

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
114	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	
GEC0022	8 Quantitative Technique in Geography Studies	3.0	3.0	0.0	
GEC0023	9 Digital Elevation Model Analysis	2.0	2.0	0.0	
GEC0034	10 Studies in Agricultural Geography	2.0	2.0	0.0	
GEC0035	11 Studies in Political Geography	2.0	2.0	0.0	
GEC0037	12 Environmental Pollution and Management	2.0	2.0	0.0	
GEC0041	13 Studies in Taiwan Aboriginal Geography	2.0	2.0	0.0	
GEC0043	14 Studies in Human Geography of Taiwan	2.0	2.0	0.0	
GEC0044	15 Topics in Sedimentology	2.0	2.0	0.0	
GEC0049	16 Qualitative Methodologies and Thesis Writing	2.0	2.0	0.0	
GEC0054	17 E Urban Governance	2.0	2.0	0.0	
GEC0057	18 Space and Society	2.0	2.0	0.0	
GEC0058	19 Rural Geography and Rural Development	2.0	2.0	0.0	
GEC0059	20 E Studies in Feminist Geography	3.0	3.0	0.0	
GEC0062	21 The Theory of Space	2.0	2.0	0.0	
GEC0064	22 Studies in Regional Geography	2.0	2.0	0.0	
GEC0067	23 Environmental Monitoring and Assessment	2.0	2.0	0.0	
GEC0068	24 Multivariate Analysis	3.0	3.0	0.0	
GEC0069	25 E Spatial Techniques	3.0	3.0	0.0	
GEC0070	26 Spatial Database System	2.0	2.0	0.0	
GEC0071	27 Catchment Environments	3.0	3.0	0.0	
GEC0072	28 E Global Change and Coastal Environment	2.0	2.0	0.0	
GEC0076	29 Thesis Writing in Geography	3.0	3.0	0.0	
GEC7001	30 Digital Photogrammetry	3.0	3.0	0.0	
GEC7002	31 Socio-Economic Geographic Information System	2.0	2.0	0.0	
GEC7003	32 Actor Network Theory and Post-Structuralist Geography	2.0	2.0	0.0	
GEC8001	33 Geographies of Consumption	3.0	3.0	0.0	
GEC8002	34 E Studies in Climate Change	3.0	3.0	0.0	
GEC8004	35 Studies in Food Geography	2.0	2.0	0.0	
GEC8005	36 Topics on Hydrology	3.0	3.0	0.0	
GEC8006	37 E Ecosystem Management	3.0	3.0	0.0	
GEC8008	38 Topics on Hazards and Environmental Transformation	2.0	2.0	0.0	
GEC8009	39 Monsoon Climate	3.0	3.0	0.0	
GEC8010	40 Climate Change Impact Assessment	3.0	3.0	0.0	
GEC8012	41 Resources Analysis and Management	2.0	2.0	0.0	

Course Code	Course Name	Credit(s)	Credit Unit		Note
			Lecture Hour	Lab/Practice Hour	
GEC8013	42 Watershed Assessment and Modeling	3.0	3.0	0.0	
GEC8014	43 Risk Society and Sustainable Development	2.0	2.0	0.0	
GEC8015	44 E Gender and Space	2.0	2.0	0.0	
GEC8017	45 E Urban Political Economy and Spatial Development	3.0	3.0	0.0	
GEC8018	46 Studies in Space of High-Tech Taiwan	2.0	2.0	0.0	
GEC8019	47 E Studies in Geographic Information System	3.0	3.0	0.0	
GEC8020	48 Cyber City Modeling	2.0	2.0	0.0	
GEC8021	49 Geosimulation	3.0	3.0	0.0	
GEC8022	50 Studies in Environmental Administration	2.0	2.0	0.0	
GEC8023	51 Studies in Cultural Geography	2.0	2.0	0.0	
GEC8024	52 Landscape Ecology	2.0	2.0	0.0	
GEC8025	53 Studies in Industrial Ecology	2.0	2.0	0.0	
GEC8026	54 Mitigation of and Adaptation to Climate Change	3.0	3.0	0.0	
GEC8027	55 E Studies in Political Ecology	3.0	3.0	0.0	
GEC8028	56 Spatial Decision Support System	2.0	2.0	0.0	
GEC8029	57 Critical Geography and Physical Environment	2.0	2.0	0.0	
GEC8030	58 Studies in Economic Geography	3.0	3.0	0.0	
GEC8031	59 Topics on Climatology	2.0	2.0	0.0	
GEC8032	60 E Topics on Geography of Everyday Life	3.0	3.0	0.0	
GEC8033	61 Phylogeography	3.0	3.0	0.0	
GEC8034	62 E Science Writing in English	3.0	3.0	0.0	
GEC8035	63 Analysis of Geographic Information	2.0	2.0	0.0	
GEC8036	64 Studies in Ethnogeography	2.0	2.0	0.0	
GED0003	65 Methodology of Geography	2.0	2.0	0.0	
GED0004	66 Topics in Geomorphology	2.0	2.0	0.0	
GED0010	67 Topics in Soil Geography	2.0	2.0	0.0	
GED0011	68 Topics in Biogeography	2.0	2.0	0.0	
GED0014	69 Topics in Agricultural Geography	2.0	2.0	0.0	
GED0022	70 Topics in Regional Geography	2.0	2.0	0.0	
GED0023	71 Topics in Hometown Geography	2.0	2.0	0.0	
GED0025	72 Topics in Applied Geography	2.0	2.0	0.0	
GED0027	73 Topics in Environmental Conservation	2.0	2.0	0.0	
GED0030	74 Topics in Linguistic Geography	2.0	2.0	0.0	
GED0031	75 Topics in Hydrogeology	2.0	2.0	0.0	
GED0082	76 Human Ecology	3.0	3.0	0.0	
GEC8037	77 E Applications of Geospatial Technology	3.0	3.0	0.0	
GEC8038	78 E Studies in Urban Geography	3.0	3.0	0.0	
GEC8039	79 Studies in Mobility and Space	3.0	3.0	0.0	
GEC8040	80 Studies in Geography of the Senses	3.0	3.0	0.0	
GEC8041	81 Cultural Geography of Tea in Taiwan	3.0	3.0	0.0	
GEC8042	82 Environment and Society	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	
GEC8037	13 E Applications of Geospatial Technology	3.0	3.0	0.0	
GEC8038	14 E Studies in Urban Geography	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