

11220 PME 544200 微奈米製造技術:

112200 PME 544200 Micro and Nano Fabrication Technology

上課時間: F6F6F8

地點: 台達館 321 教室 (若疫情嚴峻, 可能改採線上)

This course will be offered in English (英語授課)

Chien-Chung Fu 傅建中

### Syllabus

Week	Date	Syllabus 課程安排
1	2024.02.23	Introduction and Opening the Course
2	2024.03.01	梅竹賽停課
3	2024.03.08	X-Ray Mask and X-Ray Lithography I
4	2024.03.15	X-Ray Mask and X-Ray Lithography II
5	2024.03.22	Amanda Process
6	2024.03.29	E-beam and RIE
7	2024.04.05	Break
8	2024.04.12	Polymer, Photoresists and Development
9	2024.04.19	期中考
10	2024.04.19	Lithography in Semiconductor
11	2024.04.26	Galvanic Deposition
12	2024.05.03	Plastic Molding in the LIGA Process
13	2024.05.10	Mid-Term Report I
14	2024.05.17	Mid-Term Report II
15	2024.05.24	Company Visiting
16	2024.05.31	Mid-Term Report III
17	2024.06.07	Final Exam

Grading: (Grading will be based on the ranking in the class)

期中考: 25%

期中報告: 25%

每週報告與上課參與: 30%

期末考: 20%

Textbook: Microsystem Technology, W. Menz, J. Mohr, O. Paul, Wiley-VCH Ch.7~Ch.10

Mid-Term Report/Supplementary Material:

1. LIGA and its Applications, Brand etc., Wiley-VCH Ch.8-Ch.19 ◦
2. Multiphoton Lithography, Jürgen Stampfl, Robert Liska, and Aleksandr Ovsianikov, Wiley-VCH, CH6-CH9(material), CH10-CH14(application)

註一：關於疫情，本學期這門課將以實體上課，上課的教室將在台達館 321 教室。若學期中，國內疫情變嚴峻，依 CDC 的規定，有可能視情況改成遠距上課。

註二：每週心得上傳時限當週三中午 12 點，從 EECLASS 系統。

確認修本門課的同學，屆時請加入本課程 line 群組：

#### % Ethics Statement on Generative Artificial Intelligence

After careful consideration, the instructor of this course deems it inappropriate to use generative artificial intelligence in this class. This is because the content within generative AI contains numerous errors and may adversely affect students' understanding of foundational knowledge. In accordance with the published Guidelines for Collaboration, Co-learning, and Cultivation of Artificial Intelligence Competencies in University Education, this course adopts the following policy :  
**Prohibited use**

Students enrolled in this course should be aware that they may not submit assignments, reports, or personal reflections generated using artificial intelligence. If such usage is discovered, instructors, the institution, or relevant units have the right to reevaluate the assignment or report or withhold scores. Students enrolled in this course agree to the above ethics statement if registering for the class.