Courses Description

College: Prince El- Hassan Bin Talal For Natural Resources & Environment

Department: Land & Environment Management

Couse ID: 1202712 **Description:** Sustainable Environmental Management

Full Course Description: An introduction to environmental issues such as soil, Water and air pollution, renewable energy, recycling, climate change, land suitability analysis, ecology and biodiversity. Implementation methods, process design and alternative dispute resolution methods. Case studies and group exercises will be used to illustrate the methods and approaches.
The subject looks at the interaction between geography, ecology, chemistry and socio-economics and covers practical methods for achieving sustainability.

Couse ID: 1202731 **Description:** Desertification

Full Course Description: Focusing on the desert development and the interaction of desertification and climate. Socio-economic aspects with desertification. Selecting of the optimal technology lead for developing desert resources and combating desertification.

Couse ID: 1202734 **Description:** Environmental Pollution and Remediation

Full Course Description: Fate of contaminants in soils, Remediation phases of contaminants, pump and treat, bioremediation, soil venting, soil bioreactors, innovative technologies, incineration, thermal desorption, photochemical processes, phytoremediation

Couse ID: 1202751 **Description:** Ecosystems Management

Full Course Description: Water-related properties of plants and soil, the properties of water, and the natural processes that affect the behavior of water in plants, global scale radiation, heat and water budgets, biomes of Jordan, where each biome (terrestrial or marine) is found, how each biome varies geographically, the structural characteristic of the vegetation of each biome, and the types of animals characteristic of each biome and their typical morphological, physiological, and/or behavioral adaptations to the environment.

Couse ID: 1202799 **Description:** Thesis

Full Course Description: a

Couse ID: 31202799 **Description:** Thesis

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Couse ID: 61202799 **Description:** Thesis

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Couse ID: 91202799 **Description:** Thesis

Full Course Description: a

Couse ID: 131202710 **Description:** Climate Change Vulnerability and Adaptation

Full Course Description: The course introduces the students with the definition and concept of climate change with emphasis on green house gases (GHG) inventory and sustainable management. It overviews the national and international related articles. The course overview the impacts and vulnerability of climate change on different sectors. The course also covers the adaptation and mitigation measures, options and the criteria for selection and prioritization, gap analysis and capacity building required to incorporate climate change into national policies and strategies.

Couse ID: 131202720 **Description:** Reclamation of Degraded Land

Full Course Description: This course is designed to meet the increasing demand to manage and reclaim the degraded land as a result of several human activities. In this course the students will be introduced to different concepts related to what do mean by reclamation, what do mean by degraded land, extent of land degradation, sustainability concepts in land reclamation, plant and water interactions and ecosystem behaviors.

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Couse ID: 131202721 **Description:** Dry Land Water Resources

Full Course Description: This course explores water resources in dry lands in terms of scarcity, quality, and variability. Students will examine hydrological, legal, political, and ecological implications of alternative water-management practices to cope with changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors. Special focus will be given to water harvesting techniques to obtain efficient, sustainable management of water resources and agriculture.

Couse ID: 131202730 **Description:** Arid Zone Biodiversity

Full Course Description: This course explores the science of global CC and its effect on biodiversity of arid zone. It examines the challenges a changing climate poses for ecology and conservation biology research and management, including ecological restoration in arid zones. Upon completion of this course students should be able to identify threatened species and habitats in the arid areas, propose procedures to evaluate the efficiency of adaptation measures in view of optimizing management plans (adaptive management), and assess the impact of CC mitigation measures on biodiversity.

Couse ID: 131202731 **Description:** Advanced Range Managment

Full Course Description: This course will cover many topics regarding range management including soil and water conservation on rangelands, conservation and maintenance of plant and animal resources, maintenance of rangeland productive capacity, social and economic indicators of rangeland sustainability, and legal institutional and economic frameworks for rangeland conservation and sustainable management

Couse ID: 131202740 **Description:** Scientific Research Methods

Full Course Description: This course will present the principles of statistical design and analysis for scientific studies to graduate students. The objective of the course can be addressed by appropriate choices of treatment designs. This includes development of research hypothesis, selection of treatment design to address the research hypothesis, and facilitation of data collection and analysis. Topics will include major experimental designs.

Couse ID: 131202741 **Description:** Climate Variability and Modeling

Full Course Description: The course overviews the Climatic Variability in all its associated components and deals with modeling the temporal and spatial behavior of climatic variability and their relation to drought, floods, etc using simple and advanced models of temporal and spatial statistics. Trend analysis and description of atmosphere behavior are also included. Numerical Modeling and Numerical Weather Prediction as GCM, RCM, stochastic models, and downscaling are also discussed.

Couse ID: 131202742 **Description:** Geospatial Techniques and Management

Full Course Description: This course deals with the applications of geographic information systems and remote sensing in land management conceptual issues in GIS database design, development, analysis and display. The course focuses on land management using spatial and temporal definitions. Emphasis is placed on training students many applications of GIS, such as environmental assessment, analysis of natural hazards, site analysis for business and industry, location analysis, resource management, and land-use planning.

Couse ID: 131202790 **Description:** Air Pollution

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Couse ID: 131202792 **Description:** Special Topics

Full Course Description: Special topics will be assigned by the program educators focusing on subjects related to arid land ecosystems, Sustainable land management practices, adaptation to climate change, the goal of such courses is to build interest and strengthen knowledge in the provided fields. This will be enhanced through project management skills among students throughout the course. Students will accomplish this through the use of readings, exercises, case studies, and projects.

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Couse ID: 131202799 **Description:** Thesis

Full Course Description: This course is to enable the student to work on his specific thesis through field and office work