National Taiwan University
Ph.D. Program in Semiconductor Device, Material, and Hetero-integration Degree Regulations

1. Study period: 2 to 7 years
2. Minimum graduation credits:
   - General student: 15 credits. Thesis, Special Topics, and Seminar are not included.
   - Direct admission to Ph.D. student: 27 credits. Thesis, Special Topics, and Seminar are not included.
3. At least 9 credits of professional electives are required from the program (courses are approved by an advisor)
4. Online learning of Academic Ethics is a required course, and does not count toward graduation credits.
5. The credits of undergraduate courses do not count toward the minimum credits for graduation requirements.
6. Those who enrolled in the 2022 academic year, 35% of English-taught courses should be registered for graduation requirements.
7. For any matters not covered, please refer to the regulations of Graduate School of Advanced Technology.

- **Required Curriculum**

Required Course	Credit(s)	Note
Internship	6	2 semesters
Seminar	1	4 semesters
Special Project	1	every semester
Doctoral Dissertation	0	Semester of graduation
Academic Ethics	0	Students who fail the Academic Ethics are Not eligible to apply Defense

- **Required Competency (choose one)**

Level	Course Title	Credit(s)
Graduate	固態物理學一 Solid State Physics (1)	3
Graduate	積體電路工程 Integrated Circuit Technology	3

Graduate	半導體元件物理 Physics of Semiconductor Devices	3
Graduate	材料熱力學 Thermodynamics of Materials	3
Graduate	電子顯微鏡學 Electron Microscopy	3
Graduate	電磁學二 Electromagnetics (II)	3

- **Elective Curriculum**

Level	Course Title	Credit(s)
Graduate	金氧半電容元件 MOS Capacitor Device	3
Graduate	量子物理與應用 Principles and Applications of Quantum Physics	3
Graduate	先進半導體與顯示技術 Advanced Technologies for Semiconductor and Display	3
Graduate	固態元件 Solid State Devices	3
Graduate	有機光電半導體與元件 Organic Semiconductors for Optoelectronic and Electronic Devices	3
Graduate	光電半導體物理 Semiconductor Physics in Optical-electronics	3
Graduate	半導體雷射原理 Principles of Semiconductor Lasers	3
Graduate	微感測器 Micro Sensors	3
Graduate	量子電子學一 Quantum Electronics (I)	3
Graduate	數位積體電路工程 Digital IC Engineering	3
Graduate	記憶體電路技術 Memory Circuit Technology	3
Graduate	奈米電子學 Nanoelectronics	3
Graduate	磁性材料	3

	Magnetic Materials	
Graduate	材料分析 Materials Analysis	3
Graduate	表面分析技術 Surface Analysis Technology	3
Graduate	訊號完整度 Signal Integrity	3
Graduate	系統構裝電源完整度 Power Integrity for System-in-Packages	3
Graduate	電磁相容 Electromagnetic Compatibility	3
Graduate	異質整合封裝 Heterogeneous Integrated Packaging	3

※課程非於每學年開授，請依本校課程資訊與選課系統公告規劃選課※

※Please refer to the current course catalog for the actual course offerings each semester.※