* **Overview of the Program**

The Structure Engineering and Construction Management Program at Future University in Egypt is a five-year, 164 Credit Hours (CH) program consisting of ten semesters. The curriculum includes both compulsory and elective courses, allowing students to tailor their education to their interests. The program incorporates four educational modules:

* University requirements module of 12 CH, including two English language courses and four humanity courses, two compulsory and two electives.
* Faculty requirements module of 32 CH, including: 2 math courses, 2 physics courses, 1 chemistry course, 1 mechanics course, 1 graphics course, and 2 humanity courses.
* Department requirements module of 119 CH, including 106 CH Compulsory course (39 course) and 14 CH elective course (5 to 7 courses) in the following areas:
  + Structural analysis and mechanics
  + Material proprieties, inspection and repair
  + Structural design of concrete and steel structures
  + Fluid mechanics, hydraulics and irrigation
  + Traffic, transportation and highways design
  + Geology, soil mechanics and foundations design
  + Construction project management
  + Environmental engineering and sanitary
  + Surveying, photogrammetry and GIS
  + Two graduation project courses (part 1, 2)
* The practical training of 240 training hours divided into 3 training modules each 80 hours, and is counted as 1 CH.
* **Program Mission**

The Structural Engineering and Construction Management Program at the Faculty of Engineering and Technology at Future University in Egypt is committed to providing an academic and cultural environment with international standards that enables the preparation of distinguished engineers capable of competing locally and regionally, keeping pace with the requirements of the labor market professionally and ethically, and capable of continuing in post-graduate education. It also encourages faculty members and support staff to conduct innovative scientific research and contributes to serving the community and achieving sustainable development.

* **Program Aims**
* PA1. Identify, formulate, and solve complex structural engineering and construction management problems by applying principles of engineering, science, and mathematics
* PA2. Apply structural engineering and construction management design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
* PA3. Communicate effectively with a range of audiences.
* PA4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of structural engineering and construction management solutions in global, economic, environmental, and societal contexts.
* PA5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
* PA6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
* PA7. Acquire and apply new knowledge as needed, using appropriate learning strategies.
* PA8. Use techniques, skills and modern engineering tools necessary for structural & construction management engineering practice.
* PA9. Demonstrate leadership qualities, business administration and entrepreneurial skills.
* PA10. Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community.
* **Graduate’ Attributes**

1. Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations.
2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.
3. Behave professionally and adhere to engineering ethics and standards.
4. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance.
5. Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community.
6. Value the importance of the environment, both physical and natural, and work to promote sustainability principles.
7. Use techniques, skills and modern engineering tools necessary for engineering practice.
8. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies.
9. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.
10. Demonstrate leadership qualities, business administration and entrepreneurial skills.

* **Career opportunities**
* Consultancy firms (designer, reviewer, supervision, project manager)
* Construction companies (technical office, site engineer, construction manager)
* Real estate companies (sales engineer, owner representative)
* Higher education facilities (assistance stuff, faculty stuff)
* Entrepreneurship (establish your own company)
* **Students' training and research**

The practical training of 240 training hours, which is counted as 1 CH, is a compulsory component of the program. It is divided into 3 training modules each 80 hours.

* **Under approval new bylaw (144 CH’s)**

The under-approval new bylaw of the Structure Engineering and Construction Management Program is a four-year, 144 Credit Hours (CH) program consisting of eight semesters. The curriculum includes both compulsory and elective courses, allowing students to tailor their education to their interests. The program incorporates five educational modules:

* University requirements module of 12 CH, including 6 CH Compulsory course (3 courses) and 6 CH elective course (3 courses)
* Faculty requirements module of 30 CH, including 28 CH Compulsory course (12 courses) and 2 CH elective course (1 course).
* Specialty requirements module of 75 CH, including Compulsory course (25 courses)
* Sub-specialty requirements module of 27 CH, including 12 CH Compulsory course (4 courses) and 15 CH elective course (5 courses)
* The practical training of 150 training hours divided into 2 training modules each 75 hours without credit hours.

It is expected to be enrolled starting from fall 2025.