

I-SHOU UNIVERSITY
Department of Materials Science and Engineering
Curriculum for Master's Students Admitted in Academic Year 2025

Category	First Year (2025)		Second Year (2026)	
Required Professional Courses (14 Credits)	M07044 Seminar (I) [2]1st	M07045 Seminar (II) [2]2nd M07M01 Research Ethics [0] 2nd	M07046 Seminar(III) [2]1st M07916 Dissertation/Thesis Guide(I) [3] 1st	M07047 Seminar(IV) [2] 2nd M07917 Dissertation/Thesis Guide(II) [3] 2nd M07M00 Master Thesis [0] 2nd
Elective Professional Courses (≥24 Credits) (Elective courses “Independent Study” will not be included.)	M07048 Defect Chemistry of Materials [3] M07476 Magnetic Materials [3] M07751 Advanced Physical Metallurgy [3] M07752 Advanced Metallurgical Themodynamics [3] M07753 Weldling Metallurgy [3] M07151 Electron Microscopic Analysis of Material [3] M07153 Tribology of Materials [3] M07767 Structure Analysis of Materials [3] M07374 Composite materials [3] M07235 Display Technology and Materials [3] M07474 Thin Film Technology [3] M07816 Materials Characterization and Analysis [3] M07341 IC Package Processing and Materials [3] M07471 Biomaterials [3] M07766 Mechanical Property Analysis of Materials [3] M07156 Optoelectronic Devices and Materials [3] M07805 X-ray Crystallography [3] M07616 Nanotechnology on Biomedical Engineering [3] M07499 Functional Ceramic Materials [3] M07455 Technology of Flexible Electronic Materials [3] M07097 Defects in Materials and Microscopic Characterization [3] M07450 Corrosion and Corrosion Prevention [3] M07783 Fabrication Process of Semiconductor Devices [3] M07098 Advanced Welding Technology and Metallurgy [3] M07154 Surface and thin films analysis [3] M07092 Application of Atificial Itelligence on Materials Science and Engining [3]		M07901 Advanced Solid State Physics [3] M07813 Diffusion Theory [3] M07812 Advanced Phase Transformation [3] M07585 Special topics in flectron microscopy[3] M07902 Special Alloys and Processing[3]	
Category	Third Year (2027)		Fourth Year (2028)	
Elective Professional Courses	M07918 Independent Study (III) [1] 1st M07919Independent Study(IV) [1] 2nd		M07920 Independent Study (V) [1] 1st M07921 Independent Study (VI) [1] 2nd	
Thesis	Thesis required courses without credits (capstone courses)			
Credits required for graduation from the Program	38 Credits			
Note	1. In order to meet students' needs, course offerings may be adjusted by adding or removing courses as necessary 。 2. If a departmental elective course does not specify whether it is offered in the first or second semester, it will be scheduled in one of the two semesters at the department’s discretion 。 3. In addition to the Master's thesis, graduate students must complete at least 24 credits of graduate-level coursework, including core professional courses, to be eligible for graduation. With the approval of the department, up to 6 credits of elective courses may be taken from other departments and counted toward the program requirements. 。 4. Graduate students are required to take core professional courses. The course titles include: Advanced Physical Metallurgy, Advanced Thermodynamics, Crystal Structure Analysis or X-ray Crystallography (choose one), Advanced Solid State Physics, and Theory of Material Defects. Students must complete at least three of the aforementioned core courses. 。 5. Within the designated period of study, students must not only complete the required number of credits for graduation, but also pass the Master’s Degree Examination in accordance with the regulations of I-Shou University in order to qualify for graduation. 。			