

**Civil Engineering
Department
at
CAIRO UNIVERSITY**

Civil Engineering Department

Structural Engineering (STR)

Structures

Materials

Steel

Reinforced Concrete

Construction

Irrigation and Hydraulics (IHD)

Irrigation

Hydraulics

Harbor & Coastal

Public Works (BPW)

Soil Mech. & Found

Highway & Airports

Transportation

Railways

Sanitary

Survey

CEM
2006

STE
2008

WEE
2009

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

Humanities and Engineering

Computers for Eng.

Chemistry

Engineering Graphics

Fundamental of Manufacturing Eng.

Humanities and Engineering

Basic Engineering Design

Sample Study Plan (CEM: cont.)

Sophomore: (100) level courses:

Structural Analysis-1

Structural Analysis-2

Engineering Materials

Fundamentals of Management

Linear Algebra

Mech. of Materials

Intro. to CAD Systems

Intro. to Construction Engng.

Dynamics of Rigid Bodies

Mathematics-4 (Diff. Eqs)

Technical Writing

Human Resources Manag.

Civil Eng. Drawing

Basic Architectural Design

Sample Study Plan (CEM: cont.)

Junior: (200) level courses:

Economics

Mechanical & Electrical Syst.

Probability & Statistics

Economy Strategies in Constr. Industry

Surveying for Engineers

Risk Management

Fluid Mechanics

Open Channel Hydraulics.

Building Constr. & City Planning

Commun. & Present. Skills

Water & waste water Eng.

Accounting

Construction Project Management.

Non-engineering Elective

Engineering Elective 1

industrial Training 1

Sample Study Plan (CEM: cont.)

Senior I: (300) level courses:

Fundamentals of R.C.

Highway Engineering

Steel Structures 1

Marketing

Ethics & Legislation

R.C. Design 1

Construction Planning & Scheduling

Steel Structures 2

Environment

Foundations

Construction Equipment

Construction Methods

Soil Mechanics

Engineering Elective 2

Law and Construction Industry

Seminar 1

industrial Training 2

Sample Study Plan (CEM: cont.)

Senior II: (400) level courses:

Intro. to Construction Contracts

Contract Administration

Cost Engineering1

Risk Manag. in Constr. Industry

Financial Management

Estimating and Quantity Surveying

Engineering Elective 3

Engineering Elective 5

Engineering Elective 4

Engineering Elective 6

Graduation Project 1

Graduation Project 2

Course Map – Construction Engineering & Management

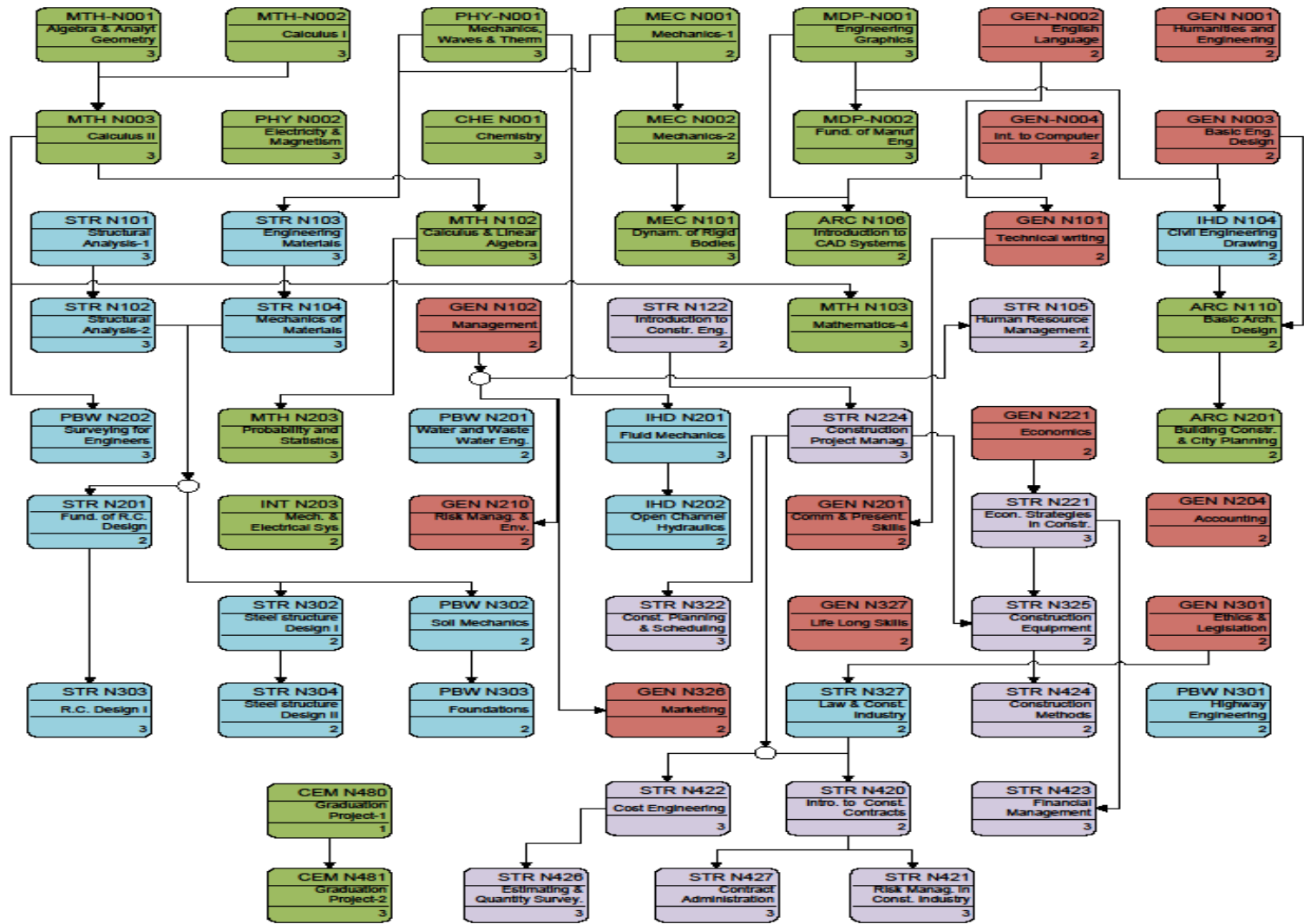
Freshman

Sophomore

Junior

Senior I

Senior II



Legend

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

Course Code
Course Name
Credit Hours

Notes:
 1- Elective, seminar and industrial training courses not shown. Refer to student guide for prerequisites.

	Code	Course Title	Credits	Group
1	GENN301	Ethics and Legislation ⁽¹⁾	2	E-1 ⁽¹⁾
2	GENN310	Advanced Risk Management	2	
3	GENN311	Technical Writing in Arabic	2	
4	GENN321	Foreign Language	2	
5	GENN326	Marketing	2	
6	GENN327	Selections of Life-long Skills	2	
7	GENN331	Business Communication	2	
8	GENN332	Service Management	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

Remarks:

(1) Student selects at least one (1) course from group E-4 equivalent to 3 credits

(2) Student selects at least two (2) courses from group E-5 equivalent to 6 credits

(3) Student selects at least two (2) courses from group E-6 equivalent to 6 credits

	Code	Course Title	Credits	Group
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	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	
5	STRN454	Special Problems in Construction	3	
6	STRN455	Feasibility Studies and Project Evaluation	3	
9	STRN465	Inspection and Maintenance of Structures	3	E-6 ⁽³⁾
1	PBWN342	Ground Water Control Systems	3	
2	PBWN446	Deep Excavation and Side Support	3	
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 months delay)

BEST WISHES

FROM CEM

Prof. Dr. Nabil A.B. Yehia

Prof. Dr. Hatem Mostafa

Prof. Dr. Hesham Osman