

**Civil Engineering
Department
at
CAIRO UNIVERSITY**

Civil Engineering Department

Structural Engineering (STR)

Structures

Materials

Steel

Reinforced Concrete

Construction

CEM
2006

STE
2008

Irrigation and Hydraulics (IHD)

Irrigation

Hydraulics

Harbor & Coastal

WEE
2009

Public Works (BPW)

Soil Mech. & Found

Highway & Airports

Transportation

Railways

Sanitary

Survey

CIE
2018

**Construction
Engineering And Management
Program
(CEM)**

Introduction:

- Construction is one of the largest and most important industries in the world.
- Construction sector represents over 11% of the total Egyptian workforce.
- Its share in the total National Gross Income approaches 8%.
- Construction engineering and management is obviously critical to the development of civil infrastructure.
- The program will train the students in construction management ; a multidisciplinary field that integrates engineering, technology and management of people and physical resources.

Mission:

- to cope with the new advances in the field of construction Engineering
- to provide a well-integrated program that gives the student the opportunity to develop the proficiencies necessary for a successful professional career in construction industry.

Educational Objectives:

To Provide the graduates with:

- The ability to review the contract strategies, appropriate contract forms, and payment methods.
- Appropriate technical proficiency in producing tender and contract documents.
- Appropriate technical proficiency in supervising constructions projects and monitoring their progress.
- Excelling graduates capabilities in advising clients on settling claims and disputes

Sample Study Plan: (CEM Program)

Since the program is credit hours based curriculum, student does not have to take the courses during the semester/level indicated as long as prerequisites of a particular course are fulfilled and, of course, the course is offered

Sample Study Plan (CEM: cont.):

Freshman: (000) level courses:

Mathematics; 1, 2, 3

English Language

Physics; 1, 2

Basic Engineering Design

Mechanics; 1, 2

History of Science and Engineering

Computers for Eng.

Chemistry

Engineering Graphics

Fundamental of Manufacturing Eng.

Technical writing

Basic Engineering Design

Sample Study Plan (CEM: cont.)

Sophomore: (100) level courses:

Structural Analysis-1

Structural Analysis-2

Engineering Materials

Mech. of Materials

Linear Algebra

Mathematics-4 (Diff. Eqs)

Dynamics of Rigid Bodies

Basic Architectural Design

Intro. to CAD Systems For Civil Eng.

Human Resources Manag.

Civil Eng. Drawing

Communication and Presentation Skills

Fundamentals of Management

Sample Study Plan (CEM: cont.)

Junior: (200) level courses:

R.C. Design 1

Steel Structures I

Probability & Statistics

Mechanical & Electrical Syst.

Fluid Mechanics

Economy Strategies in Constr. Industry

Construction Project Management.

Open Channel Hydraulics.

Fundamentals of Economics and Accounting

Surveying for Engineers

Water & waste water Eng.

Risk Management & Environment

Engineering Elective E-1

industrial Training 1

Sample Study Plan (CEM: cont.)

Senior I: (300) level courses:

R.C. Design II

Engineering Elective E-4

Steel Structures II

Soil Mechanics

Engineering Elective E-2

Highway Engineering

Construction Planning & Scheduling

Estimating & Quantity Surv.

Heavy Construction Methods

Construction Methods and Equipment

Ethics & Legislation

Law and Construction Industry

Seminar 1

industrial Training 2

Sample Study Plan (CEM: cont.)

Senior II: (400) level courses:

R.C. Design III

Risk Manag. in Constr. Industry

Financial Management

Engineering Elective E-6

Cost Engineering

University Elective E-1

Intro. to Construction Contracts & Contract Administration

Foundations

Engineering Elective E-5

Engineering Elective E-5

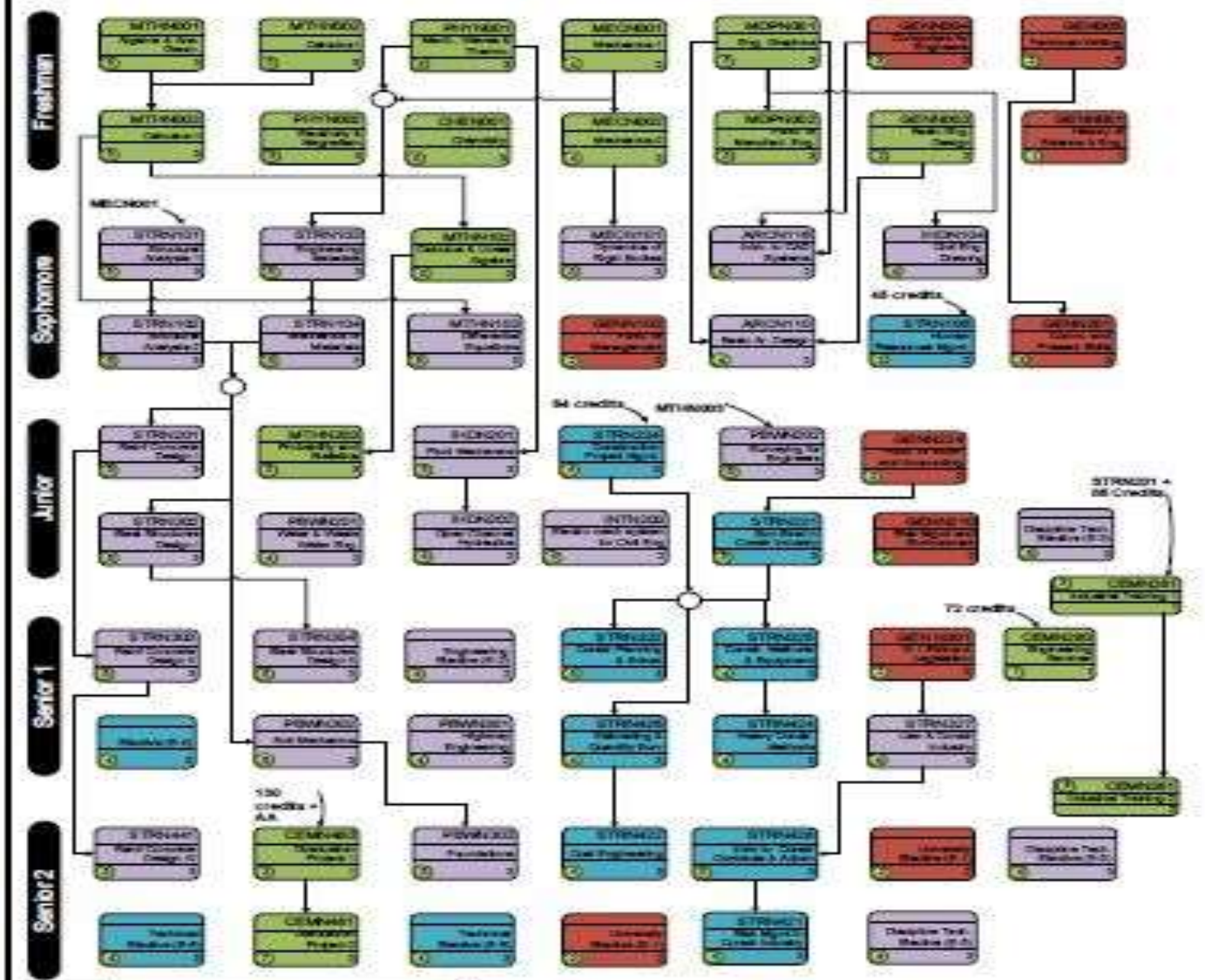
Engineering Elective E-6

University Elective E-1

Graduation Project 1

Graduation Project 2

Course Map – Construction Engineering & Management (CEM) 175 CH Program (2018-2019)



Legend:

- University Courses
- College Courses
- Major Courses
- Discipline Courses

Course Code
Course Title
Contact Hours
Credits

Notes:
 1- Students are strongly encouraged to take the industrial training courses in the indicated summer semesters.
 2- For specific elective courses please consult the latest version of the CHS student guide.



	Code	Course Title	Credits	Group
1	GENN301	Ethics and Legislation ⁽²⁾	2	E-1 ⁽¹⁾
2	GENN303	Critical thinking	2	
3	GENN305	Interdisciplinary Project	2	
4	GENN310	Advanced Risk Management	2	
5	GENN311	Technical Writing in Arabic	2	
6	GENN321	Foreign Language	2	
7	GENN326	Marketing	2	
8	GENN327	Selections of Life-long Skills	2	
9	GENN328	Scientific Research Methods	2	
10	GENN331	Business Communication	2	
11	GENN332	Service Management	2	
12	GENN333	Creativity, Art & Design ⁽³⁾	2	
13	GENN380	Thesis Writing for GP ⁽⁴⁾	2	

Remarks:

(1) Student selects at least three (3) courses equivalent to 6 credits; one of these courses should be GENN301

	Code	Course Title	Credits	Group
1	ARCN211	Urban Planning	2	E-2⁽¹⁾
2	GENN341	Operation Research	2	
3	GENN342	Decision Support System	2	
1	IHDN301	Introduction to Water Resources Engineering	3	E-3⁽²⁾
2	PBWN343	Transportation and Logistic Management	3	
3	STRN341	Masonry Structures	3	

Remarks:

(1) Student selects at least one (1) course from group E-2 equivalent to 2 credits

(2) Student selects at least one (1) course from group E-3 equivalent to 3 credits

	Code	Course Title	Credits	Group	
Remarks:	1	STRN342	Project Resources Management	3	E-4 ⁽¹⁾
	2	STRN344	Construction Material and Quality Control	3	
	3	STRN447	Strategic Planning	3	
	4	STRN464	Sustainability and Public Policy in the Construction Industry	3	
(1) Student selects at least one (1) course from group E-4 equivalent to 3 credits	1	STRN423	Financial Management	3	E-5 ⁽²⁾
	2	STRN443	Temporary Structures and Form Work Design	3	
	3	STRN444	Special Concrete Structures	3	
	4	STRN452	Information Technology in Construction	3	
(2) Student selects at least two (2) courses from group E-5 equivalent to 6 credits	5	STRN454	Special Problems in Construction	3	
	6	STRN455	Feasibility Studies and Project Evaluation	3	
	7	STRN465	Inspection and Maintenance of Structures	3	
	1	PBWN34 2	Ground Water Control Systems	3	
2	PBWN44 6	Deep Excavation and Side Support	3		
(3) Student selects at least two (2) courses from group E-6 equivalent to 6 credits	3	STRN445	Steel Structures Design III	3	
	4	STRN448	Quality and Safety Management	3	
	5	STRN449	Organization Management	3	
	6	STRN453	Project Specifications and Bids	3	
	7	STRN456	Claims In Construction Industry	3	
	8	STRN463	Building Information Modeling	3	

Employment Chances:

- Site Engineer; supervision, site technical office, contract administration, Project Engineer, Project Manager.
- Head office: contract Administration, structural designer, Project Engineer, Project Manager,
- Employer: Owner, Contractor, Consultant.
- Employment of CEM graduates over the past 5 years \approx 100% (average 2-3 months delay)

BEST WISHES

FROM CEM

Prof. Dr. Nabil A.B. Yehia

Prof. Dr. Hatem Mostafa

Prof. Dr. Hesham Osman