# MUST Curriculum Planning for Undergraduate Students of Academic Year 2023-2027,
# Department of Semiconductor and Electro-Optical Technology

| Year | | 112 | | | | Year | | 113 | | | | Year | | 114 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Course | SEP 2023 | | FEB 2024 | | | Course | SEP 2024 | | FEB 2025 | | | Course | SEP 2025 | | FEB 2026 | |
| | | Cr. | hr. | Cr. | hr. | | | Cr. | hr. | Cr. | hr. | | | Cr. | hr. | Cr. | hr. |
| MUST Core Required Courses | Physical Education | 1 | 2 | 1 | 2 | MUST Core Required Courses | | | | | | MUST Core Required Courses | Taiwanese Society | 2 | 2 | | |
| | Chinese Pinyin Pronunciation Practice | 1 | 2 | | | | | | | | | | Taiwanese Art | | | 2 | 2 |
| | Chinese Listening Practice | 1 | 2 | | | | | | | | | | | | | | |
| | Chinese Conversation Practice | 1 | 2 | | | | | | | | | | | | | | |
| | Chinese Reading and Comprehension | 1 | 2 | | | | | | | | | | | | | | |
| | Chinese Writing Practice | 1 | 2 | | | | | | | | | | | | | | |
| | chinese tutoring | 0 | 5 | | | | | | | | | | | | | | |
| | Chinese Literature | | | 2 | 2 | | | | | | | | | | | | |
| | Chinese Culture | | | 2 | 2 | | | | | | | | | | | | |
| | Taiwanese Culture | | | 3 | 3 | | | | | | | | | | | | |
| | Taiwan Life and Law | | | 3 | 3 | | | | | | | | | | | | |
| | **Subtotal** | **6** | **17** | **11** | **12** | | **Subtotal** | **0** | **0** | **0** | **0** | | **Subtotal** | **2** | **2** | **2** | **2** |
| School Professional Required Courses | Technical English(I)(II) | 2 | 2 | 2 | 2 | School Professional Required Courses | | | | | | School Professional Required Courses | Technical English(III)(IV) | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | Ethics for Engineers | | | 2 | 2 |
| | **Subtotal** | **2** | **2** | **2** | **2** | | **Subtotal** | **0** | **0** | **0** | **0** | | **Subtotal** | **2** | **2** | **4** | **4** |
| Compulsory Courses | Physics | 3 | 3 | | | Compulsory Courses | Lab of Property Practice(I)(II) | 9 | 32 | 9 | 32 | Compulsory Courses | Introduction to Modern Science | 3 | 3 | | |
| | Applied Mathematics | 2 | 2 | | | | | | | | | | Semiconductor Material and Device | 3 | 3 | | |
| | Basic Circuit Theory | 2 | 2 | | | | | | | | | | Electronics Lab(II) | 3 | 3 | | |
| | Introduction to Optoelectric Industry | 2 | 2 | | | | | | | | | | Laser Engineering | | | 3 | 3 |
| | Computer Data Processing | | | 2 | 3 | | | | | | | | Optoelectric Lab | | | 3 | 3 |
| | Electronics Circuits | | | 3 | 3 | | | | | | | | Semiconductor Manufacturing Technology | | | 3 | 3 |
| | Electronics Lab(I) | | | 3 | 3 | | | | | | | | | | | | |
| | Geometrical Optics | | | 3 | 3 | | | | | | | | | | | | |
| | **Subtotal** | **9** | **9** | **11** | **12** | | **Subtotal** | **9** | **32** | **9** | **32** | | **Subtotal** | **9** | **9** | **9** | **9** |
| Elective Courses | Vacuum Technology | | | 2 | 2 | Elective Courses | Material Science and Engineering | 2 | 2 | | | Elective Courses | Certification of Solid Design CAD and License Counseling | 3 | 3 | | |
| | Introduction to Bio-Medical Engineering | | | 2 | 2 | | Introduction to Computers and Programming | 2 | 2 | | | | Optical Thin Film and Coating Technology | 3 | 3 | | |
| | Engineering Applied Mathematics | | | 2 | 2 | | Solid State Lighting | 2 | 2 | | | | Technology Management | 3 | 3 | | |
| | Introduction and Application of Artificial Intelligence | | | 3 | 3 | | Solar Photovoltaic Technology | 2 | 2 | | | | Photonics applications | 3 | 3 | | |
| | Introduction to Semiconductor Materials Industry | | | 3 | 3 | | Micro-computer Application | 3 | 3 | | | | Thin Film Technology | 3 | 3 | | |
| | Material Science and Engineering | | | 2 | 2 | | Mobile Computing Practice | 3 | 3 | | | | Semiconductor Inspection technology | 3 | 3 | | |
| | | | | | | | App Programming | 3 | 3 | | | | Semiconductor Manufacturing Equipement | 3 | 3 | | |
| | | | | | | | Practical Vacuum Technology | 3 | 3 | | | | Certification of Solid Design CAD | 3 | 3 | | |
| | | | | | | | Surface Engineering and AI Assistance | 3 | 3 | | | | Nanomaterials | 3 | 3 | | |
| | | | | | | | Introduction of Flat Panel Displays | 3 | 3 | | | | Computer-Aided Optical System Design | 3 | 3 | | |
| | | | | | | | CAD of Solid Design | | | 2 | 2 | | Semiconductor Packaging Process and Equipment | 3 | 3 | | |
| | | | | | | | Introduction to Artificial Intelligence | | | 2 | 2 | | Data Science | | | 3 | 3 |
| | | | | | | | Engineering Statistics | | | 2 | 2 | | Chromatics | | | 3 | 3 |
| | | | | | | | Chromatics | | | 2 | 2 | | Optoelectronic Device and Application | | | 3 | 3 |
| | | | | | | | Thin Film Technology | | | 2 | 2 | | Solar Photovoltaic Technology | | | 3 | 3 |
| | | | | | | | Measurement of LEDs | | | 2 | 2 | | Digital Logic Design | | | 3 | 3 |
| | | | | | | | | | | | | | Python Application | | | 3 | 3 |
| | | | | | | | | | | | | | Memory Device Technology | | | 3 | 3 |
| | | | | | | | | | | | | | Semiconductor Lab | | | 3 | 3 |
| | | | | | | | | | | | | | Semiconductor Manufacturing Equipement | | | 3 | 3 |
| | | | | | | | | | | | | | CAD of Solid Certification | | | 3 | 3 |
| | | | | | | | | | | | | | Semiconductor Materials and Applications | | | 3 | 3 |
| | | | | | | | | | | | | | Photonic Biomedical Engineering | | | 3 | 3 |
| | | | | | | | | | | | | | Computer-Assisted lighting system design | | | 3 | 3 |
| | | | | | | | | | | | | | Optical Factory | | | 3 | 3 |
| | | | | | | | | | | | | | Silicon Nano-device Detection and Analysis | | | 3 | 3 |
| | | | | | | | | | | | | | Certification of Solid Design CAD | | | 3 | 3 |
| | | | | | | | | | | | | | Machine Learning | | | 3 | 3 |
| | | | | | | | | | | | | | Smart Industry and Manufacturing | | | 3 | 3 |

| Year | | 115 | | | |
|---|---|---|---|---|---|
| | Course | SEP 2026 | | FEB 2027 | |
| | | Cr. | hr. | Cr. | hr. |
| MUST Core Required Courses | | | | | |
| | | | | | |
| | **Subtotal** | **0** | **0** | **0** | **0** |
| School Professional Required Courses | | | | | |
| | | | | | |
| | **Subtotal** | **0** | **0** | **0** | **0** |
| Compulsory Courses | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | **Subtotal** | **0** | **0** | **0** | **0** |
| Elective Courses | Lab of Property Practice(III)(IV) | 9 | 32 | 9 | 32 |
| | Project of Optoelectronics | 3 | 3 | 3 | 3 |
| | Solar Photovoltaic Technology | 3 | 3 | | |
| | Optoelectronic Detection Engineering | 3 | 3 | | |
| | Chromatics | 3 | 3 | | |
| | Artificial Intelligence-Deep Learning | 3 | 3 | | |
| | Labview Programming Design | 3 | 3 | | |
| | Python Program Application | 3 | 3 | | |
| | Machine Learning with Python | 3 | 3 | | |
| | Generative AI and Applications | 3 | 3 | | |
| | spectral analysis | 3 | 3 | | |
| | Creative Design in Optoelectronics | | | 3 | 3 |
| | Nano Bio-Photonics | | | 3 | 3 |
| | Technology of Organic Light-Emitting Diode Display | | | 3 | 3 |

Cr./hr.=Credit/hour

Remarks:

1.Minimum credits required for graduation: 128 credits including 87 compulsory credits, and at least 41 elective credits (including the interdepartmental elective credits).

2.Inter-departmental elective credits are transferable. Professional elective course credits shall not be fewer than 29.

3.Students should take off-campus internship courses, Lab of Property Practice(I)(II)(III)(IV), and the relevant measures are handled in accordance with the Implementation of Off-campus Internship

4. Off-campus practice courses : Lab of Property Practice(I)(II)(III)(IV), 1 credit requires no more than 80 hours The actual internship hours for Lab of Property Practice(I)(II) are 36 to 40 hours per week, and the actual internship hours for Lab of Property Practice (III) and (IV) are 32 to 40 hours per week.

5. The elective courses listed in the tables are subejct to adaptation when necessary.

明新科技大學 財團法人 半導體與光電科技系 MUST

半導體系課程規劃委員 1

系主任