Institute of Medical Science and Technology, National Sun Yat-sen University

Course Structure

112.08 External review of courses
112.10.04 Revised and approved by the Institute Meeting of 112-2
113.03.22 Revised and approved by the Institute Meeting of 112-9
113.05.07 Approved by the 4th Meeting of the University Curriculum Committee in the 112 Academic Year
113.05.30 Approved by the 180th Academic Affairs Meeting
113.10.18 Revised and approved by the Institute Meeting of 113-2
113.10.24 Approved by the College Curriculum Committee in 113-2
113.11.19 Approved by the 2nd Meeting of the University Curriculum Committee in the 113 Academic Year
113.12.12 Approved by the 182nd Academic Affairs Meeting
114.10.7 Revised by the 2nd Meeting of the Departmental Joint Curriculum Committee in the 114 Academic Year
114.10.16 Approved by the 2nd Meeting of the College Curriculum Committee in the 114 Academic Year
114.11.18 Approved by the 2nd Meeting of the College Curriculum Committee in the 114 Academic Year
114.12.09 Approved by the 186th Academic Affairs Meeting

Course		Master		PhD
		Group A (Biomedical Engineering group)	**Group B (Smart Long-Term care group)**	
Required Courses		Introduction to Medical Science and Technology Seminar (I) Seminar (II) Seminar (III) Seminar (IV)	Special Topics in Long-Term Care Technologies Monographic Study on Smart Long-Term Care Practical Applications of Smart Technology in Long-Term Care (I) Practical Applications of Smart Technology in Long-Term Care (II) Seminar on Smart Long-Term Care (I) Seminar on Smart Long-Term Care (II)	Advanced Medical Science and Technology Seminar (I) Seminar (II) Seminar (III) Seminar (IV)
Elective Required Courses (Choose 2 courses)		Pathology Biomedical Sensing Biomechanics Biological Simulation Cellular and Molecular Biology Biomedical MEMS (Micro-Electro-Mechanical Systems) Biomedical Optical Imaging Technology Brain-Computer Interface: Theory and Practice		
Elective Courses	**Smart Healthcare Domain**	Preclinical Biopharmaceutical R&D Models Toxicology Introduction to Emergency Medicine Preclinical Drug Activity Testing Experiments Biochip Practice Innovation and Application of Assistive Technology Introduction to Biomedical Engineering Medical Electronics Medical Imaging Systems Biomedical Signal Processing Clinical Medical Overview Special Topics in Immunology Human Anatomy	Design and Fabrication of Smart Electrochemical Sensors Introduction to Internal Medicine Biostatistics Structural Biology Computational Biology Bioinformatics Medical Computer Systems and Analysis Molecular Simulation Design and Development of Biotech Medical Devices Biological Databases EG Signal Processing and Data Mining Computer-Aided Engineering Analysis and Design	Special Topics in Clinical Toxicology (I) Special Topics in Clinical Toxicology (II) Special Topics in Micro/Nano Sensing (I) Special Topics in Micro/Nano Sensing (II) Special Topics in Computational Biology (I) Special Topics in Computational Biology (II) Special Topics in Instrument Systems (I) Special Topics in Instrument Systems (II) Special Topics in Neural and Human Factors Engineering (I) Special Topics in Neural and Human Factors Engineering (II)
	Nanobiomedical Domain	Applied Physiology Biomaterials Special Topics in Medical Regulations and Ethics Biomedical Micro/Nano Materials Tissue Engineering Subcutaneous Drug Delivery Systems Biomedical Analysis Chemical Engineering Materials Protein Engineering	Fundamentals of Bone Graft Biomaterials and Practical Applications Practical Applications of 3D Printing Photocatalytic Materials Science Applications of Instrumental Analysis in Biochemistry Biochemistry (I) Biochemistry (II)	Special Topics in Drug Delivery (I) Special Topics in Drug Delivery (II) Special Topics in Nanomaterials (I) Special Topics in Nanomaterials (II) Special Topics in Biophysics (I) Special Topics in Biophysics (II) Special Topics in Multifunctional Materials (I) Special Topics in Multifunctional Materials (II)
	Smart Long-Term Care Domain	Seminar on Smart Long-Term Care (III) Seminar on Smart Long-Term Care (IV) Clinical Smart Care AI in Sleep and Hearing Loss in the Elderly Long-Term Care for Aging and Disability Application of Hyperbaric Oxygen Therapy Medical Ethics and Clinical Trials Rehabilitation Medicine Counseling Theories and Techniques for the Elderly	Applications of Multiple Complementary Therapies in the Elderly Special Topics in Cardiovascular Diseases in the Elderly Mental Health in the Elderly Special Topics in Oral Health Care for the Elderly Service Innovation and Development Models for Smart Long-Term Care Physiological and Psychological Exploration of Geriatric Syndromes Laboratory Medicine in Geriatrics Evidence-Based Healthcare	Applications of Multiple Complementary Therapies in the Elderly Special Topics in Cardiovascular Diseases in the Elderly Mental Health in the Elderly Special Topics in Oral Health Care for the Elderly Service Innovation and Development Models for Smart Long-Term Care Physiological and Psychological Exploration of Geriatric Syndromes Laboratory Medicine in Geriatrics Evidence-Based Healthcare