

Course Structure for Ph. D Program
Department of Geography
National Taiwan Normal University

Adaptive to Class of	Required Credit(s)	Elective Credit(s)	Free Elective Credit(s)	Minimum Total Credits for Graduation
112	General Program 8.0 GPE Program 8.0	General Program 16.0 GPE Program 16.0	General Program 0.0 GPE Program 0.0	General Program 24.0 GPE Program 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: 8.0 credits are required

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
GED0080	1 E Seminar on Geography	1.0	1.0	0.0	This course must be retaken with a passing score for 2 times
GED0081	2 E Field Work in Geography	1.0	1.0	0.0	This course must be retaken with a passing score for 2 times
GEC8079	3 E Seminar on Geographical Studies	2.0	2.0	0.0	This course must be retaken with a passing score for 2 times

II. Elective Courses: 0.0 credit is required

III. Courses Offered to Students in Different Divisions

A-1. Required Course for General Program, 0.0 credit is required

A-2. Elective Course for General Program, 16.0 credits are required

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
GEC0002	1 Landscape and Land Use Planning	2.0	2.0	0.0	
GEC0003	2 Theory and Practice in Geography Education	2.0	2.0	0.0	
GEC0009	3 Studied in Geography of Taiwan	2.0	2.0	0.0	
GEC0011	4 Studies in Settlement Geography	2.0	2.0	0.0	
GEC0013	5 Studies in Tourism and Recreation Geography	2.0	2.0	0.0	
GEC0015	6 Studies in Landscape	2.0	2.0	0.0	
GEC0017	7 Application of Computer Network in Geography	2.0	2.0	0.0	
GEC0018	8 Studies in Medical Geography	2.0	2.0	0.0	
GEC0022	9 Quantitative Technique in Geography Studies	3.0	3.0	0.0	
GEC0023	10 Digital Elevation Model Analysis	2.0	2.0	0.0	
GEC0034	11 Studies in Agricultural Geography	2.0	2.0	0.0	
GEC0035	12 Studies in Political Geography	2.0	2.0	0.0	
GEC0037	13 Environmental Pollution and Management	2.0	2.0	0.0	
GEC0040	14 Spatial Quantitative Analysis	2.0	2.0	0.0	
GEC0041	15 Studies in Taiwan Aboriginal Geography	2.0	2.0	0.0	
GEC0043	16 Studies in Human Geography of Taiwan	2.0	2.0	0.0	
GEC0044	17 Topics in Sedimentology	2.0	2.0	0.0	
GEC0049	18 Qualitative Methodologies and Thesis Writing	2.0	2.0	0.0	
GEC0054	19 E Urban Governance	2.0	2.0	0.0	
GEC0057	20 Space and Society	2.0	2.0	0.0	
GEC0058	21 Rural Geography and Rural Development	2.0	2.0	0.0	
GEC0059	22 E Studies in Feminist Geography	3.0	3.0	0.0	
GEC0062	23 The Theory of Space	2.0	2.0	0.0	
GEC0063	24 Studies in Religious Geography	2.0	2.0	0.0	
GEC0064	25 Studies in Regional Geography	2.0	2.0	0.0	
GEC0067	26 Environmental Monitoring and Assessment	2.0	2.0	0.0	
GEC0068	27 Multivariate Analysis	3.0	3.0	0.0	
GEC0069	28 E Spatial Techniques	3.0	3.0	0.0	
GEC0070	29 Spatial Database System	2.0	2.0	0.0	
GEC0071	30 Catchment Environments	3.0	3.0	0.0	
GEC0072	31 E Global Change and Coastal Environment	2.0	2.0	0.0	
GEC0076	32 Thesis Writing in Geography	3.0	3.0	0.0	
GEC7001	33 Digital Photogrammetry	3.0	3.0	0.0	
GEC7002	34 Socio-Economic Geographic Information System	2.0	2.0	0.0	
GEC7003	35 Actor Network Theory and Post-Structuralist Geography	2.0	2.0	0.0	
GEC8001	36 Geographies of Consumption	3.0	3.0	0.0	
GEC8002	37 E Studies in Climate Change	3.0	3.0	0.0	
GEC8004	38 Studies in Food Geography	2.0	2.0	0.0	
GEC8005	39 Topics on Hydrology	3.0	3.0	0.0	
GEC8006	40 E Ecosystem Management	3.0	3.0	0.0	
GEC8008	41 Topics on Hazards and Environmental Transformation	2.0	2.0	0.0	

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
GEC8009	42 Monsoon Climate	3.0	3.0	0.0	
GEC8010	43 Climate Change Impact Assessment	3.0	3.0	0.0	
GEC8012	44 Resources Analysis and Management	2.0	2.0	0.0	
GEC8013	45 Watershed Assessment and Modeling	3.0	3.0	0.0	
GEC8014	46 Risk Society and Sustainable Development	2.0	2.0	0.0	
GEC8015	47 E Gender and Space	2.0	2.0	0.0	
GEC8017	48 E Urban Political Economy and Spatial Development	3.0	3.0	0.0	
GEC8018	49 Studies in Space of High-Tech Taiwan	2.0	2.0	0.0	
GEC8019	50 E Studies in Geographic Information System	3.0	3.0	0.0	
GEC8020	51 Cyber City Modeling	2.0	2.0	0.0	
GEC8021	52 Geosimulation	3.0	3.0	0.0	
GEC8022	53 Studies in Environmental Administration	2.0	2.0	0.0	
GEC8023	54 Studies in Cultural Geography	2.0	2.0	0.0	
GEC8024	55 Landscape Ecology	2.0	2.0	0.0	
GEC8025	56 Studies in Industrial Ecology	2.0	2.0	0.0	
GEC8026	57 Mitigation of and Adaptation to Climate Change	3.0	3.0	0.0	
GEC8027	58 E Studies in Political Ecology	3.0	3.0	0.0	
GEC8028	59 Spatial Decision Support System	2.0	2.0	0.0	
GEC8029	60 Critical Geography and Physical Environment	2.0	2.0	0.0	
GEC8030	61 Studies in Economic Geography	3.0	3.0	0.0	
GEC8031	62 Topics on Climatology	2.0	2.0	0.0	
GEC8032	63 E Topics on Geography of Everyday Life	3.0	3.0	0.0	
GEC8033	64 Phylogeography	3.0	3.0	0.0	
GEC8034	65 E Science Writing in English	3.0	3.0	0.0	
GEC8035	66 Analysis of Geographic Information	2.0	2.0	0.0	
GEC8036	67 Studies in Ethnogeography	2.0	2.0	0.0	
GED0003	68 Methodology of Geography	2.0	2.0	0.0	
GED0004	69 Topics in Geomorphology	2.0	2.0	0.0	
GED0010	70 Topics in Soil Geography	2.0	2.0	0.0	
GED0011	71 Topics in Biogeography	2.0	2.0	0.0	
GED0014	72 Topics in Agricultural Geography	2.0	2.0	0.0	
GED0018	73 E Topics in Urban Geography	2.0	2.0	0.0	
GED0022	74 Topics in Regional Geography	2.0	2.0	0.0	
GED0023	75 Topics in Hometown Geography	2.0	2.0	0.0	
GED0025	76 Topics in Applied Geography	2.0	2.0	0.0	
GED0027	77 Topics in Environmental Conservation	2.0	2.0	0.0	
GED0030	78 Topics in Linguistic Geography	2.0	2.0	0.0	
GED0031	79 Topics in Hydrogeology	2.0	2.0	0.0	
GED0050	80 Topics in Tropical Environments	2.0	2.0	0.0	
GED0082	81 Human Ecology	3.0	3.0	0.0	
GEC8037	82 E Applications of Geospatial Technology	3.0	3.0	0.0	

B-1. Required Course for GPE Program, 0.0 credit is required

B-2. Elective Course for GPE Program, 16.0 credits are required

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
GEC0054	1 E Urban Governance	2.0	2.0	0.0	
GEC0059	2 E Studies in Feminist Geography	3.0	3.0	0.0	
GEC0069	3 E Spatial Techniques	3.0	3.0	0.0	
GEC0072	4 E Global Change and Coastal Environment	2.0	2.0	0.0	
GEC8002	5 E Studies in Climate Change	3.0	3.0	0.0	
GEC8006	6 E Ecosystem Management	3.0	3.0	0.0	
GEC8015	7 E Gender and Space	2.0	2.0	0.0	
GEC8017	8 E Urban Political Economy and Spatial Development	3.0	3.0	0.0	
GEC8019	9 E Studies in Geographic Information System	3.0	3.0	0.0	
GEC8027	10 E Studies in Political Ecology	3.0	3.0	0.0	
GEC8032	11 E Topics on Geography of Everyday Life	3.0	3.0	0.0	
GEC8034	12 E Science Writing in English	3.0	3.0	0.0	
GED0018	13 E Topics in Urban Geography	2.0	2.0	0.0	
GEC8037	14 E Applications of Geospatial Technology	3.0	3.0	0.0	

IV. Free Elective Credits

A Free Elective Credit for General Program, 0.0 credit is required

B Free Elective Credit for GPE Program, 0.0 credit is required