

半導體製造管理 學分學程實施辦法

1. 為提供學生跨學域並具整合性之選課環境，特訂定半導體製造管理學程。其主要在於整合資訊、工業工程及電子等不同學域內之課程，培養具有此類專長基本訓練之學生。
2. 凡本校學生，均得申請修讀本學程，修滿本學程規定之科目及學分者，由本校發給學程修畢證明。
3. 本學程由管理學院及工學院共同規劃，工業工程、材料科學與工程、資訊工程、電子物理、電子工程系、資訊科學、資訊管理研究所所提供課程，惟其他系所開設之相關課程，亦得經本學程負責教師認可後予以承認。
4. 本學程設專屬之半導體製造管理實驗室，由本學程負責教師共同管理，提供本學程之必修課程及專題使用。
5. 本學程包括必修課程6學分，選修課程12學分。具體課程如「半導體製造管理」學分學程課程規劃表所示。

學分學程課程規劃表

一、學程名稱：半導體製造管理

二、課程名稱及開課系所（必修課程為二門，選修課程至少四門）

必修課程（ <u>二</u> 門）				
編號	課程名稱	開課系所	學分	備註
1	電子學（一）	電資學院	3	
2	半導體製程	工學院或電資學院	3	

選修課程（至少 <u>四</u> 門）					
課程名稱	開課系所	學分	課程名稱	開課系所	學分
<u>生產與作業管理</u>	<u>工工管系</u>	<u>3</u>	供應鏈管理	工工管系	3
<u>作業研究（一）</u>	<u>工工管系</u>	<u>3</u>	電子商務	<u>資管所</u>	3
<u>模擬學</u>	<u>工工管系</u>	<u>3</u>	資料庫系統	工工管系	3
品質管理	工工管系	3	賽局論	<u>經管所</u>	3
作業研究（二）	工工管系	3	計算機網路概論	資工系	3
工程經濟	工工管系	3	網路程式設計概論	資工系	3
設施規劃	工工管系	3	網際網路技術	資工系	3
多目標決策分析	工工管系	3	資訊安全	資管所	3
排程理論與應用	工工管系	3	電子學（二）	電工系	3

三、召集人姓名：陳勝一（工工管系）

四、連絡人姓名：陳勝一（工工管系）

Semiconductor Manufacturing Management Interdisciplinary Program

1. In order to provide a cross-field and integrate learning environment, we design this “Semiconductor Manufacturing Management Interdisciplinary Program” to develop students’ ability of integrating the different fields such as information technology, industrial engineering and electric engineering.
2. All students in NCTU can apply for this program. Students who fulfill the requirements for this program should be granted certification from NCTU when the students graduate.
3. This program is designed by the College of Management and College of Engineering. The program courses are offered by Department of Industrial Engineering and Management, Department of Material Science and Engineering, Department of Computer Science, Department of Electrophysics, Department of Electronics Engineering and Institute of Information Management. However, similar courses offered by other department or institute will be permitted after obtaining the coordinator’s approval.
4. The Semiconductor Manufacturing Management Laboratory is mutually administrated by the corresponding instructors. This Lab is provided for the required courses and projects in this program.
5. The requirements on this program include **6** credits for required courses and **12** credits for elective courses. The curriculums are list as the following.

Curriculum

1. Name of Interdisciplinary Program: Semiconductor Manufacturing Management
2. Courses and offered departments: (at least **2** required courses and **4** elective courses should be taken)

Required Courses (at least 2 courses should be taken):				
No	Course Name	Department	Credits	Notes
1	Electronics (I)	College of EE and CS	3	
2	Semiconductor Manufacturing Processes	College of Engineering or College of EE and CS	3	

Elective Courses (at least 4 courses should be taken):					
Course Name	Department	Credits	Course Name	Department	Credits
Production and Operation Management	Dept. of IEM	3	Supply Chain Management	Dept. of IEM	3
Operations Research (I)	Dept. of IEM	3	Electronic Commerce	Inst. of IM	3
Simulation	Dept. of IEM	3	Database Systems	Dept. of IEM	3
Quality Management	Dept. of IEM	3	Game Theory	Inst. of BM	3
Operations Research (II)	Dept. of IEM	3	Intro. to Computer Networks	Dept. of CS	3
Engineering Economics	Dept. of IEM	3	Intro. to Network Programming	Dept. of CS	3
Facility Planning	Dept. of IEM	3	Internet Technology	Dept. of CS	3
Multi-Criteria Decision Making	Dept. of IEM	3	Information Network Security	Inst. of IM	3
Theory and Application of Scheduling	Dept. of IEM	3	Electronics (II)	Dept. of EE	3

3. Coordinator: Prof. Sheng-I Chen (Department of IEM)
4. Contact: Prof. Sheng-I Chen (Department of IEM)