Cement Engineering
Postgraduate Diploma Degree

FLSmidth Helwan Cement Institute
Upon the successful completion of the program, the student will be eligible to receive a Diploma degree in Cement Engineering from Helwan University in cooperation with FLSmidth. Participants will be registered at Helwan University and get the cement field experience from FLSmidth. The program is accredited by the Supreme Council of Egyptian Universities.

Both FLSmidth and Helwan University will share responsibility in teaching which will include theoretical and practical aspects. Helwan University lecturers will ensure that the students fulfill all their academic requirements.

All final exams will be conducted within the premises of the Faculty of Engineering at Helwan University.

Mission
The mission of the Higher Professional Diploma program in Cement Engineering at Helwan University is to produce graduates to fulfill the growing need of specialized shop floor engineering supervisors in the cement industry. The program provides the graduates with:

- learning opportunities for acquiring a broad base of engineering knowledge necessary for advanced work in cement plants,
- an in-depth knowledge and experience in one of the following specializations: cement equipment, controls and automation, and cement production
- the necessary skills for lifelong learning and professional development.

What our graduates say
During our study in FLSmidth Helwan Cement Institute we grew our knowledge and experience in all engineering aspects. Having the feeling of being a part of the industrial world provided us with more self-confidence as we improved our knowledge and had the opportunity to innovate. After graduation we didn’t take a lot of time to fit in or to learn the basics which we already had received that also gave us a boost to gain more knowledge as we proceed in our cement career.

Thanks and Best Regards

Mohamed Khaled
Planning and Preparation Engineer
Expected requirements of participants
Student must be earned B. Sc., in mechanical, electrical or chemical engineering.

Learning objectives
Upon successful completion of this program, graduates should be able to demonstrate and apply knowledge of:

- The current developments in cement industry in terms of machinery, maintenance techniques, control systems and environmental protection.
- Machinery and equipment used on cement plants and their role.
- Advanced techniques and tools for electrical maintenance, control systems as well as quality control and their applications in the cement industry.
- Systematic approach to mechanical maintenance techniques.
- Ethical, legal, safety and professional issues in the field of cement industry.
- Investigate the failure of components, systems, and processes related to the cement industry using the available knowledge.
- Assess the characteristics and performance of components, systems and processes in the cement plant.
- Use a wide range of measuring tools and techniques pertaining to the cement industry.
- Present a case study from a chosen cement production area including the problem analysis, suggested solution methods and final conclusion.

Course Contents
The program consists of the following modules:
- Chemistry and Production of Cement.
- Health, Safety & Environmental Management.
- Cement Raw Materials Homogenization.
- Cement Plant Quality Control.
- Cement Plant Instrumentation & Control.
- Cement Process Simulation.
- Fault detection and Diagnosis of Cement Equipment.

Specialized Modules for Mechanical Engineers:
- Cement Machinery functioning & maintenance.
- Material Handling and Conveying equipment.
- Cement Equipment Maintenance.

Specialized Modules for Electrical Engineers:
- Advanced Cement Plant Control Systems.
- Drive Systems in Cement Plants.
- Maintenance of Cement Plant Electrical Equipment.

Specialized Modules for Production Engineers:
- Crushers and Mills Operation and Troubleshooting.
- Kiln Process Operation and Control.
- Dedusting Equipment.

Project.
Helwan Uni. and FLSmidth define relevant project topics and provide coaching for students on their projects. Helwan Uni. staff ensure academic standards of projects and provide tutoring on these aspects.

Target group
Graduates with B. Sc. degree in Mechanical (Production, Mechatronics & Industrial) Engineering, Electrical Power Systems, and Chemical Engineering.

Participants
The maximum number of participants is 20.

Duration
2 years

Location
The program will be offered in the premises of the Faculty of Engineering at Helwan University. The field experience will be gained from many of the FLSmidth working sites in Egypt.

Registration fee
1000 Euro/Semester.

Registration
February 2013
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For further information, please contact us by email, fax or phone. Information on the back page.