Course Structure for Ph. D Program
Ecology and Evolution, Department of Life Science
National Taiwan Normal University

Adaptive to Class of	Required Credit(s)	Elective Credit(s)	Free Elective Credit(s)	Minimum Total Credits for Graduation
114	14.0	10.0	0.0	24.0

Note: The first alphabet ”E” on the course name refers to the course in English as a medium of instruction

I. Required Courses: 0.0 credit is required

II. Elective Courses: 0.0 credit is required

III. Courses Offered to Students in Different Divisions

Required Course, 14.0 credits are required

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
BIC0173	1 Evolutionary Biology	3.0	3.0	0.0	
BIC0174	2 E Advanced Ecology	3.0	3.0	0.0	
BID0165	3 Seminar	2.0	2.0	0.0	This course must be retaken with a passing score for 4 times

Elective Course: 10.0 credits are required

Direct Admission to Doctoral Program from Master's Program must Practice 16 credits

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
	1 Core Elective Curriculum 2 courses are least required				
BIC8010	1-1 Research Methods in Ecology and Evolution	2.0	2.0	0.0	
BIC0011	1-2 Experimental Design and Data Analysis	3.0	3.0	0.0	
BIC7007	1-3 Population Genetics and Evolution	3.0	3.0	0.0	
BIC8022	1-4 E Behavioral Ecology	3.0	3.0	0.0	
BIC0153	1-5 Regression Analysis	3.0	3.0	0.0	
BIC0185	1-6 Adaptation and Natural Selection	3.0	3.0	0.0	
BIC0061	1-7 E Principles and Methods of Plant Taxonomy	3.0	3.0	0.0	
BIC8025	1-8 E Introduction to Statistical Analysis	3.0	3.0	0.0	
BIC8026	1-9 E Linear and Logistic Regression Models	3.0	3.0	0.0	
BIC0133	2 Topics in Molecular Biology	2.0	2.0	0.0	
BIC8007	3 Research Methods of Experimental Biology	2.0	2.0	0.0	
BIC0139	4 Protein and Enzyme Chemistry	3.0	3.0	0.0	
BIC8016	5 Writing Scientific Papers in English	3.0	3.0	0.0	
BIC7009	6 Immunochemistry	3.0	3.0	0.0	
BIC8018	7 Topics on Animal Physiology (I)	2.0	2.0	0.0	
BIC7015	8 Comparative Animal Physiology	3.0	3.0	0.0	
BIC0119	9 Learning and memory	3.0	3.0	0.0	
BID0074	10 Topics in Sensory Physiology	3.0	3.0	0.0	
BIC0052	11 Neuropharmacology	3.0	3.0	0.0	
BIC8006	12 Topics on Animal Physiology (II)	2.0	2.0	0.0	
BIC0017	13 Topics in Fish Physiology	3.0	3.0	0.0	
BID0069	14 Topics in principle of phylogenetics	3.0	3.0	0.0	
BID0072	15 Topics in Plant Growth and Development	2.0	2.0	0.0	
BID0075	16 Topics in Brain Physiology	3.0	3.0	0.0	
BIC0016	17 E Topics in Plant Molecular Biology	2.0	2.0	0.0	
BIC0021	18 Topics in Molecular Genetics	3.0	3.0	0.0	
BIC0038	19 Studies in Adaptation and Natural Selection	2.0	2.0	0.0	
BIC0059	20 Architecture of Brain	3.0	3.0	0.0	
BIC0101	21 Paper Writing and Presentation in Biological Science	2.0	2.0	0.0	
BIC0138	22 Cellular and Molecular Biology	3.0	3.0	0.0	
BIC0186	23 Protein Engineering	3.0	3.0	0.0	
BIC7001	24 Special Topics on Intellectual Property	2.0	2.0	0.0	
BIC8003	25 Ecology and Evolution of Amphibians and Reptiles	2.0	2.0	0.0	
BIC8012	26 Oxidative Stress Physiology	3.0	3.0	0.0	
BIC8020	27 Biotechnology for the Drug Development	2.0	2.0	0.0	
BIC7002	28 Industrial Practice	3.0	3.0	0.0	
BIC7004	29 Translational Medicine — Novel Compounds and Chinese Herbal Medicines	2.0	2.0	0.0	
BIC7005	30 E Drug Development and Translational Medicine	2.0	2.0	0.0	
BIC7010	31 Neuroethology	3.0	3.0	0.0	
BIC8021	32 Experimental Physiology	2.0	2.0	0.0	
BIC8009	33 Advanced Seminar (I)	0.0	0.0	0.0	

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
BIC8014	34 Advanced Seminar (II)	0.0	0.0	0.0	
BID0166	35 Issues and Rationale of Biological Education	3.0	3.0	0.0	
BIC8023	36 Application of Optoelectronic Technology in Biomedical	2.0	2.0	0.0	
BIC8027	37 E Topics in Virology	2.0	2.0	0.0	
BIC8030	38 E Comprehensive Biotech Practice-From Micro Molecular Biology to Macro Physiology	3.0	3.0	0.0	
BIC8028	39 E Apply Sciences Lead to Biotechnology Industry	2.0	2.0	0.0	
BID0168	40 Special Topic on Endocrinology	3.0	3.0	0.0	
BID0169	41 Special Topic on Signal Transduction	3.0	3.0	0.0	
BIC0061	42 E Principles and Methods of Plant Taxonomy	3.0	3.0	0.0	
BIC7012	43 Principles of Phylogenetics	3.0	3.0	0.0	
BID0170	44 Special Topics on Scleractinian Coral Taxonomy (I)	3.0	3.0	0.0	
BID0171	45 Special Topics on Scleractinian Coral Taxonomy (II)	3.0	3.0	0.0	
BIC8031	46 Special Topics in Brain Neurobehavioral Studies	3.0	3.0	0.0	

IV. Free Elective Credits: 0.0 credit is required