Irrigation Engineering and Hydraulics Department
Faculty of Engineering – Alexandria University (FoE-AU)

http://www.alexeng.edu.eg/
Address: Faculty of Engineering, Alexandria University, Post No. 21544, Alexandria, Egypt

FoE-AU Facts & Figure

- 17,122 full-time students
- 25.7 student/staff ratio
- 488 taught undergraduate courses.
- Bachelor of Science in 15 fields
- Diploma in 50 fields
- MSc. in 20 fields, and PhD in 14 fields.

Faculty Vision

The Faculty of Engineering, Alexandria University should be a pioneer in engineering sciences on both the Middle East and the African levels in education, scientific research and community service. This can be achieved through the distinction of its faculty members and the availability of fine education, research programs and the exceptional resources related to the surrounding desert and sea environment.

Irrigation Engineering and Hydraulics Department

- Established in 1942.
- Has a history of Cross-disciplinary research in the area of water resources management, including systems thinking and research, hydraulic structures, irrigation engineering, modelling, simulation, optimisation, decision support, data-mining and evolutionary computing.
- One of the most important department which shares in forming the Civil Engineering Program.
- The department cooperates with the Egyptian Ministry of Water Resources and Irrigation for choosing graduation and research projects.

Laboratories

The department has two Labs. Their function is to provide practical service and experimental works to the undergraduate and post graduate courses, research projects, and students Summer training as well. Also these Labs are employed to carry out all the testing and calibrations needed by the society.

Department Mission

To provide an outstanding education in Water Science Engineering with rich diversity of skills to contribute to the community property through professional services and researches. The department also prepares graduates capable to engage in life-long learning and capable of carrying out engineering practice with competence.

Recent Research Projects and Activities

- Integrated Water Resources Management of Aswan High Dam in Egypt.
- Energy Storage Upstream Egyptian Hydraulic Structures.
- Optimal Reservoir Training Model for Minimising Evaporation Water Losses.
- Optimal Determination of Penstock Trajectory using Evolution Computing Techniques.
- JE-HydroNet: Modern Methodologies for the Management, Monitoring and Planning of Integrated Water Resources in the Nile Delta of Egypt.
- Management of Lake Nasser Alternatives.
- Cooperation with Ethiopia and Sudan and Impact of Proposed Blue Nile Basin Projects on Ethiopia and Egypt.
- ZAMZAM: Arabic Software for Modeling Water Supply Networks.
- Energy Harvesting from Egyptian Navigation Locks.
- Simulating Some Coastal Problems in Egypt.
- Evaluation of Storms in Sinai Peninsula.
- Assessment and Analysis of Sea Waves Storms in Alexandria.
- Velocity Profile and Roughness Characteristics in Vegetated Channels.
- Simulation - Optimisation Model for Intermediate Reuse of Drainage Water.
- Optimal Pressure (Re)Zoning of Water Distribution Systems.
- Effect of Groins Protection Works on Shoreline Changes.
- The Environmental Impact of Covering Agricultural Drains in Egypt.
- Estimation of Local Scour Depth around Abutments using Artificial Neural Networks.
- Local Scour Downstream a Stepped Weir
- Seepage from Channels with Composite Section.
- Analysis of Water Hammer in Irrigation Pipelines Networks Due to Power Failure.
- Evaluation of Common Emitters Used in Egypt.

Dr. Haytham M. Awad
Associate Professor
E-mail: Haytham.Awad@alexu.edu.eg