

## Geography Department

# Course Description

### Geg 100 Water resources

(3 Cr.Hr.)

This course aims to study the water resources, the elements of the general water cycle and its relation to the climatic factors it also discuss the runoff and the stream flow, ground water, springs and lakes. It also discuss the evaluation of surface water resources and the ground water in the Arab world and Jordan.

### PHYS 100: Fundamentals of Astronomy

(3 Cr.Hr.)

Ancient Astronomy, Modern Astronomy, Astronomical Equipments, The Earth Motions, Zcomposition and Atmosphere, Locating places on Earth, The Coordinates, View of the Sky from different Places, The movements of Sun, The Movements of the Moon, Lunar and Solar Eclipse, Tides, The Solar Universe: Creation, Development, and Fate.

### Econ 101: Principles of Macroeconomics

(3 Cr.Hr.)

An introduction to the general principles of national income, employment and prices in closed economies. The role of government, money, inflation, international trade, economic growth and development ( this is not a prerequisite for 102).

### Geo 101: Introduction to Human Geography

(3 Cr.Hr.)

This course is designed to explain the importance of human aspect in geographical studies. The course contains the following subjects: the concept of human geography, its schools, and branches, the relation between environment and human being, human races, the cultures.

### Geo 102: population Geography

(3 Cr.Hr.)

This course deals with the concept of population geography, its development, and relation with other sciences, types of data population, distribution of population, fertility, mortality, and migration and population structure.

### Stat 107 : Statistics (Non-science Students)

(3 Cr.Hr.)

Collecting data, census survey and sampling survey. Types of data. Sampling methods. Descriptive methods, probability, discrete and continuous random variables. Sampling distribution. Statistical

estimation, hypothesis testing, simple linear regression and correlation coefficient.

**Geo 111:Introduction To Physical Geography** (3 Cr.Hr.)

This course deals with the natural features of the earth system such as: atmosphere, hydrosphere, and biosphere, the common characteristics of earth planet, its beginning, its rock structure, forces and main shapes.

**Geo 114:Geomorphology** (3 Cr.Hr.)

The course studies the geomorphology science, the development of its thoughts and methods; study the structural phenomena, the effect of weathering, rivers, winds, and ice, Focusing on the importance of applied studies in geomorphology.

**Cis 116: programming principles for geographic information systems** (3 Cr.Hr.)

This course aims to teach the students the main principles needed for programming with the use of one of the used languages (such as vb.net) The course contains the following subjects : programming essentials, screens , the use of different programming lists and programming implementation .This course has a practical part in the use of programming languages.

**Cis 160: Geographic Information Systems Data Bases** (3 Cr.Hr.)

This course aims to introduce to the students the kinds of data ,mainly their organization , data collection and computer use of data bases related to GIS softwares.this course includes the following subjects : principal concept, kinds of data ,users of data bases and SQL Language. The course contains a practical part to assist students in establishing and using of data bases.

**Geo 214: Climatology** (3 Cr.Hr.)

The course concentrates upon the development of climatology, the natural characteristics of atmosphere, solar radiation, temperature, humidity, condensation precipitation, evaporation and atmospheric conditions.

**Geo 223: Geography of Ancient World** (3 Cr.Hr.)

The course concentrates on the regional geography of Asia, Africa and Europe, its natural phenomenon. Population, Socio – economic conditions and the development of their political regions and states.

**Geo 224:Geography of the Arab World** (3 Cr.Hr.)

This course deals with the Arab World. Its physical, human , economic and political conditions. It concentrates on its Geostrategic, and economic importance. The course includes analysis of physical topography climatology, water resources and aspects of human geography.

**Geo 225 Arab Contribution to Geography**

This course deals with the evolution of the Islamic Geographic thought from Antiquity to present emphasizing development of the Arab and Muslim participation in Geography, Survey of the different will be discussed schools of Muslim Geography will be discussed.

**Geo 226: Geography of the New World** (3 Cr.Hr.)

The course concentrates on the regional geography of North America, South America and Australia, its physical landscape, population, socio-economic conditions and the development of their political regions.

**Geo 231: Economic Geography** (3 Cr.Hr.)

The course studies aspects of economic geography, the development of its thought and research methods, the relationship between man and physical environments through studying agriculture, mineral and industrial resources etc.

**Econ. 231 : Economics of Natural resources** (3 Cr.Hr.)

Elements of economic theory relating to resource oriented industries. Alternate strategies of public decision-making, economics of energy. Prerequisites; Econ. 101: 102.

**Geo 236: Economics of Location** (3 Cr.Hr.)

The course concentrates upon the concept of economic location, its space and characteristics. The characteristics of natural and human resources as: location, land, climatology, water resources, natural

plants, and the population size, its density and geographical distribution, nature of their activities, road nets, and land use.

**Geo 241: Urban and Rural Geography** (3 Cr.Hr.)

The course deals with urban and rural functions. The hierarchy of settlements and their functions, city functions and classifications. The course also deals with rural – Urban integration.

**Geo 242: Cultural Geography** (3 Cr.Hr.)

This course aims to give students the basic concepts of cultural geography through study of cultural elements that form material and spiritual heritage of people. The course introduces the different cultures of the world, their distribution, and the geographic factors that affected this distribution. It also studies the geographical distribution of races, languages, and religions as well as the spatio – temporal development of cultural regions through the cultural landscape of earth surface. Moreover, course studies the spatial diffusion of cultural influences of people and their physical and human factor.

**Geo 271 : Principals of Cartography:** ( 3 Cr.Hr.)

The course identifies the cartography science and its relation with other sciences, it studies maps, map history, the modern schools of cartography and traces topographic maps, topographic sectors, and analysis of contour maps.

**Geo 274: Introduction to Remote Sensing** (3 Cr.Hr.)

The course concentrates on the principals of photogrammetry Geometry of the photos, air photo interpretation ,the physical bases of remote sensing , electro magnetic radiation , the different kinds of satellites of earth resources. The course also deals with the attributes of remote sensing data, as well as spatial , temporal and spectral resolutions. The course ends with digital images analysis and integration of remote sensing and GIS.

**Geo 276 : Introduction To Geographic Information System**  
(3 Cr.Hr.)

The course aims at teaching the techniques of GIS for transferring the location descriptive data into digital data stored in PC, and illustrating the importance of its use in different fields at local, regional and

international levels. This includes studying the GIS programs and the means of organizing data in a relational data base (RDB). The course also includes studying the ways of geographical and descriptive data. The course includes some application on actual case studies.

**Geo 281 : digital cartography** (3 Cr.Hr.)

This course pays special attention to the following topics : the concepts of digital cartography and the meaning of the digital map , manual digitizing , scanning and screen digitizing , scale and projection of the map. The use of computer in thematic maps as well as their interpretation .

**Geo 283: Land – Use Planning** (3 Cr.Hr.)

This course emphasizes the concepts, principles and procedures of urban land use planning, how Geographers and planners decide the different land uses of the earth services; how the location principles and theories of economic activities and the methods of regional Analyzing effect that land use patterns.

**Geo 291: Research Methods in Geography** (3 Cr.Hr.)

This course aims to teach students how to deal with Geographic research problems, how to plan for the problem, how to put forward a hypothesis, collect and analyses data, and how to write a research paper. Computer assistance is needed in this course.

**G 302 : Surveying** (2 chr; 1 chr lecture and 1 chr Lab.)

Definition of surveying and its importance, types of surveys and basic definitions, different methods of presenting a sphere in two dimensions. The topographic maps definitions, instruments\; level, Theodolite, plane table, photography, construction of topographic maps and field application.

**Geo 315: Political Geography** (3 Cr.Hr.)

This course studies the state as a political unit, it sheds light on its physical and human resources, its borders and relation with neighboring states and its weight in the international arena. International economy, boundary and human problems are also discussed.

**Geo 316 : Oceanography**

**This course deals with the relationship between Oceanography and other sciences, the formation of seas and Oceans. It also investigates the natural and chemical characteristics of sea waves, water currents, sea grounds (geomorphology) sea creatures sea shores and its economical and political importance's.**

**Geo 318: Geography of Arid Lands (3 Cr.Hr.)**

**This course deals with aridity: its causes, patterns and results with special reference to physical landscape of the arid land such as land forms, climatology, water, flora and other characteristics which have a great effect upon human activities such as farming, herding and water uses.**

**Geo 321: Geography of Jordan (3 Cr.Hr.)**

**This course describes and analyzes natural and human environment of Jordan and identifies some of its physical factors that influence the urban settlements and the human activities of the population. The course provides an understanding of the size and distribution of the population as well as agriculture, industry, trade, services and environmental problems. This will provides a base for a spatial variation and give character to each of the various sub-regions of the country.**

**Geo 322: Geography of Industry and Energy (3 Cr.Hr.)**

**The course studies the methods, which are applied to the industrial sector; industrial stages and energy resources; the major industrial types; industrial development at the regional level. The course also concentrates on atom energy and other resources.**

**Geo 323: Geography of Asia (3 Cr.Hr.)**

**This course describes the physical and human aspects of Asia. Special emphasis is made on the regions of ancient cultures and civilizations, the places of crowded population, such as: size, distribution and movement. The course studies the historical evolution of political systems in some selected countries of the continent.**

**Geo 334: The Geography of Mark. And Inter. Trade (3 Cr.Hr.)**

**This course emphasizes the importance of the principles of marketing geography and its role in the industrial activities of the population; special analysis of whole and retail- sale industry; and recreation regions marketing trade areas and their distribution will be the care area of this core.**

**Geo 335: Geography of Transportation (3 Cr.Hr.)**

**This course analyzes the special principles of transportation including methods of research in transportation and communication, kinds of transportation, theories of interaction, network structure and network analysis and the role of transportation on trade and economy.**

**Geo 337: Agriculture Geography (3 Cr.Hr.)**

**This course shows the development of agriculture throughout the world. It deals with some of the factors that affect this agricultural production, agricultural systems ( intensive, extensive, mixed, diary farming), agriculture distribution and agricultural development.**

**Geo 338: International Geographical Problems: (3 Cr.Hr.)**

**This course seeks to apply the concepts and theories of political geography on local, natural and international problems which have a geographical base problems such as boundaries, ethnic racial and religion struggles, compition of world power on economic and strategic resources or places at past and present through out the world.**

**Geo 361 : Environmental Systems Managements (3 Cr.Hr.)**

**The course aims to introduce the concept of physical environment system, energy and optimum planning for its use, the different human activities and their impacts on the environment. The course also discusses the coastal, dry, forest and mountains systems and methods used in their management.**

**Economic 370: Economic Planning: (3 Cr.Hr.)**

**This course emphasis the planning concepts, kinds of planning specially the comprehensive planning, planning tools, different stages of building the national plan and the necessary regulations influencing the regional plan.**

**Geo 374: Distribution Maps (3 Cr.Hr.)**

The course teaches the cartographical ways used in preparing the different types of distributional maps. The course also clarifies the graphical illustrations of data through computer techniques.

**Geo 387 : Planning of public Services** (3 Cr.Hr.)

The course teaches the concept of public services planning, its importance and functions. It also clarifies the problems related to these issues directly or indirectly. The course also elaborates on the planning standards and elements included under the framework of this kind of planning. Phases of planning such as preliminary, analysis and preparing the plan are also taught. Practical and applied field studies will be emphasized through preparing a model for a development plan for a local area showing the distribution of public services.

**Geo 417 : Coastal Geomorphology** (3 Cr.Hr.)

This course deals with factors that affect the geomorphology of coastal land forms. And the role of rock formation and structure on these land forms, The role of waves, sea currents, Tides on coastal land forms. The course also deals with the geomorphologic forms the of Arab countries.

**Geo 418 : Maps' Usage and Analysis** (3 Cr.Hr.)

The course objectives are to introduce the students about the importance of the map and its usage in illustrating the data, provide the students with the necessary skills for understanding the map legend and coded, hence the use of map as an analytical tool. The course also applies the concepts, which are taught in the course of introduction to maps where students learn how the physical and human characteristics of the map.

**Geo 422 : Geographic studies in English**

This course concentrates on selected studies in physical geography such as relief , climate , vegetation and soil, also selected studies in human geography such as population , migration and languages are emphasized. Agricultural and industrial topics are studied as parts of economic geography. The specialized expressions for all these topics are emphasized.

**Geo 452: Geography of Water Resources** (3 Cr.Hr.)

The course focuses on studying the various water resources on land and their importance for human being. The factors influencing the water

**cycles, systems and their management. The course also deals with the optimum usage of water for various activities with particular emphasis on water management in Jordan. Furthermore, the course deals with water pollution and means of treatment.**

**Geo 474 : remote sensing applications (3 Cr.Hr.)**

**This course aims to give students the ability to use remote sensing soft wares in geometric rectification of satellite images , enhancement and supervised classification . digital elevation model from pairs of photos will be emphasized.**

**Geo 481: Regional Planning (3 Cr.Hr.)**

**This subject is concerned with the relationship between Urban geography and Planning. Also it studies the planning of ancient and Islamic cities, as well as European cities. It gives more attention for the planning of international major cities, and their contemporary problems. Finally, the subject is interested with city model planning and models from Jordanian cities.**

**Geo 482 : Urban planning (3 Cr.Hr.)**

**This subject is concerned with the relationship between Urban geography and Planning. Also it studies the planning of ancient and Islamic cities, as well as European cities. It gives more attention for the planning of international major cities, and their contemporary problems. Finally, the subject is interested with city model planning and models from Jordanian cities.**

**Geo 493: Tourism Geography (3 Cr.Hr.)**

**The course teaches the concept of tourism geography, its importance in production resources and its impact on national economies . Also, it teaches the physical and human potential of tourism and the factors which enhance and develop the tourism sector. The course includes examples of tourism patterns in different societies in addition to measuring the tourist characteristics of various tourist locations, analyzing the statistical data, clarifying the problems and identifying possible solutions.**

**Geo 495 : general researches project (3 Cr.Hr.)**

Students learn how to conduct research employing the geographical models and theories. This is done through conducting a research in any field of geography according to the student interest. Students will apply appropriate geographical and statistical techniques.

**Geo 497: GIS Applications**

**(3 Cr.Hr.)**

The course objectives are to conduct practical applications for the techniques explained in (476) course. Students learn how to actually store data in PCs, transfer the written data into digital to be used for research solving problems and producing analysis results through graphs and different layers of maps.

**Geo 498: Research Project/ location Planning**

**(3 Cr.Hr.)**

Students learn how to conduct research employing the geographical models and theories. This is done through conducting a research in any field of geography according to the student interest. Students will apply appropriate geographical and statistical techniques.

**Geo .499Research project in geographic information systems**

**(3 Cr.Hr.)**

This course concentrates on applied topics related to the students specialization. Students have to search for necessary data and their sources . A proposal project should be submitted in accordance with available Gis possibilities mainly in the fields of natural resources management and the different infrastructure.