

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
115	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	This course must be retaken with a passing score for 4 times
BIC0174	2 E Advanced Ecology	3.0	3.0	0.0	
BID0165	3 Seminar	2.0	2.0	0.0	

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	
BIC8032	1-10 Regulatory and Verification Mechanism Analysis for Nature-Based Carbon Sinks	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	
BIC7002	27 Industrial Practice	3.0	3.0	0.0	
BIC7004	28 Translational Medicine — Novel Compounds and Chinese Herbal Medicines	2.0	2.0	0.0	
BIC7005	29 E Drug Development and Translational Medicine	2.0	2.0	0.0	
BIC7010	30 Neuroethology	3.0	3.0	0.0	
BIC8021	31 Experimental Physiology	2.0	2.0	0.0	

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
BID0166	32 Issues and Rationale of Biological Education	3.0	3.0	0.0	
BIC8023	33 Application of Optoelectronic Technology in Biomedical	2.0	2.0	0.0	
BIC8027	34 E Topics in Virology	2.0	2.0	0.0	
BIC8030	35 E Comprehensive Biotech Practice-From Micro Molecular Biology to Macro Physiology	3.0	3.0	0.0	
BIC8028	36 E Apply Sciences Lead to Biotechnology Industry	2.0	2.0	0.0	
BID0168	37 Special Topic on Endocrinology	3.0	3.0	0.0	
BID0169	38 Special Topic on Signal Transduction	3.0	3.0	0.0	
BIC0061	39 E Principles and Methods of Plant Taxonomy	3.0	3.0	0.0	
BIC7012	40 Principles of Phylogenetics	3.0	3.0	0.0	
BID0170	41 Special Topics on Scleractinian Coral Taxonomy (I)	3.0	3.0	0.0	
BID0171	42 Special Topics on Scleractinian Coral Taxonomy (II)	3.0	3.0	0.0	
BIC8031	43 Special Topics in Brain Neurobehavioral Studies	3.0	3.0	0.0	
BIC8024	44 E Seminar on Ecology & Evolution	2.0	2.0	0.0	This course can be retaken
BID0172	45 Special Topics on Coral Diversity and Communities in Marginal Reefs	3.0	3.0	0.0	

IV. Free Elective Credits: 0.0 credit is required