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COURSES RELATED TO ENVIRONMENTAL SUSTAINABILITY

ACADÉMIE LIBANAISE DES BEAUX-ARTS (ALBA)

- REGA1202- Architecture Régionale (2 ECTS)
- ARCD1301- Architecture Durable: entrée en matière pour la conception de batiments durables (2 ECTS)
- ATAR1401 - Projet de Construction (8 ECTS)
- ENDU7301- Sustainable Environments/ Environnements Durables (2 ECTS)

FACULTY OF ARTS AND SCIENCES (FAS)

- Sustainability:
 - A. Undergraduate: EVSC 201, 203, 207, 213, 239, 241, 253.
 - B. Graduate: EVSC 315, 331, 333, 305, 317, 335.
- Climate science:
 - A. Undergraduate: EVSC 201, 203, 207, 233, 243.
 - B. Graduate: EVSC 303, 305, 315.

FACULTY OF BUSINESS & MANAGEMENT (FOBM)

- MGMT291- Business Ethics and Professional Responsibility (BBA-Undergraduate) Required
- BUSN222- International Business (BBA Undergraduate)- emphasized on Ethics
- EMBA 450- Business Ethics and Sustainability –Required- Assigned projects are related to SDGs.

FACULTY OF ENGINEERING (FOE)

ALL ENGINEERING STUDENTS MUST TAKE THE ENGINEERING ETHICS COURSE AND SUSTAINABLE DEVELOPMENT COURSE FOR ENGINEERS:

GENG221 “Engineering Ethics”

This course introduces and reinforces the concepts, theories, and practice of engineering ethics and aims at providing basic knowledge of ethics for engineers in different types of work roles. It prepares the engineering students for identifying, taking responsibility for, and finding solutions to potential ethical problems/cases. It provides students with an interactive study of ethical theory and the development of professionalism and helps them think more clearly and deeply about ethical issues of the natures that engineers often face in professional practice, and explore resources, strategies, and options for dealing with such complications. Students review case studies of ethical conflicts in engineering practice. The course also covers engineering codes of ethics and requires students to resolve theoretical situations through the application of ethical codes.

GENG222 “Sustainable Development for Engineers”

This course introduces the fundamental concepts of sustainable development. It enhances students’ understanding of the UN Sustainable Development Goals (SDGs) and focuses specifically on the critical role of engineers in achieving these SDGs. Students should be able to resolve problems by adopting sustainability principles, which should in turn reflect on the students’ design ability to ensure a proper sustainable process to improve and preserve the quality of life for future generations.

CHEMICAL ENGINEERING DEPARTMENT COURSES:

- CHEN299: Introduction to Renewable Energy
- CHEN430: Environmental Design and Life Cycle Assessment
- CHEN589: Waste Treatment Engineering

CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENT COURSES:

- CIVE311: Sanitary Engineering (3 credits);
- CIVE318: Environmental Engineering Modeling (1 credit);
- CIVE418: Sewage Treatment Plant (3 credits);
- CIVE520: Principles of Environmental Engineering (3 credits);
- CIVE521: Wastewater Engineering Design (3 credits);
- CIVE522: Water Resources and Water Quality (3 credits);
- CIVE523: Air Pollution Control (3 credits);
- CIVE524: Solid Waste Disposal (3 credits).

Civil and Environmental Engineering Department offers the following courses related to Transportation Sustainability:

- CIVE540: Sustainable Roadway Design, Construction, and Operation (3 credits);
- CIVE541: Contemporary Cities (3 credits);
- CIVE542: Sustainable Development in Transportation Engineering (3 credits);
- CIVE543: Sustainable Development in Civil Engineering (3 credits).

MECHANICAL ENGINEERING DEPARTMENT COURSES:

- MECH290: Introduction to the Engineering Design Process: 2 activities:
- Design of a composting system
- Explication of the 17 Sustainable Development Goals (SDGs) (United Nations)
- MECH389: System Design: sustainability & Environment are considered within design considerations
- MECH419: Renewable Energy Systems: explication of energy consumption and sustainability

FACULTY OF HEALTH SCIENCES (FHS)

- PDHP201 Environment, health, and development 3.0: 3 cr. E
- PDHP 219 INTRODUCTION TO PUBLIC HEALTH 3.0: 3 cr. E
- PDHP 226 SANITATION AND RESOURCE MANAGEMENT FOR PUBLIC HEALTH 3.0: 3 cr. E
- PDHP 227 OCCUPATIONAL HEALTH AND HYGIENE 3.0: 3 cr. E
- PDHP 238 ENVIRONMENTAL MANAGEMENT IN PUBLIC HEALTH PRACTICE 3.0: 3 cr. E
- PDHP 242 PUBLIC HEALTH AND URBAN ENVIRONMENTS 3.0: 3 cr. E
- PDHP 247 ECONOMICS IN ENVIRONMENT, HEALTH AND DEVELOPMENT 3.0: 3 cr. E
- PDHP 249 TOXICOLOGY AND HUMAN HEALTH RISK ASSESSMENT 3.0: 3 cr. E
- PDHP245 Issues in Community Health and Development3:0: 3 cr. E
- MPHP 303 ENVIRONMENTAL HEALTH SCIENCES 3.0: 3 cr. E
- And all the environmental and occupational health track. Link to graduate courses:
<https://www.balamand.edu.lb/Style%20Library/PDFs/Catalogue/FHSGraduate.pdf#page=15>

MECHATRONICS DEPARTMENT

- MECT329 Renewable Energy (3 credits)
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CIVIL AND CONSTRUCTION TECHNOLOGY DEPARTMENT

- CIVT327 Introduction to Environmental Engineering (3 credits).
 - CIVT360 Green Building Rating Systems (3 credits).
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AGRICULTURE AND FOOD TECHNOLOGY DEPARTMENT

- AGRT 379 Pest Control (3 credits)
- AGRT 365 Natural and Transformed Ecosystems (3 credits)

TRACK OR DEGREE RELATED TO ENVIRONMENTAL SUSTAINABILITY

The Public Health Department offers several undergraduate and graduate courses in relation to environmental management, environmental health, and climate change. A special graduate track within the MPH program exists and focus on environmental and occupational health.

<https://www.balamand.edu.lb/faculties/FHS/AcademicPrograms/Pages/Programs/MSPublicHealth.aspx>

All environmental Sciences courses (EVSC) directly deals with sustainability and/or climate sciences. It is important to note that the sustainability theme is the core of the entire Environmental Sciences undergraduate and graduate programs, and is referred to in almost all the program courses. These courses award qualifications of direct relevance to climate and sustainability officially recognized in BS and MS degrees.