Description of Courses offered by the Department of Applied of Geography/ Bachelor Degree in Applied of Geography

Course No.	Basics of RS	Pre-requisite	Learning Type
0802120		2.30-12	Face-to-Face
The foundations of remote sensing, electromagnetic energy, classification of satellites, properties of space visuals, properties of remote sensing data, spatial, temporal and spectral accuracy, the relationship between remote sensing and GIS, types of image clarity, factors affecting electromagnetic radiation and improvement processes, and identification of the most important properties Satellites, the basics of satellite image acquisition and the most important radiometric correction operations.			

Course No.	Aerial Photos Interpretation and Analysis 11-10	Pre-requisite	Learning Type
0802452		0802120	Face-to-Face
Measurement and correction of aerial image coordinates, correction of distortions resulting from photographic film, processing of lens aberrations for camera calibration, methods of projection of aerial images, solving and finding absolute and relative coefficients of aerial images, methods of intersection and drop, correction for aerial images, with computer applications on the processing of a set of aerial images using The aerial triangulation method, control and correction points, and practical applications covering the topics covered in photogrammetry and aerial photography			

Course No.	Principle of Geomorphology	Pre-requisite	Learning Type
1309101			Blended
Study the emergence and development of land forms and geomorphological processes prevailing in different environments, in particular weathering and landslides, erosion, transport and sedimentation due to rivers, stagnation, wind, waves and ocean currents, and the resulting local and regional forms under the influence of climate, vegetation, rock quality, geological construction and other environmental factors			

Course No.	Principle of Climatology	Pre-requisite	Learning Type
1309102			Online
Studying the different elements of climate such as rain, temperature, humidity, atmospheric pressure, clouds, etc., and their differences in the atmosphere, and how they are measured and represented on weather maps, and the study of climatic regions and their types. The course includes scientific field visits			

Course No.	Introduction to Geography	Pre-requisite	Learning Type
1309111			Online
The study of the characteristics of the components of natural and human ecosystems, and their interrelationships with the aim of knowing the causes of regional differences in the world. Population on the one hand and their geographical environment on the other			

Course No.	Geography of Population and Demography Analysis	Pre-requisite	Learning Type
1309114			Face-to-Face
The course deals with the principles of demographics in terms of demographic, economic and social characteristics of the population, its age and gender structure and its geographical distribution, with attention to population problems and issues, linking them to development and analyzing the various population theories and policies, the issue of population migrations, their types, motives and effects, and the use of statistical analysis to understand the relationships between population issues and development processes with Application on Mafraq Governorate. a model			

Course No.	Principle of Cartography	Pre-requisite	Learning Type
1309142			Face-to-Face
The course is concerned with studying the design and implementation of maps, including the elements of basic maps, studying the types of maps and their descriptive and quantitative methods of representation, and methods of representing terrain on maps, and focusing on the representation, classification and presentation			

of various thematic maps using automated display methods. Teaching maps as models using geographic information

Course No.	Principle of GIS	Pre-requisite	Learning Type
1309143		1309142	Face-to-Face
Study the basic principles of geographic information systems, the nature and privacy of geographic data and information, ways to represent the phenomena of the Earth's surface and accuracy of representation, the concept of GIS and its development, the relationship between GIS and automated (digital) cartography, components of GIS, components of GIS programs, data Descriptive, spatial and database management methods and map output			

Course No.	Studies of population migration and applications	Pre-requisite	Learning Type
1309212		1309114	Face-to-Face
The course studies the concepts of population migration, its patterns, classifications, sources of information, and theories of spatial behavior associated with it. The course is concerned with the processes of making the decision to move and choosing the place of destination. The course also deals with the factors affecting migration and its demographic, social, economic and political effects on the societies sending and receiving migrants. The course is concerned with the relationship of migration and asylum to planning and development, giving various models of migration, with a focus on the Kingdom of Jordan as a model and the Arab and Islamic worlds			

Course No.	Applied Quantitative Geography	Pre-requisite	Learning Type
1309240		0901132	Face-to-Face
The course deals with the different principles and methods of quantitative analysis and how to use them to study geographical relations. The course provides an explanation of statistical concepts, how to collect and prepare data for quantitative analysis, discussing quantitative description by using measures of central tendency, measures of dispersion, direction and form of concentration of geographical data. The course also deals with the study of possibilities and their geographical			

applications. . It is concerned with the study of samples and how to analyze them, hypothesis testing, chi-square test and analysis of variance, with the study of correlation and regression of geographical phenomena and the study of spatial statistical relationships such as Pearson and Spearman coefficients

Course No.	Advanced GIS	Pre-requisite	Learning Type
1309244		1309143	Face-to-Face
The course deals with the concept of spatial analysis, geographical data and measurement, spatial statistics techniques, methods of data analysis in GIS (sanctuary - dissolution - merge - union, spatial relationships and types of topological congruence, surface analysis and regression models, exploratory analysis and deductive methods, spatial correlation, examination of data accuracy			

Course No.	Water Resources and Management	Pre-requisite	Learning Type
1309303			Blended
The course includes the water cycle in nature and its basic elements, especially rain and water infiltration in soil, groundwater, rivers, lakes, seas and oceans, water quantities in terms of abundance, scarcity and other characteristics, their spatial and temporal differences, their exploitation, development and preservation, and the existing relationships between them and humans, with field visits to water basins and riverine in Jordan			

Course No.	Regional and Urban Planning	Pre-requisite	Learning Type
1309310			Blended
The concept of planning and its types, problems of defining the planning unit (regions), the historical and contemporary framework of planning, the philosophy, foundations and theories of regional planning with a focus on regional and urban planning processes and resource planning, analysis of planning problems, issues and techniques in planning regions, setting goals and constraints (political, economic, social and environmental) , General models of agricultural, industrial, urban and service planning, with a focus on models and applications on Jordan			

Course No.	Applied Geographic Transportation	Pre-requisite	Learning Type
1309320		1309240	Face-to-Face
Studying applied and human geographical factors affecting the development of transportation and transportation networks, studying the history of transportation geography and the prospects for its future development, and focusing on the relationship between urbanization and transportation, as well as steps for evaluating transportation networks, their structure and geographical distribution in all their forms, and training students to use statistical analysis and network analysis (Network). Analyst) using geographic information systems to study and plan the structure and installation of road and transportation networks, accessibility, and planning, in addition to the integration of GPS technology and GIS technology in the organization and management of traffic and the planning of main road networks, railways and various transport lines			

Course No.	Applied Economic Geography	Pre-requisite	Learning Type
1309321			Blended
The course examines ways for human groups to invest in the available natural resources and develop these resources, study the obstacles to economic production in agriculture, mineral industry, forests and pastures, and their relationship to the natural environment, and study the production, distribution and consumption of major commodities. The study of the economic geographical location and its relationship to production inputs is accompanied by an applied field study on some economic activities practiced by the population using quantitative methods and modern geographical techniques			

Course No.	GIS and RS Applications in Geography	Pre-requisite	Learning Type
1309322		1309244	Face-to-Face
The course focuses on clarifying the areas of application of GIS and remote sensing theories and techniques in geography. It also reviews the foundations and tools theoretically, and then shows in practice how to employ them through practical			

examples, including: extracting and derivating natural and human phenomena such as land cover, vegetation density, soil types, minerals, urban, economic, social and military applications, and detecting changes during time periods in these areas of space visuals. Determining the most appropriate sites for some phenomena, with examples, practical exercises, and a project to link theory to practice, and to produce work according to the requirements of the geographical scientific method. And a final project that demonstrates the student's ability to master the application of appropriate technology to study a specific geographical phenomenon

Course No.	Survey Natural Resources and Management	Pre-requisite	Learning Type
1309404			Face-to-Face
This course deals with the importance of spatial resources and their definition, and the methods and methods used in collecting data related to natural, human and economic resources, and building an input–output model. This course trains students to inventory resources in all their forms in order to plan for the balanced and sustainable development of those resources			

Course No.	Geographic Methodology	Pre-requisite	Learning Type
1309440		1309240	Face-to-Face
The course aims to introduce students and train them on the principles of writing scientific research, reports, and theses in different geographic curricula, and train them on all steps of geographical research, starting with choosing the topic, office and field work, models and hypotheses, and examining them using several methods to measure them, analyze information, extract results, and assign students to conduct discussions on the elements of scientific research			

Course No.	Field Training	Pre-requisite	Learning Type
1309454		Department approval	Face-to-Face

The course includes an in-depth field study of a distinct topic chosen by the department with the aim of deepening the student's understanding of modern and contemporary geographical phenomena, and deepening his ability to field training in data collection, storage, analysis and presentation, and the creation of the necessary maps and forms, using the set of analytical tools and techniques he learned in GIS and remote sensing

Course No.	Principles of Environmental Management	Pre-requisite	Learning Type
0802215			Blended

Basic concepts of environmental management and protection, management of natural resource exploitation and environmental protection, monitoring and follow-up of environmental conditions (roads, equipment and creating environmental maps), ways and means of preserving and protecting the environment, environmental planning, legislation and laws that protect and preserve the environment, environment and local and international policy

Course No.	Applied Geomorphology	Pre-requisite	Learning Type
0802330		1309101	Face-to-Face

Classifications of minerals and rocks, the study of structural engineering geology by using different geological measurements of the rocky layers visible above the surface of the earth and the depth of the rocky layers below the surface of the earth, the preparation of sections of geological and topographic maps, the study of physical and chemical weathering and the genesis of the Earth's surface forms and wadi systems, the processes of rock encroachment and the morphometrics of water basins, and the study of The geological and engineering structure and its representation by drawing and mathematical methods, the use of the geological map and how to interpret it, the interpretation of aerial photographs and the making of geological maps through aerial photographs

Course No.	Land Use Planning and Management	Pre-requisite	Learning Type
0802381			Blended
The course deals with the general concepts of planning and land use, the main foundations in the management of land uses, the methods used in classifying and determining land uses, the importance of land management and planning, and methods of comparison in land use operations			

Course No.	Political Geography and Applied Geopolitics	Pre-requisite	Learning Type
1309113			Blended
The course deals with the origins of political geography and geopolitics, the concept of political geography, and study methods in political geography. It also studies geopolitics, ancient and modern, ancient and modern concept and thought, continental forces in geopolitics, the relationship of geopolitics to political geography, the structure of the state as a geopolitical unit (elements of composition and natural and human components), the life of states in terms of growth in place and the development of states, the modern state, population in geography The political, civilized and demographic, borders in political geography from several geographical and political aspects, then the course deals with an applied study of some of the political problems recently based on border planning			

Course No.	Applied Geography of Tourism	Pre-requisite	Learning Type
1309124			Blended
This course deals with the identification of tourism geography as a modern branch of human geography that is concerned with studying the spatial distribution of tourism phenomena, and the extent to which they are affected by natural and human factors. On the effects of economic, cultural, environmental and social tourism on societies, it will also focus on studying Jordan's various tourism potentials, and an important part will be devoted to introducing tourism sites in Jordan through visits, field trips and research			

Course No.	Applied Development Geography	Pre-requisite	Learning Type
1309225			Blended

This course deals with the concept of development, its principles, and its economic, social and environmental aspects. It also deals with the relationship between man and land and the resulting economic and social activities. It studies the basic pillars of development geography, which are capital, natural and human resources, technology, and ways of their integration in achieving sustainable development. The course also deals with the applied research aspect in the optimal distribution of resources and activities in achieving spatial justice and facing the problems of underdevelopment, poverty, unemployment and other problems facing humanity, especially in the developing world

Course No.	Applied Climatology	Pre-requisite	Learning Type
1309305		1309102	Blended

This course deals with the study of climatic elements in full and climatic classifications, and training students on how to measure and conduct analyzes and the extent of benefiting from the prevailing climate in agricultural operations, industry, construction, transportation, health and food, and determining human activity in it positively and negatively, as well as analyzing the surface and underground water cycle and water balance and identifying needs for development planning. Spatial service in the service of society, and a statement of the impact of climate on man and place and his engineering and economic activity

Course No.	Location Theories	Pre-requisite	Learning Type
1309315			Blended

Studying the basic concepts of site theories and analyzing the foundations on which these theories are based, and applying them in geographical studies. It also includes studying the theories used in determining agricultural, industrial and commercial sites, in addition to applying site theories to various activities in Jordan

Course No.	Planning of public utilities and applications	Pre-requisite	Learning Type
1309316			Blended
The course deals with the concept of public utility planning, its importance, fields, characteristics, functions and types, and the problems associated with it. It also deals with the criteria and elements that fall within the framework of this type of planning, then the planning stages such as the preliminary stage, the analysis stage and the preparation of the facilities plan. The course also focuses on field and applied studies, by preparing an applied model for a development plan in the local environment and the distribution of public utilities in it			

Course No.	Hydrological analysis and Morphometric	Pre-requisite	Learning Type
1309406		1309303	Face-to-Face
The course deals in detail with the methods of studying the introductions and basics of hydrological and morphometric analysis with its various elements, and includes within the framework of this analysis the GIS technology that contributes to decision-making. DEM digital elevation model and linking hydrological analysis to spatial analysis and planning			

Course No.	Geography of Semi- Arid land and its Management	Pre-requisite	Learning Type
1309407			Blended
The study of dry and semi-arid lands in terms of their formation and affecting factors, their natural and organic components, their various characteristics, the basis for their classification and geographical distribution, the causes of soil degradation and their impact on human economic activity, land use, evaluation, management, and conservation methods from pollution, erosion, salinity, fertility, acidity, etc., and identification of dry lands and their characteristics and how Its management, future, evolution and role in development and application through geographic information systems and field studies			

Course No.	Natural hazards and Disasters	Pre-requisite	Learning Type
1309408			Blended
The course deals with the general concept of natural disasters, their types and causes, the main concepts in the management of natural disasters, and the foundations used in disaster management. It also includes the most important natural hazards to which the world is exposed, with a focus on their geographical distribution, the causes of their emergence, their environmental and economic effects, and the human and material losses that accompany their occurrence. The methods and means to reduce their effects, and the most important natural hazards that the article deals with are earthquakes, volcanoes, hurricanes, water floods, El Nino and the El Nina phenomenon			

Course No.	Applied Urban Planning	Pre-requisite	Learning Type
1309423			Blended
The course includes a study of the historical development of cities and its importance in solving the problems that cities suffer with, with a focus on studying the urban system of cities, their sizes, arrangement and distribution, and analyzing economic theories that explain the process of city growth. Focusing on the central place theory and land use theory, and studying some models related to the planning of Jordanian cities			