

2023 NTHU Course

Advanced Technologies of Semiconductor and Display

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Applied Materials Confidential



Objectives

■ Semiconductor

- Main focus: Below N16 FEOL, MEOL and BEOL, including Packaging.
- Process and hardware of Product: FEP, Implant, Etch, MDP (PVD), DDP (CVD), CMP, PDC, Packaging and Lithography product.
- Integration Scheme: Process flow of Foundry and DRAM.

■ Display

- What is TFT LCD, Advanced OLED, Micro-LED and Quantum Dot (QD)?
- CVD and PVD of TFT LCD

■ Lab Touring – to open the horizon

- Global Technology Learning Center (GTLC) Lab (300 mm Semi Lab) Touring at Hsinchu

■ Top Executive Sharing (Cancelled this semester)

- Group VP of AMAT and CEO of AMT: Erix Yu – The Road to Innovation
- VP of AMAT: Yi-Tse Kuo – Display Industry and Marketing Overview

■ Final Poster Exhibition

- To know/learn/experience the real presentation situation in company
- To simulate the poster section for international conference/symposium

Fundamental and advanced knowledges/technologies of Semiconductor and Display



2023 NTHU Course – Syllabus

Advanced Technologies of Semiconductor and Display

日期	課程名稱	講師	職稱
02/07	1. Introduction to Course 課程簡介 2. Introduction to Applied Materials 美商應用材料簡介	Dr. Steve Wang (王寶琪)	技術副處長
02/14	應材 - 半導體與顯示器產品概述 (Applied Materials Product Overview – Semiconductor and Display)	Jacy Liao (廖欽立)	資深技術督學
02/21	Introduction to Flat Panel Display (FPD) - Advanced OLED and Micro LED	Dr. Eric Sun (孫正宏)	技術處長
03/07	顯示器物理氣、化學相沉積及物理沉積技術及產品 (Physical & Chemical Vapor Deposition Product for Display)	Dr. Shih-Tse Wu (吳世澤)	產品處長
03/14	1. The road to innovation 2. Display - Industry and Marketing Overview	1. Erix Yu (余定陸) 2. Yi-Tze Kuo (郭怡之)	1. 應用材料集團副總裁; 台灣應用材料總裁 2. 應用材料新產品銷售副總裁
03/21	Process Flow of Semiconductor: DRAM	Jeff Kuo (郭乃文)	技術處長
03/28	Process Flow of Semiconductor: Foundry	Dr. Samuel Chiu (邱興邦)	資深產品處長
04/11	前段製程及鳍式電晶體簡介 (Front-end (including FinFET Transistor) Product for Semiconductor)	Wallence Peng 彭智龍	產品處長
04/18	離子植入製程技術與產品 (Implant Product for Semiconductor)	Dr. Hsueh-Li Sun (孫學立)	技術處長
04/25	金屬化製程簡介 (MDP Products for Semiconductor)	Travis Huang (黃怡旭)	資深產品經理
05/02	平坦化 - 化學機械研磨 (Planarization of Semiconductor: Chemical Mechanical Polishing)	Nick Huang (黃源青)	產品處長
05/09	Mid-term Exam	Dr. Steve Wang (王寶琪)	技術副處長
05/16	封裝製程及設備 (Packaging Product for Semiconductor)	Albert Lan (藍章益)	資深產品處長
05/23	蝕刻製程技術及產品 (Etch Products for Semiconductor)	Scott Chen (陳世益)	資深產品經理
05/30	製程診斷與控制技術及產品 (Process Diagnostics & Control)	Paul Chuang (莊伯龍)	產品處長
06/06	Applied Materials Global Technology Learning Center (GTLC) Lab Touring	Kelvin Chang/Morris Chang	資深技術督學
06/13	Final Exam – Poster Exhibition	Dr. Steve Wang (王寶琪)	技術副處長

2/28, 和平紀念日; 4/4, 兒童節放假

Every Tuesday at NTHU 台達館 璟德廳 PM 3:30 – 6:20

