1.	School	**Arts**
2.	Department	**Geography**
3.	Program title (Arabic)	**الدكتوراه في الجغرافيا**
4.	Program title (English)	**PhD in Geography**

	Specialization #	Degree	Dep #	Faculty #	Year	Track
Plan Number	-	3	04	23	2023	Dissertation

First: General Rules & Conditions:

1. This plan conforms to valid regulations of the programs of graduate studies.
2. Specialties of Admission:

- The First Priority: M.A in Geography and MA or Msc in GIS, but with B.A in Geography.
- The second Priority: MA in Population Studies, M.A. in Urban and Regional Planning, M.A. in Geology, M.A. in Agricultural Sciences , M.A. in Tourism and Archaeology, M.A. in Civil Engineering, M.A.in Geographic Information Systems.

Second: Special Conditions:

None.

Third: Study Plan: Studying (54) Credit Hours as following:

1. **Obligatory Courses (21) credit hours:**

Course No.	Course Title	Credit Hrs	Theory	Practical	Pre/Co-requisite
2304901	Spatial Analysis / GIS	3	3	-	-
2304902	Advanced Studies in Human Geography	3	3	-	-
2304903	Climate Change	3	3	-	-
2304904	Urban Economics	3	3	-	-
2304906	Advanced Remote Sensing	3	3	-	-
2304933	Geomorphology of Drainage Basins	3	3	-	-
2304951	Philosophy of Geography	3	3	-	-

2. **Elective Courses (15) Credit Hours: from the following:**

Course No.	Course Title	Credit Hrs	Theory	Practical	Pre/Co-requisite
2304905	Sustainable Development of Natural Resources	3	3	-	-
2304907	Economic and Political Geography of the Middle East	3	3	-	-
2304908	Drylands Management	3	3	-	-

2304909	Modern Trends in Tourism	3	3	-	-
2304910	Modern Population Issues	3	3	-	-
2304912	Environmental Impact Assessment	3	3	-	-
2304960	Integrated Rural Development	3	3	-	-

3. Pass the qualifying exam (2304998).

4. Dissertation (18) Credit hours (2304999).

Course Description

2304901 Spatial Analysis/ GIS **3[1](3,0,0) Credit hours**

This course explores the theory and applications of spatial analysis and modeling. Applications of GIS spatial analysis and 3D analysis in geographical topics and research, this includes spatial modeling, building geodatabases by integrating data from separate sources, database analysis and visualization, and electronic map production.

2304902 Advanced Studies in Human Geography **3 (3,0,0) Credit hours**

The focus in this course is on the recent trends in human geography and the reactions to them, which are presently known as New Human Geography. The course discusses the Berkeley school of thought regarding the additions provided by Karl Sauer, his disciples as well as his opponents. Both the humanist and material dimensions of studying landscapes will be highlighted. The course will negotiate the symbolic and semiotic orders of place and e its inspirations from arising concepts of space in urban as well as in rural areas.

2304903 Climate Change **3 (3,0,0) Credit hours**

The course is devoted to study climate of the past, present, and future. H includes the following fundamental, of climate change: the earth climate history, air pollution, evidences of climate change, the consequences of climate charge, the methods used to mitigate the global climate change, and the universal efforts to achieve that.

2304904 Urban Economics **3 (3,0,0) Credit hours**

The course explores a range of topics related to current research in urban economies: modelling and estimation of agglomeration economies; the sizes and functions of cities; the cities internal structure with emphasis on land use regulations and transportation as well as other services provided by cities; Tourism in Cities; Commercial function and the retail geography of cities; Marketing the cities in a globalized world. Both theoretical and empirical will be covered with special focus on Amman city.

2304905 Sustainable Development of Natural Resources **3 (3,0,0) Credit hours**

This course deals with examination of the context, concepts, principles, and applications of sustainable development and natural resources at the national and regional levels. Study the main components of natural resources such soil, vegetation, and energy sources, and impact of human activities on its sustainability. Sustainable development is considered from three perspectives - environment, economy, and people's well-being. Particular attention is focused upon the implications of sustainable development for natural resources and environmental management.

2304906 Advanced Remote Sensing **3 (3,0,0) Credit hours**

The course reviews the basic concepts of remote sensing, types of satellite remote sensing, steps and techniques of digital image processing. Land use / cover classification and mapping,

land use/ cover monitoring and change detection, spectral analysis of soil and rock types, urban analysis and planning.

2304907 Economic and Political Geography of the Middle East 3 (3,0,0) Credit hours
The course will provide students with a comprehensive overview of the political economy of the MENA region. Economic structures and processes of development, institutions, and policy challenges in the individual MENA countries and the region, as a whole, will be examined. The course starts with a broad overview of the economic history of the MENA region in the 20th century and continues to address selected aspects of economic policies and processes. Issues as demographic growth, oil, international trade, globalization, liberalization and structural adjustment measures, business networks, and corruption will be analyzed in detail in order to address the contemporary nature of economic and political challenges facing the states in the MENA region.

2304908 Drylands Management 3 (3,0,0) Credit hours
This course aims to manage natural and human resource in drylands to address emerging social and natural challenges in such areas such as: desertification, global climate change, water scarcity, spiralling human and livestock numbers and poverty. This course will provide graduates with sound knowledge and skills for sustainable utilisation of drylands resources, the focus on dryland ecosystems. Students will also be trained in related aspects such as: dryland ecology; land uses ecology; water ecology; drylands livestock nutrition; human ecology. Also study specific areas related to vegetation management, water management, animal behaviour, rehabilitation and restoration of drylands and recreational resource management.

2304909 Modern Trends in Tourism 3 (3,0,0) Credit hours
The course is designed to follow the transitions in the field of human geography. The main concern will be the transitions in the "institutional" realm, as well as its interaction with other social sciences. Tourism is to be understood as a spatio-temporal (holistic) system with subsystems contained by "spaces of activity" defined by tourism types. Another subsystem is the networking system among international or regional tourism organization enterprises. The demand and supply factors in the regions of tourism, the tourism growth cycles, as well as transitions in tourism are defined by this spatio-temporal system.

2304910 Modern Population Issues 3 (3,0,0) Credit hours
The aim of this course is to enable student to develop population analysis skills and discuss rapid population growth issues since 1950 such as: changing population growth rates, imbalance population distribution. The course will also focus on issues like poverty, unemployment, urbanization, the infrastructure and basic service and refugees.

2304912 Environmental Impact Assessment 3 (3,0,0) Credit hours
The course provides the comprehensive knowledge on principle of environmental impact assessment (EIA), definition, history and law related to EIA. Understand principles, process,

and necessary techniques and tools for environmental impact assessment, mitigation and monitoring. Analysis impact on resources and environment as well as evaluate impact from development projects. Provide students with a clear methodology to conduct a successful EIA, enable students to evaluate the quality and completeness of existing EIAs and to prepare a full EIA report.

2304933 Geomorphology of Drainage Basins 3 (3,0,0) Credit hours

This course Illustrates the concept of drainage basin as a fundamental geomorphic unit, the processes of fluvial system, global sediment yield and denudation rates, drainage patterns, drainage basin morphometry, morphometric properties and parameters, statistical analysis of morphometric properties, drainage morphometry and floods and water resources.

2304951 Philosophy of Geography 3 (3,0,0) Credit hours

This course is concerned with the hegemony of Eurocentric thought on the development of the discipline of geography and the possibilities to reframe and reconstruct the discipline in accordance with cultural diversity. The course discusses the mapping of place, landscape and space as text that can be mined, read and analyzed. The course will also trace the development of the philosophy of geography both in terms of modernity and post-modernity and the spaces produced beyond them in the Eurocentric realm. The thereof arising issues of homogeneity in the reproduced places will be weighed against the production of "new traditions" and "new urbanization".

2304960 Integrated Rural Development 3 (3,0,0) Credit hours

This course clarifies the concepts and inputs of integrated rural development and determines the role of integrated approach in rural development taking into consideration social, economic and cultural aspects that influence the life of rural areas' people. It analyses the polices and planning of rural development of developing countries. It also highlights the pillars of the rural development strategy providing some models of integrated rural development in a number of developing countries.