Semiconductor Research Department Introduction

1. National Taiwan University

Department Name	Graduate School of Advanced Technology (GSAT)
Department Goals	The goals of GSAT include: 1. Establish a public-private co-education, co-creation, and co-prosperity mechanism between academia and industry. 2. Closely link university and industries, making academic research and industrial technology development go hand-in-hand. 3. Cultivate high-quality talents who can lead academic research and innovation, and drive industrial development.
Curriculum Design	1. GSAT offer both Master and Doctoral program in three areas: ● Integrated Circuit Design and Automation ● Semiconductor Device, Material, and Hetero-Integration ● Nano Engineering and Nano Science 2. Master Degree Programs: The compulsory courses include core courses, internship courses (one semester), and directed research (every semester). Students can choose to take elective courses according to their research interest and thesis advisor's suggestion. 3. Doctoral Degree Programs: The compulsory courses include internship courses (two semester), and directed research (every semester). 4. All-English Courses: Students are required to take 35% of the graduate credits (excluding R&D internships) be taught in English starting from the 2022 academic year. There are 54 courses offered in the 2022 academic year, of which more than 40 % are taught in English (EMI). GSAT plans to increase the proportion of graduate credits taught in English year by year, expecting to increase EMI graduate credits to 100% in 5-6 years.

	5. Internships: Regarding Internship requirements, Master students are required to take one semester (3 credits), and Ph.D. students take two semesters (6 credits). Before starting internships, students should submit internship worksheet, indicating their goals, expected learning plan, timeline and so on. At the end of internship, the companies need to evaluate student performance. At the same time, the professors evaluate the internship written and oral reports presented by students.
Website	https://gsat.ntu.edu.tw/en/home/

2. National Cheng Kung University

Department Name	Academy of Innovative Semiconductor and Sustainable Manufacturing
Department Goals	Fostering future talents equipped with the core competency on AI, data-driven & sustainable manufacturing applicable to the whole spectrum of the semiconductor industry and continuously supporting the semiconductor industry's competitiveness on an innovative educational platform.
Curriculum Design	1. Master Degree Programs: 24 credits required on coursework and 6 on thesis. The coursework includes 6 credits core competency on AI and Sustainability. 2. Doctoral Degree Programs: 18 credits required on coursework and 12 on thesis. 3. English-taught courses: 44 are taught in English, out of 155 courses offed by the Academy. 4. Internships: will be arranged in coordination with the industry partners of the Academy.
Website	https://ais2m.ncku.edu.tw/?lang=3

3. National Yang Ming Chiao Tung University

Department Name	Industry Academia Innovation School
Department Goals	1. Two integrated Graduate Institutes: Semiconductors and AI Systems. 2. Serving as an industry-academia co-innovation and co-creation platform. 3. NYCU is the leading cradle of semiconductors, ICT, and AI industries in Taiwan.

Curriculum Design	1. Institute of Pioneer Semiconductor Innovation (IPSI): 3 sub-groups: "Semiconductor Materials and Assembly," "Semiconductor Components and Process," and "Integrated Circuits and Design."
	2. Institute of Artificial Intelligence Innovation (IAII): 3 sub-groups: "Artificial Intelligence, Data Science, Computing and Application," "Group Information Security and Information Engineering," and "Broadband Communication and Internet of Things."
	3. Course offering in English: IAIS has been recruiting top-notch overseas scholars and professors to offer graduate courses in English. Courses conducted in English would be considered as one of graduation requirement credits to upgrade students' English ability. IPSI and IAII also offer many official courses conducted in English by leveraging existing ones taught by jointly-appointed faculty members with other colleges in NYCU.
	4. Industrial academic practical training program: IAIS has been planning the program including course curriculum and contents with our collaborated industrial partners and not-for-profit research organizations.
Website	https://iais.nycu.edu.tw/en/index.html#gsc.tab=0

4. National Tsing Hua University

Department Name	College of Semiconductor Research (CoSR)
Department Goals	The semiconductor technology is grouped into 4 key areas. CoSR reviewed the syllabus of all semiconductor-related courses from Elec. Eng., Computer Sci., Material Sci./Eng., Physics, Chemistry, Chem. Eng., and Power Mech. Eng. For combination into an organized curriculum.
Curriculum Design	1. M.A. Program Total Required credits: 29 credits Constants (Seminars, Master Thesis, Industry Internship/Practical Curriculum, Leadership), Core Courses, Professional Courses. 2. Ph.D. Program Total Required credits: 20 credits

	Constants (Seminars, Doctoral Thesis, Industry Internship/Practical Curriculum, Leadership), Core Courses, Professional Course. 3. Direct Admission to Doctoral Program Total required credits: 35 credits Constants (Seminar, Doctoral Thesis, Industry Internship/Practical Curriculum, Leadership), Core Courses, Professional Courses. 4. EMI teaching plan: The school increases English teaching courses year by year, and it is expected to reach EMI within 5 years. 5. Industry Internship plan: In order to enable students to apply academic theory in actual operation, improve professional skills, and cultivate students' understanding of the workplace and professional ethics, College of Semiconductors Research specially includes Industry Internships (3 credits) in required credits.
Website	https://cosr.site.nthu.edu.tw/

5. National Sun Yat-sen University

Department Name	College of Semiconductor and Advanced Technology Research
Department Goals	1. NSYSU cooperated with enterprises with international market-leading positions in semiconductor packaging, testing and electronic components in the greater Kaohsiung area to jointly cultivate 960 master's students (8 classes in 10 years). 2. Relevant innovation cultivation mechanism has been approved by the Ministry of Education to establish the institute. It is expected to be subsidized by the National Development Council and jointly invested by seven companies approximately 1.7 billion in the next ten years. Each year the College will recruit 80 master's students for the Institute of Advanced Semiconductor Packaging and Testing and 40 master's students for the Institute of Precision Electronics Components.
Curriculum Design	1. Course Design: required professional core courses, elective professional courses, and corporate internship courses. 2. EMI Teaching Design: The proportion of all English courses planned by the college is about 25~30% in the initial stage and 50~54% in the later stage.

	3. Internship Design: The college has a corporate internship program from the first to the third year, with a total of 18 hours for the first year, 20 hours for the second year, and 6 hours for the third year.
Website	https://sat.nsysu.edu.tw/?Lang=en