

National Pingtung University of Science and Technology

**Department of Biological Science and Technology**

Curriculum Table of Master Program for Academic Year107-110

Year	First Academic Year				Second Academic Year				Total
Semester	First Semester		Second Semester		First Semester		Second Semester		
	Courses	Credit/ Hour	Courses	Credit/ Hour	Courses	Credit/ Hour	Courses	Credit/ Hour	
Required	Seminar	1/2	Seminar	1/2	Thesis	6/6			
	Biotechnology and Bioindustry (Remark 2)	3/3							
	Special Topics in Bioactive Natural Products (Remark 2)	3/3							
	Advanced Molecular Biology (Remark 2)	3/3							
	Advanced human physiology (Remark 2)	3/3							
Total		7/8		1/2		6/6			14
Elective	Plant Functional Genomics and Applications	2/2	Plant Biochemistry	2/2	Seminar I	1/2	Seminar II	1/2	
	Plant Functional Genomics and Applications	1/2	Plant Molecular Biology	2/2					
	Genomics	2/2	Environmental Genomics	2/2					
	Bioinformatics	2/2	Morphological and physiological daptations of animals	2/2					
	Gastrointestinal Microbiology	3/3	Natural Products	2/4					
	Special Topics on Applied Microbiology	2/2	Organic Spectroscopy	3/3					
	Advanced in Microbial Physiology and Genetics	3/3	Gene Recombination and Expression	2/2					
	Herpetology	2/2	The Biology of Animal Aging	2/2					
	Natural Products Chemistry	3/3	Advanced Cell Biology	2/2					
	Animal Transgenics	2/2	Quality assurance and quality control	2/2					
	Animal Transgenics Practice	1/2	Mass Spectrometry & Laboratory Practice 3	3/3					
	Protein Engineering	3/3	Medical Embryology	3/3					
	Organic Analysis	3/3	Animal Care and management	2/2					
	Proteomics	2/2	Application and Establishment of Embryonic Stem Cells	2/2					
	Proteomics experimental course	1/2	Application and Establishment of Embryonic Stem Cells	1/2					
	Stem cell biology	3/3	Stem Cells Practice						
	Apoptosis	3/3	Molecular Virology	3/3					
	Animal Cell Culture	2/2	Practice of Industrial Training	3/9					
	Molecular-Based Diagnostic Technique	2/2	Independent study (2)	2/2					
	Special Topics in Photosynthesis	2/2	Separation Science and Internship	3/3					
	Stress Physiology of Plants	2/2							
	Independent study (1)	2/2							
Innovative application of Bioresources	3/3								
Total		51/54		43/52		1/2		1/2	96

**Remark:**

1. Graduate students must complete at least **30** credits (**14** required credits and **16** elective credits) for graduation.
2. 「Special Topics in Bioactive Natural Products」, 「Biotechnology and Bioindustry」, 「Advanced Molecular Biology」, 「Advanced human physiology」 Choose 2 of the 4 courses.
3. 「Independent study (1)(2)」 elective courses only for foreign students and part-time students.