

Sample of SDGs courses description

	Description
Food Safety	Introduction to the concept of food hygiene and its importance. Food borne infections and intoxication and the problem of residues in foods. Hygienic requirements in food production and harvesting areas and in food establishments with emphasis on hygienic food handling, processing, and storage. Personal hygiene and health requirements, cleaning and disinfecting and pest control as well as the application of hazard analysis critical control point (HACCP) system in food establishments, and workplace safety standards.
Ecology and Sustainable Production	This course deals with the main principles of sustainable agriculture, as well as farming production systems that aim to enhance the health of the environment, natural resources and improve horticultural farm income. This course will also, provide a base of knowledge of the principles of alternative horticulture farming systems including soil biological processes (compost, humus, fertility, and pest management.
Health, Safety, and Professional Environment	The overall aim of this course is explaining the work environment and outlining the methods of protecting people and others at work. It provides examining the most known dangers of distinguishing dangers of chemical and biological materials, falling from high floors, physical dangers, fire, electricity, other types of dangers, and how they influence health, work safety, controlling dangers and risks, to reduce the potential damage in case of any accident. The course also explains the hierarchy of dangers control processes, methods, and techniques of personal safety, first aid methods in case of human casualties, and knowing the Jordanian legal requirements and national codes for protecting workers and employees.
Waste Management and Composting	Integrated sustainable waste management; Organic waste generation and characterization; Organic waste collection and transport; Organic waste treatment technologies;

	Science of composting; Composting technologies, compost quality, and its economic feasibility; Operating the composting technologies; Vermicomposting; Compost uses and global compost market; Case study composting; Governance of organic waste management; Impact of organic waste management on the environment.
Smart Lighting and Electrical Installations	Study and design of electrical wiring networks in the building by calculating the loads and the amount of lighting needed to illuminate the various facilities in it according to the standard specifications, components of household electrical wiring of one and three phase, electrical measurements, drawing and reading electrical diagrams, grounding, wireless electrical installations, and smart home systems.
Renewable Energy Technologies	Introduction to renewable energy and the concept of energy generation and conversion, types of renewable energy, benefits of renewable energy, solar energy, wind energy, and smart electric grids.
Heating, Air Conditioning and Cooling Technologies	Acquiring heating and cooling skills, calculating thermal loads, and cooling loads for buildings, the principles of psychometric and its use in air conditioning calculations in buildings, places of equipment placement and drawing plans, control systems for air conditioning and heating devices, and the use of renewable energy in heating and cooling.
Meteorology and Air Pollution	Structure of the atmosphere and its thermodynamics; water and its transformations; cloud formation; precipitation... etc. Current climate issues such as global warming. Fundamentals of air pollution, major pollutants, their sources, and their effects (environmental, economic and health), air pollution from mobile/stationary sources and indoor air quality. Pollutant sampling and measurement devices, pollutant distributions and dispersal modes as well as available methods to control the pollutants. Relevant Jordanian air quality policies and standards and presents relevant case studies.

Hydrochemistry and Water Quality	Origin of water, properties, influence of soil and aquifer materials on groundwater quality. Classification and assessment of groundwater quality. Changes in drinking water quality and quality criteria, water pollution and physiochemical treatment.
Wastewater Treatment and Reuse:	Composition and characterization of wastewater and sludge, Wastewater microbiology, Municipal wastewater treatment systems including physical unit operations (physical treatment) and biological unit processes (biochemical treatment), treatment and disposal of sludge, and wastewater reuse.
Soil, Water, and Plant Relationships:	Basic relationships between soil, plant, and water make it possible to better manage and conserve irrigation water. Review physical laws of solutions: vapor pressure, solution potential, and latent heat. Soil water terminology. Physical characteristics of soil, soil and water interactions, available soil water, and how plants use water to determine what crops to plant and when to irrigate. Review irrigation scheduling that determines when and how much water needs to be added to a crop's root zone to promote optimum yields.
Pests and Diseases of Honeybees	This course is designed to contribute to the enjoyment and profitability of honeybees by giving you the knowledge and skills to recognize and manage their pests and diseases.
Organic Farming	Method of preparation and fermentation of organic materials, factors affecting its fermentation, effect of microorganisms, effect of organic materials, on the soil and its content of nutrient elements, its effect on production and quality of fruits, methods, and time of applications.
Biological Control	Biological pest control concepts, environmental aspects, ecology, and strategies. Conservation and augmentation of natural enemies. Importation and colonization of natural

	enemies from abroad. Examples of successful utilization of parasitoids, predators, and microbial agents. Biological control ecology.
Organic Chemistry	Study the chemical properties of the compounds is cyclic, clarify the nature of inter-linkages in the molecules, the study of public reactions and the stereochemistry of these compounds. Includes the study of alcohol and aromatic compounds, chemical reactions, substitution reactions of various types, some of these mechanical interactions, methods of analysis of different kinds of class to determine the composition of the binary compounds.
Principles of Psychology	Learn about the basic principles in psychology and the experimental origins on which psychological knowledge is based, a presentation of the concept of psychology, its origin, development, and branches, with a focus on psychology schools of learning, motivation, personality, memory, psychological disorders, and intelligence.
Communication skills	Definition of communication, its nature, types and components, its models and characteristics, the efficiency of communication, studying some misconceptions about communication, mental perception and self-concept, the relationship between verbal communication and non-verbal communication, and writing a CV and interview.
Agriculture in Jordan	This course covers topics related to the development and development of agriculture and its global, Arab and local importance, agricultural climate, elements of plant production in rainy and irrigated areas, animal production, marketing of agricultural products, water sources and their uses. Agricultural operations used. Agricultural pests and methods of combating them, agricultural mechanization, food industries. Institutions and bodies working in the agricultural service in Jordan.

Environment and society	The proposed course provides a general and comprehensive description of the environment: its definition, evolution, and the benefits that can be achieved through preserving environmental resources. In addition to addressing the relationship between society and environmental resources. The course also discusses topics known as the environmental reality in Jordan in terms of the nature and types of ecosystems, the most important environmental problems facing Jordan and their implications for society in general, not only from an environmental aspect, but also from a health, social, economic, and developmental aspect.
General entomology	Phylum Arthropoda and its main classes. External anatomy including head, thorax, abdomen, and their appendages. Internal anatomy including digestive, endocrine, respiratory, circulatory, nervous, and reproductive systems. Development, metamorphosis, and insect taxonomy are also covered.
Principles of Microeconomics	This course is an introductory course that covers fundamentals of Microeconomics with major emphasis on the theory of the market system. The course introduces economic concepts and analysis, demand and supply analysis, elasticity concepts, theories of the individual and the firm behavior mainly consumer and producer choice and how they interact to determine prices, output and resource allocations. The course also covers market structure, in particular competition, monopoly, monopolistic competition, and oligopoly.
Economic Feasibility Studies and Projects Evaluation	This course introduces the theory and practice of cost-benefit analysis and its link to basic economic and financial theory. Topics include: discounting and the valuation of benefits and costs, projects' appraisal phases including;

	<p>economic, market and financial study, risk analysis, time value of money, and criteria for projects evaluation. Students will analyze and investigate contemporary cases from areas in economics and finance that are related to public policy issues and private projects.</p>
Environmental Resources Management	<p>Basic principles of environmental management; Environmental and sustainable development objectives; Nature's ecosystem services; Global environmental trends and issues Complexity; Managing biodiversity; pest and weed management; Soil, sediment, air and water – environmental degradation; Overview of environmental resources management assessment; Production, consumption, urbanization and extractive industries; The ecosystem approach and adaptive management; Strategic Management and SWOT Analysis.</p>

جامعة البلقاء التطبيقية

الخطة الدراسية لدرجة الماجستير في إدارة موارد المياه والبيئة / مسار الشامل

تتكون الخطة الدراسية لدرجة الماجستير في تخصص إدارة موارد المياه والبيئة من 33 ساعة معتمدة موزعة على النحو الآتي:

المسار	المتطلبات	الساعات المعتمدة
الشامل	أ. مواد إجبارية	21
	ب. مواد اختيارية	12
	ج. الإمتحان الشامل	-
	المجموع	33



جامعة البلقاء التطبيقية

الخطة الدراسية لدرجة البكالوريوس في تخصص إدارة موارد المياه والبيئة

تتكون الخطة الدراسية لدرجة البكالوريوس في تخصص (إدارة موارد المياه والبيئة) من (135) ساعة معتمدة موزعة على النحو الآتي:-

الرقم	المتطلبات	عدد الساعات المعتمدة
أولاً:	متطلبات الجامعة وتشمل : متطلبات الجامعة الإلزامية متطلبات الجامعة الاختيارية	27 21 6
ثانياً:	متطلبات الكلية	22
ثالثاً:	متطلبات التخصص وتشمل: متطلبات التخصص الإلزامية متطلبات التخصص الاختيارية	76 70 6
رابعاً:	متطلبات التخصص المساندة	10
المجموع		135

Sample of dedicated SDGs specific courses (full degrees)
Bachelor's degree in Water Resources and Environmental Management



تكنولوجيا الطاقة المتجددة

مجالات العمل و مميزات التخصص

- تركيب وصيانة وحدات الطاقة الشمسية عمل خاص وعمل لدى شركات متخصصة
 - فني صيانة وتركيب الخلايا الشمسية وتوربينات الرياح لدى شركات الطاقة
 - فني صيانة لدى شركات الكهرباء
 - فني لدى مصطات توليد الطاقة
- مميزات التخصص
- عدم نفاد الطاقة المتجددة ، السرعة في امتلاك الخبرة والمعرفة ،
 - زيادة الحاجة لطاقة في المستقبل مما يؤدي الى زيادة الطلب عليها ،
 - الطاقة المتجددة صديقة للبيئة وليس لديها مخاطر

الخطة الدراسية



عدد ساعات التخصص



72 ساعة

Sample of dedicated SDGs specific courses (full degrees)
Associate Diploma degree in Renewable Energy