

Course Structure for M.A. 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
115	General Program 8.0 GPE Program 8.0	General Program 20.0 GPE Program 20.0	General Program 0.0 GPE Program 0.0	General Program 28.0 GPE Program 28.0

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	
GEM0032	1 E Literature Review in Geography	2.0	2.0	0.0	
GEM0121	2 E Special Topics on Research Methods in Geography	2.0	2.0	0.0	
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, 20.0 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	
GEC9004	8 Medical Geography	3.0	3.0	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	3.0	3.0	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	
GEC0041	14 Studies in Taiwan Aboriginal Geography	2.0	2.0	0.0	
GEC0043	15 Studies in Human Geography of Taiwan	2.0	2.0	0.0	
GEC0044	16 Topics in Sedimentology	2.0	2.0	0.0	
GEC0049	17 Qualitative Methodologies and Thesis Writing	2.0	2.0	0.0	
GEC0054	18 E Urban Governance	2.0	2.0	0.0	
GEC0057	19 Space and Society	2.0	2.0	0.0	
GEC0058	20 Rural Geography and Rural Development	2.0	2.0	0.0	
GEC0059	21 E Studies in Feminist Geography	3.0	3.0	0.0	
GEC0062	22 The Theory of Space	2.0	2.0	0.0	
GEC0064	23 Studies in Regional Geography	2.0	2.0	0.0	
GEC0067	24 Environmental Monitoring and Assessment	2.0	2.0	0.0	
GEC0068	25 E Multivariate Analysis	3.0	3.0	0.0	
GEC0069	26 E Spatial Techniques	3.0	3.0	0.0	
GEC0070	27 Spatial Database System	2.0	2.0	0.0	
GEC0071	28 Catchment Environments	3.0	3.0	0.0	
GEC0072	29 E Global Change and Coastal Environment	2.0	2.0	0.0	
GEC0076	30 Thesis Writing in Geography	3.0	3.0	0.0	
GEC7001	31 Digital Photogrammetry	3.0	3.0	0.0	
GEC7002	32 Socio-Economic Geographic Information System	2.0	2.0	0.0	
GEC7003	33 Actor Network Theory and Post-Structuralist Geography	2.0	2.0	0.0	
GEC8001	34 Geographies of Consumption	3.0	3.0	0.0	
GEC8002	35 E Studies in Climate Change	3.0	3.0	0.0	
GEC8004	36 Studies in Food Geography	2.0	2.0	0.0	
GEC8005	37 Topics on Hydrology	3.0	3.0	0.0	
GEC8006	38 E Ecosystem Management	3.0	3.0	0.0	
GEC8008	39 Topics on Hazards and Environmental Transformation	2.0	2.0	0.0	
GEC8009	40 Monsoon Climate	3.0	3.0	0.0	
GEC8010	41 Climate Change Impact Assessment	3.0	3.0	0.0	
GEC8012	42 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	43 Watershed Assessment and Modeling	3.0	3.0	0.0	
GEC8014	44 Risk Society and Sustainable Development	2.0	2.0	0.0	
GEC8015	45 E Gender and Space	2.0	2.0	0.0	
GEC8017	46 E Urban Political Economy and Spatial Development	3.0	3.0	0.0	
GEC8018	47 Studies in Space of High-Tech Taiwan	2.0	2.0	0.0	
GEC8019	48 E Studies in Geographic Information System	3.0	3.0	0.0	
GEC8020	49 Cyber City Modeling	2.0	2.0	0.0	
GEC8021	50 Geosimulation	3.0	3.0	0.0	
GEC8022	51 Studies in Environmental Administration	2.0	2.0	0.0	
GEC8023	52 Studies in Cultural Geography	2.0	2.0	0.0	
GEC8024	53 Landscape Ecology	2.0	2.0	0.0	
GEC8025	54 Studies in Industrial Ecology	2.0	2.0	0.0	
GEC8026	55 Mitigation of and Adaptation to Climate Change	3.0	3.0	0.0	
GEC8027	56 E Studies in Political Ecology	3.0	3.0	0.0	
GEC8028	57 Spatial Decision Support System	2.0	2.0	0.0	
GEC8029	58 Critical Geography and Physical Environment	2.0	2.0	0.0	
GEC8030	59 Studies in Economic Geography	3.0	3.0	0.0	
GEC8031	60 Topics on Climatology	2.0	2.0	0.0	
GEC8032	61 E Topics on Geography of Everyday Life	3.0	3.0	0.0	
GEC8033	62 Phylogeography	3.0	3.0	0.0	
GEC8034	63 E Science Writing in English	3.0	3.0	0.0	
GEC8035	64 Analysis of Geographic Information	2.0	2.0	0.0	
GEC8036	65 Studies in Ethnogeography	2.0	2.0	0.0	
GEM0003	66 Studies in Geomorphology	2.0	2.0	0.0	
GEM0015	67 Studies in Industrial Geography	2.0	2.0	0.0	
GEM0017	68 Studies in Marketing Geography	2.0	2.0	0.0	
GEM0036	69 Studies in Cartography	2.0	2.0	0.0	
GEM0128	70 E Studies in Remote Sensing	3.0	3.0	0.0	
GEM0083	71 E Studies in Biogeography and Natural Conservation	3.0	3.0	0.0	
GEM0088	72 Urban Environments	2.0	2.0	0.0	
GEM0092	73 Studies in Taiwan Home Geography	2.0	2.0	0.0	
GEC8042	74 Environment and Society	3.0	3.0	0.0	
GEM0124	75 Land Use and Development	2.0	2.0	0.0	
GEC8037	76 E Applications of Geospatial Technology	3.0	3.0	0.0	
GEC9001	77 Web Crawler Practice	3.0	3.0	0.0	
GEC9002	78 E Social Network Analysis	3.0	3.0	0.0	
GEC8038	79 E Studies in Urban Geography	3.0	3.0	0.0	
GEC8039	80 Studies in Mobility and Space	3.0	3.0	0.0	
GEC9003	81 Environmental DNA	3.0	3.0	0.0	
GEC8040	82 Studies in Geography of the Senses	3.0	3.0	0.0	
GEC9005	83 Applied Machine Learning	3.0	3.0	0.0	
GEC8041	84 Cultural Geography of Tea in Taiwan	3.0	3.0	0.0	
GEM0127	85 Geospatial Artificial Intelligence	3.0	3.0	0.0	
GEC9006	86 Python Programming	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, 20.0 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	
GEM0128	13 E Studies in Remote Sensing	3.0	3.0	0.0	
GEM0083	14 E Studies in Biogeography and Natural Conservation	3.0	3.0	0.0	
GEC8037	15 E Applications of Geospatial Technology	3.0	3.0	0.0	
GEC8038	16 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