
5%	Participation					5
		5%	1%	73%	13%	13%

IT: Information Technology
OC: Oral Communication
PS: Problem Solving
CI: Creativity & Innovation
VP: Values & Professionalism