CIW 112 : Hydraulics

3 Cr. hrs. = [2 Lect. + 1 Tut + 1 Lab]


Turbinas, Types of turbines, Types of pumps, Pump characteristics and performance, Operation of pumps, Cavitation phenomena.

Laboratory:
01 Flow measurement.
02 Sluice gates.
03 Hydraulic jump.
04 Flow characteristics.
05 Centrifugal pumps.

Textbook:
• C. Nalluri, Martin Marriott, Civil Engineering Hydraulics, Wiley -
Assessment:
Final Exam: 50% , Quizzes: 20% , Year Work: 20% , Experimental/Oral: 10%
CIW 113 : Hydrology

2 Cr. hrs. = [1 Lect. + 2 Tut + 1 Lab]

Introduction: Hydrologic cycle, Environment and hydrology, Importance of hydrology.
Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
CIW 211 : Irrigation Network Engineering

3 Cr. hrs = [3 Lect. + 2 Tut + 0 Lab] Prerequisite: CIW 112, CIS 221, CIW 113

Textbook:
Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
CIW 311 : Design of Irrigation Structures

3 Cr. hrs  = [2 Lect. + 2 Tut + 0 Lab]

Planning and design of Irrigation projects: Alignment of canals and drains, Synoptic diagrams for canals and drains, Design of cross sections for earth channels, Seepage through earth channels, Calculation of expropriation widths, Longitudinal sections and typical cross sections for canals and drains, Canal lining. Irrigation structures: Classification of irrigation structures. Retaining walls: Types, Cases of loading. Hydraulic and structural design. Crossing structures: Hydraulic design, Calculation of loads for different cases of loading and structural design for the following crossing structures: Small R.C. bridges, Culverts, Syphons, Aqueducts. Escapes: Types, Functions, Design. Introduction to heading up works and navigation works.

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%,

E-mail: info@alsalam.edu.eg, www.alsalam.edu.eg
CIW 321: Maps, GIS & Remote Sensing

3 Cr. hrs = [2 Lect. + 1 Tut + 1 Lab] Prerequisite: CIW 121

Principles of GIS: Maps, scale, GIS origins, the development of GIS, map decomposition, map algebra, current GIS market estimates, future market projections and trends; GIS Data: Point, line, and polygon data. Raster, vector and voxel data;
Database structures: Data types: continuous, ordinal and discrete data. Integrating different data structures and data types; General Overview of GIS Capabilities and Functions. Data collection, management, manipulation, analysis, display and visualization; Components of GIS Systems: Software, operating systems, hardware, peripherals, data, people, management, infrastructure; Data Types and Data Sources: Raster, vector, point data sources. Government sources (USGS, etc.) Commercial sources, Sources of international data, remote sensing data sources; GIS Data: GIS digitizing. Digitizing paper map data. Incorporating existing database information, Incorporating GPS data; GIS Resources; Remote Sensing and GIS: Incorporation of remote sensing data into GIS, Remote sensing data types and sources, issues of incorporating and processing raster remote sensing data with vector GIS; GPS and GIS: Incorporation of GPS and other telemetry data into GIS. GPS, Glonass, Argos, and other data types and sources, issues of incorporating and processing point and time data within the GIS environment; Visualization and Simulation: The role of visualization and simulation technologies in GIS Practical Issues in successfully and productively using these technologies.
Laboratory:
01 Layers, Files, Simple Features How do they relate.
02 Digitizing and Intro to topology.
03 Joining attributes to spatial features.
04 Spatial relationships between layers.
05 Data Quality and Table Queries.
06 Working with raster data.

Textbook:

References:

Assessment:
Final Exam: 50% , Quizzes: 20% , Year Work: 20% , Experimental/Oral: 10%
CIW 331 : Environmental Impact of Projects

1 Cr. hrs = [1 Lect. + 0 Tut + 0 Lab]


Textbook:
• A.C. Panchdhari, water supply and sanitary installation, new age international, 2005.

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
CIW 341 : Sanitary Installations in Buildings

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]


Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
CIW 441 : Transportation Engineering

This course provides an introduction to the planning, design and operations of transportation systems, and materials selection, design, operation, management and maintenance of transportation infrastructure. Functional design concepts for both transportation systems and facilities with life cycle costing procedures and criteria for optimization are introduced. This class will help students (1) become familiar with transportation engineering and most planning and engineering design problems in this context; and (2) apply the methodologies introduced in this course to solve transportation engineering problems.

Textbook:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%
CIW 121 : Engineering Surveying

3 Cr. hrs. = [2 Lect. + 1 Tut + 1 Lab]


Laboratory:
1. Development of practical skills in autocad.
2. Basic understanding of data manipulation.
6. Conducting location surveys.
7. Use of various software tools to manipulate data and develop and draw construction plans.

Textbook:

Assessment:
Final Exam: 50% , Quizzes: 20% , Year Work: 20% , Experimental/Oral: 10%
CIW 451 : Harbor Engineering

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite:CIS351

linear theories on regular waves, irregular waves , statistical properties and spectra of sea waves waves propagation and transformation, waves -structures interaction ; structural design of marine infrastructure: Breakwaters, Ramps, Sea Walls, Jetties, Marinas; Harbor geometry; Dredging and Reclamation: Equipment work methods, Environmental aspects, Geotechnical aspects; Hydrographic Surveying; Corrosion protection; Coastal processes; Sediment transport; storm surge ; Modeling.

Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
**CIW 491 : Project**

\[ \text{Cr. hrs.} = \{ \text{Lect.} + 1 \cdot \text{Tut} + \cdot \text{Lab} \}\]

The Graduation Project is the last, but arbitrary and important step in practical instruction, which students have to complete upon the completion of all the required courses stipulated in the teaching program, and is a necessary transit period for students to go from study to practical work. During the graduation project, students are required to fulfill independently all the content and workload set up in the task book, understand the previous work and achievements of the same kind and the same topic done by others, relevant policies and principles of both the state and regions, and have basic economic concept. As a result of this project, students will further improve their abilities to protracting civil engineering drawings, theoretical analysis, structural design, computer applications, and reading capabilities in foreign languages, and comprehensive capabilities to solving engineering problems using the theoretical knowledge they have learned in Civil and Public Works Engineering.

**Assessment:**

*Year Work: 50% , Experimental/Oral: 50%*

**Projects 491:**

The Graduation Project is the last, but arbitrary and important step in practical instruction, which students have to complete upon the completion of all the required courses stipulated in the teaching program, and is a necessary transit period for students to go from study to practical work. During the graduation project, students are required to fulfill independently all the content and workload set up in the task book, understand the previous work and achievements of the same kind and the same topic done by others, relevant policies and principles of both the state and regions, and have basic economic concept. As a result of this project, students will further improve their abilities to protracting civil engineering drawings, theoretical analysis, structural design, computer applications, and reading capabilities in foreign languages, and comprehensive capabilities to solving engineering problems using the theoretical knowledge they have learned in Civil and Public Works Engineering.

**Assessment:**

*Year Work: 50% , Experimental/Oral: 50%*

**Projects 491:**

مشروع 491 : مشروع التخرج هو الخطوة الاخيرة، والمهمة في عملية التعليم الهندسي، والتي يجب إكمالها بعد الانتهاء من كافة الدراسات اللازمة المنصوص عليها في برنامج التدريس، وتعد خطوة الابتعاد الضرورية للطلاب للانتقال من الدراسة إلى العمل التطبيقى. خلال مشروع التخرج، يطلب من الطلاب تحقيق مستقل عن مضمون وحجم المشروع وإعداد مواد العمل وفهم موضوع المشروع والموضوعات السابقة من نفس النوع ونفس الموضوع الذي قام به الآخرون، والسياسات ذات الصلة والمبادئ والأكاديمى الخاصة بموضوع المشروع، وفهم الجوانب الاقتصادية للمشروع. نتيجة لهذا المشروع، سوف يتمكن الطلاب من تحسين قدراتهم في إعداد الرسومات الهندسية، والتحليل النظري، والتصميم الهيكلى، وتطبيقات الحاسب، والقراء باللغات الأجنبية، وقدرات شاملة على حل المشاكل الهندسية باستخدام المعرفة النظرية التي تعلمها في مجال الهندسة المدنية و الهندسة الأشغال العامة.

**Assessment:**

*Year Work: 50% , Experimental/Oral: 50%*
CIW 332 : Sanitary Engineering

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]

Textbook:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%,
CIW 111 : Civil Drawing

3 Cr. hrs. = [1 Lect. + 4 Tut + 0 Lab]


Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

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HUM x72 : Trends in Contemporary Arts

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

Ensemble ٧٢ : الاتجاهات الفنية المعاصرة


2012 - Bsalam

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%

E-mail: info@alsalam.edu.eg, www.alsalam.edu.eg
HUM 012 : English Language 1

2 Cr. hrs. = [1 Lect. + 2 Tut + 0 Lab]

How to talk about the people in your life - how to talk about greeting customs - how to explain who people are - how to correct a misunderstanding - writing a self-introduction - how to talk about your background - how to talk about tourism - how to describe objects - how to tell an anecdote - writing an intercultural experience - how to talk about your schooldays - how to talk about your achievements - how to offer hospitality - how to talk about your education and career - writing a CV - how to say how you feel about things - how to talk about music - how to compare and discuss preference - comparing with as - how to explain what a film is about - writing a description of a film or book - how to talk about countries and governments - how to talk about rules and laws - how to talk about stories in the news - how to talk about past events - writing narrating a story - how to express strong feelings - how to tell and show interest in an anecdote - how to talk about people in your neighborhood (pronouns in reported speech) - how to report what people said - writing exchanging news in a personal letter - how to say how people look - how to talk about fashion - how to talk about plans and intentions - how to express guesses - writing a letter of application - how to talk on the phone - how to talk about ability - how to report an interview - how to report a conversation - writing a report - how to make small talk - how to talk about your future - how to give advice - how to talk about unreal situations - writing an opinion - how to exchange opinion - how to talk about your shopping habits - how to talk about recent activities - how to ask about products in a shop - writing a letter of complaint - how to give and ask about directions - how to talk about holiday accommodation - how to give health advice - how to give extra information - writing a website recommendation - how to explain your point of view - how to talk about hopes and wishes - how to describe the plot of a
.story - how to talk about important decisions - writing a story with a moral

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

E-mail:info@alsalam.edu.eg, www.alsalam.edu.eg
HUM 013 : English Language 2

2 Cr. hrs. = [1 Lect. + 2 Tut + 0 Lab] Prerequisite : HUM 012

Question tags (check information) - futures overview - verb phrase about work (talk about future plans & make predictions) - narrative tenses - time expressions - (write a short story) if structures (1) - (write a dairy entry) - used to/get used to/would - appearance (describe appearance) - present perfect simple & continuous -adjectives with ed&ing endings - (write an informal email) - countable & uncountable nouns - food & cooking - (describe how to prepare & cook a dish) - it’s time/I’d rather/ I’d better - describing personality(describe different types of people) - sequencing devices e.g. after + ing - vocabulary: law & insurance (tell a funny story) - reflexive pronouns - (ask about & give your own beliefs & opinions). present/future modals of possibility - noises) make speculations( - in case - write a formal letter of application - adjectives & adverbs - verb phrases with take - (give a presentation about a place - present/future modals of possibility - noises - (make speculations - in case - (write a formal letter of application - adjectives & adverbs -verb phrases with take - (give a presentation about a place) - emphasis -phrasal verbs with out - (compare & contrast photographs) - although /but/however/nevertheless -feelings - (talk about books - making comparisons - verb phrases about moving/ travelling - (make comparisons about places & people - have/get something else -animal expression - (talk about services - hard and hardly - (write a report of survey findings - Relative clauses - (write an article) - if Structure (2) - speaking - (talk about your regrets & resolutions).

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
HUM 111 : Technical Report Writing

2 Cr. hrs. [1 Lect. + 2 Tut + 0 Lab]  
Prerequisite : HUM 013

Essential elements of a technical report: Abstract - Summary - Contents - Objectives - Details of the report including figures, images, video ...etc, - Conclusions - Recommendations - References use a standard format and the different electronic sources. Report Classification: Technical (Requirement specification, Analysis, Design, and Implementation). Administrative (Directed to different operational and management levels). Levels of confidentiality for the different reports. Report Composition: Logical presentation of the report and coordination between its components. Importance of using correct grammar and punctuation. Enhancing communication effectiveness by the use of different media. Report Implementation: Use of the appropriate software packages including any graphics or multimedia packages.

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
<table>
<thead>
<tr>
<th>Course Code: HUM 121</th>
<th>Course Title: Introduction to Accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 2 Cr. hrs.</td>
<td>[2 Lect. + 0 Tut + 0 Lab]</td>
</tr>
</tbody>
</table>


References:
- Mohamed Sabri El Attar, Mansoura Hamed & Ahmed ElSabagh, Principles of financial Accounting, Cairo University.

Assessment:
HUM 181 : Communication & Presentation Skills

2 Cr. hrs. = [1 Lect. + 2 Tut + 0 Lab]

Course Aims to providing the student with the latest knowledge about the concepts, characteristics, and types of managerial and interpersonal communications, as well as the concepts and requirement of good listening and presentation, and Developing the student’s abilities and skills of effective communication, and good listening, as well as how to use the interpersonal and managerial communication methods and the presentation techniques in performance and dealing with others inside and outside the organization. Course Contents: Concept and nature of communication - Communication model - Formal and informal communications - Interpersonal and managerial communications - Body language - Written communications (Reports and memos) - Ten Commandments of effective communication - Good listing - Elements of effective presentation model - Preparation of good presentation - Carrying out presentations - Discussion and dealing with objections - Evaluating presentation performance.

Textbook:
Assessment:

*Final Exam: 60%, Quizzes: 20%, Year Work: 20%.*
HUM 182 : Analysis & Research Skills

2 Cr. hrs. = [1 Lect. + 2 Tut + 0 Lab]

Analysis Skills: Framework for analyzing engineering problems taking into account technical, economic, environmental, and ethical issues. Phases of problem solving (Understanding the problem and formulating it, Solution plan, Implementation plan, Evaluation, and Revision). Role of creativity in the analysis. SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis for different alternatives. Detailed Cost - Benefit analysis and Risk analysis. Role of cooperation and team - work in analyzing large engineering problems. Importance of finding the relevant data, information, and knowledge. Search Skills: Basic Web search methods and how to formulate search engine queries using logical connectives (e.g. AND, OR, NOT). Phrase, title, domain, URL, and link search. Evaluating search results, choosing the appropriate search engine. Importance of evaluating the credibility of the different Web sites.

Textbook:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
HUM 352 : Human Rights

1 Cr. hrs. = [1 Lect. + 0 Tut + 0 Lab]

Textbook:

1. عصام أحمد زناتى، قانون حقوق الإنسان، دار النهضة العربية، ٢٠١٠。
2. عبد الواحد الفار، قانون حقوق الإنسان في الفكر الوضعي والشريعة الإسلامية، دار النهضة العربية، ١٩٨٧.

References:

1. المجلة المصرية للقانون الدولي.
2. إصدارات المجلس القومي لحقوق الإنسان.

Assessment:

Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
HUM 381 : Principles of Negotiation

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

Course Aims to Providing the student with the latest knowledge about the concepts, dynamic nature, principles, attributes, strategies, and tactics of effective negotiations, and Developing the student’s abilities and skills for good preparation and practices of negotiation in the contemporary organizations. Course Contents: Negotiation concept, attributes, and principles - Dynamic nature of negotiation - Interdependence - Ethics of negotiation - Psychological and social aspects of negotiation - Cooperative and competitive negotiations - Good preparation of negotiation - Strategies and tactics of negotiation - Organizing negotiation - Using power in negotiation - Using questions and dealing with objections - Handling failures in negotiations - Best practices in negotiations (case studies).

Textbook:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
HUM x75  : Arab & Islamic Civilization

2 cr. hrs.  = [2 Lect. + 0 Tut + 0 Lab]

References:


Assessment:

Final Exam: 60% , Quizzes: 20% , Year Work: 20%
HUM x76 : Literary Appreciation

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

 vão x76: التذوق الأدبي

مفهوم النص الإبداعي وأشكال التعبير الوجداني - الأنواع الأدبية الشعرية والانثروبولوجيا والقصصية - نظريات التلفيق وتدوين قراءات الدارس للنص على مستويات الفهم والتذوق والتحليل - أسس التشكيك الجمالي للنص من خلال تحليل: الماهية، الدوافع، الوظائف - أهمية التأريخ للنص والتجربة الأدبية من حيث علاقتها بالمبدع والمرحلة والمجتمع والبيئة - أركان النص الأدبي ومقوماته ونظرياته النقدية حول أسس تحليله وفسيرته وتقديره ونظفيه - النقد النظري والتطويري وال النقد التأريخي الانطباعي وال النقد الموضوعي للنص قديماً وحديثاً - تطبيقات إحدى نظريات التلفيق واستكشاف أعمق النص على أسس الوعي بالتحليل الجماعي للفرائد والأدوات والتراكيب والعمل وقضايا تجارب الشعراء - دراسة آليات التذوق الأدبي وأسس تكوينه من خلال تعدد القراءات للظواهر النقدية والوضوعية - الدرس التطورى على نصوص متميزة من الشعر العربي القديم والمعاصر بما يعكس صوراً منظورية الإدارة وظاهرة التلفيق وما بينهما من علاقات (يمكن دراسة ظاهرة فن المعارف الشعرية).

References:
• عبد الله التطاوى, تفاصيلات الحركة الشعرية بين الموروث والفردي, الدار المصرية اللبنانية ب القاهرة, الطبعة الثانية, 2007.

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

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HUM x71 : Introduction to The History of Civilizations

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

Mفهوم الحضارة ( الثقافة والحضارة - التاريخ والحضارة ) - أصول الحضارة الإنسانية في العصور القديمة 
(البدايات الحضارية الأولى - الثقافة والحضارة في الشرق القديم، وفي الغرب القديم "اليونان والرومان") - 
الحضارة والثقافة في العصور الوسطى (السياحة - الإقطاع - العرب - العصور الإسلامية) - 
الحضارة في العصور الحديثة ( النهضة - الاصلاح الديني - تقدم العلم - الفلسفة والأدب والفنون ).

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
HUM 351 : Professional Ethics

1 Cr. hrs.  = [1 Lect. + 0 Tut + 0 Lab]

Global Vision about Engineering Science & job of Engineer: Engineering Science is the indicator for any civilization since long time ago. - Being an Engineer is one of the finest and the highest job (Engineering job based on creativity, innovation and development from his own imagination - Serving the whole humanity and seeking for the quality in human life). Engineer’s responsibility in the national and the international scale: Vital role for the engineer according to the international engineering contracts (FIDIC) - Responsibility of the engineer according to the Egyptian Laws. Job ethics and etiquette: Global vision on the Engineers Syndicate law no.66 for1974 – Confirming.

References:
- قانون نقابة المهندسين المصرية ولائحته التنفيذية.

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
HUM x62 : Music Appreciation

2 Cr. hrs.  = [2 Lect. + 0 Tut + 0 Lab]

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

The course covers Music Appreciation and includes the following:

- Group musical instruments: the different groups of musical instruments are discussed and identified, and the student is expected to understand and recognize them through the attached images along with the relevant information.

- Grouping of traditional and Arabic instruments: different types of traditional and Arabic instruments are studied and differentiated through this course.

- The student is expected to be able to:
  - Understand and recognize different groups of musical instruments.
  - Identify and differentiate between the different types of traditional and Arabic instruments.

- Communication in efficiency through discussion and essay writing, and the use of scientific data in service of musical culture in other fields.

- The evaluation includes: discussions and explanation during the lectures - oral examinations - written examinations - comprehensive final exam.
HUM x74 : Heritage of Egyptian Literature

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

References:
- عوض مرسي الغباري، كتاب دراسات في الأدب المصري، الدار الدولية للاستثمارات الثقافية، القاهرة، الطبعة الأولى، 2007.

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%
HUM 081 : Computer Skills

0 Cr. hrs. = [1 Lect. + 0 Tut + 4 Lab]  Prerequisite : HUM 012

The goal of this course is to teach and assess basic computer concepts and skills so that students can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities. This curriculum will help students to develop a fundamental understanding of computers; from using the Internet, to sending e-mail, to creating a résumé. This curriculum helps in developing the essential skills the student needs to begin computing with confidence. The course consists of five modules: 1) Computer Basics (Introduction to Computers - Common Computer Terminology - Computer Performance and Features - Computer Operating Systems - Career Opportunities); 2) The Internet and the World Wide Web (The Internet - The World Wide Web - Using e-mail - Other Methods of Communicating on the Internet); 3) Productivity Programs (Introduction to Productivity Programs - Common Features and Commands - Introduction to Word Processing - Introduction to Spreadsheet Programs - Introduction to Presentation Programs - Introduction Database Programs); 4) Computer Security and Privacy (Introduction to Computer Security and Privacy - Protecting Your Computer - Protecting Your Family from Security Threats - Keeping Your Computer Secure and Updated - Computer Ethics); 5) Digital Lifestyles (The Digital Experience, Introduction to Digital Audio - Introduction to Digital Video - Introduction to Digital Photography - Digital Technology and Career Opportunities).
Laboratory:
-- Practice using ICDL components.

Assessment:
Experimental/Oral: 100%
HUM 011 : Arabic Language

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
HUM 221 : Business Administration

2 Cr. hrs. = [2 Lect. + 0 Tut + 0 Lab]

Nature, scope, importance & characteristics of business administration, development of the managerial thought, business external & internal environments, types of institutions, the managerial process. Functions of management: planning: planning concept & importance, types of plans, characteristics & contents of the plan, planning stages, budgeting for planning. Organization: organization concept & importance, characteristics of good & effective organization, types of organization structures, centralization & decentralization, span of supervision, delegation of authority, integration among the different units in the organization. Direction & supervision: Motivation, communications leadership & its different types. Control: concept & importance of control, control steps, objectives, actual performance, the deviation, reasons of the deviation, the corrective actions, types of control, internal & external control. Decision - Making: Types of administrative decisions, decision - making process & steps, importance of information of decision making. Major functions in different companies: production, marketing, finance, human resources.
Textbook:
- Mohamed Abdallah Abd El Rehim, Fundamental of Management & Organization, Cairo University.

References:
- El Desouky Hamed Abou Zeid, the Scientific Fundamentals of Management, Cairo University.

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
HUM x74  : Heritage of Egyptian Literature

2 Cr. hrs.  = [2 Lect. + 0 Tut + 0 Lab]

References:
- E-mail: info@alsalam.edu.eg, www.alsalam.edu.eg

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%
MED 021 : History of Engineering & Technology

1 Cr. hrs. = [1 Lect. + 0 Tut + 0 Lab]

History of Civilization and Technology Development, Humanities and social sciences, Engineering Education and its Disciplines, Scientific thinking and analysis, Technology and Training, Different work methodologies and ethics, Application examples, Course Project.

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
MED 011 : Engineering Drawing & Projection

3 Cr. hrs. = [1 Lect. + 3 Tut + 3 Lab]


References:

Assessment:
Final Exam: 50%, Quizzes: 20%, Year Work: 30%.

Laboratory:
1. Practice on computer graphics packages such as AUTOCAD, SOLIDWORKS, ....etc.
2. Practice on Inserting Dimensions with simple examples.
3. Practice on Normal and Auxiliary Projection using Computer Drafting Packages ....etc.
4. Practice on Sectioning and Documentation with simple examples.
MED 022 : Principles of Manufacturing Engineering

2 Cr. hrs. = [2 Lect. + 1 Tut + 1 Lab]

Engineering Materials, Manufacturing Processes: Casting and molding processes, metal forming, forming of plastics, powder metallurgy; Material Joining processes: welding, soldering, brazing, riveting, joining by mechanical elements; Material removal processes, metal cutting and finishing processes; Practical training.

Laboratory:
1. Practice on standard machining operations.
2. Practice on standard welding operations.
3. Practice on standard Soldering operations.
4. Practice on standard Brazing operations.
5. Practice on standard riveting operations.

References:
• Serope Kalpakjian, Steven Schmid, Manufacturing Engineering & Technology, Prentice Hall, 6th Ed., 2009

Assessment:
Final Exam: 50%, Quizzes: 20%, Year Work: 20%, Experimental/Oral: 10%.
MED 111 : Principles of Design & Manufacturing Engineering

2 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab]

Mechanical components, Motion and power transmission elements, Standard machine elements (threads, fasteners, locking devices, keys, splines, gears, pulleys, bearings, pipe connections, etc.), Welding and riveting conventions, Basics of Machine elements design, Stress analysis, Basic machining processes, Applications of robotics technology.

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
CIS 211 : Structural Analysis 2

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite: CIS 112

Analytical and graphical determination of combined stresses, Deformations of elastic bodies, Double integration method, Conjugate beam method, Virtual work method, Analysis of statically indeterminate structures, Method of consistent deformation, Virtual work method.

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%
CIS 221 : Design of Concrete Structures 1

3 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab] Prerequisite: CIS 112

Study of physical and mechanical properties of concrete and steel reinforcement, Study of structural systems, Statical systems of floor elements and load distribution on different supporting elements, Experimental behaviour of reinforced concrete elements under flexure, Design of short columns under axial and eccentric loads, Design of reinforced concrete beams and statically determinate frames under bending moments and normal and shearing forces using the limit state design method, Study of bond between concrete and steel, The development length of reinforcement, Details of reinforcement of beams and statically determinate frames, Study of serviceability limit states (deflection and cracking)

Textbook:

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,

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Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,

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References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 241 Concrete Technology

3 Cr. hrs. = [2 Lect. + 1 Tut + 1 Lab]  Prerequisite: CIS 141

Laboratory:

طريقة اخذ عينات الخرسانة وتجهيز المكعبات والأسطوانات. 01
اختبار هبوط الخرسانة. 02
اختبار عوسي زمن في بي. 03
اختبار تعقيمة معامل ديك الخرسانة. 04
Textbook:

Assessment:
Final Exam: 50%, Quizzes: 20%, Year Work: 20%, Experimental/Oral: 10%
CIS 351 : Foundations Engineering 1

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  Prerequisite : CIS 251, CIS 221


Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 311 : Structural Analysis 3

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite: CIS 211
Three moment equation method, Slope deflection method, Moment distribution method, Fixed points, Envelopes of internal forces, Euler theory for buckling of compressive members.

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 321 : Design of Concrete Structures 2

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  
Prerequisite : CIS 211, CIS 221

Design of long columns. Design of rectangular and square slabs under uniform loads and line loads, Design of hollow block slabs, One way and two slabs, Design of paneled beams, Design of beams under torsional moment and taking into consideration the effect of shear stresses, Design of stairs, Structural systems for long structures.

Textbook:

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 322 : Design of Wall Bearing Structures

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  Prerequisite : CIS 112


Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 331: Design of Steel Structures 2

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  
Prerequisite: CIS 231


Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%,
CIS 341 : Repair & Strengthening of Structures

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  
Prerequisite : CIS 241, CIS 221


References:
- Peter Emmons, Concrete Repair and Maintenance Illustrated : Problem Analysis; Repair Strategy; Techniques, RS Means, 1993.

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,

References:
- Peter Emmons, Concrete Repair and Maintenance Illustrated : Problem Analysis; Repair Strategy; Techniques, RS Means, 1993.

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 231  : Design of Steel Structures 1

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  
Prerequisite  : CIS 112

Structural steel technology: Metallurgy of steel, Steel fracture, Steel grades, Fatigue.  
Design synthesis: Structural systems, Lateral resistance and bracing systems, Codes and specifications.  
Elements design: Structural behavior of members, Introduction to design philosophies, Local buckling and cross section classification, Tension members, Struts and columns, Bending of beams, Torsion of beams, Beam - columns and frame structures.

Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
CIS 361 : Construction Management

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite : CIS 112

This course is intended to provide an introduction to many facets of the construction management. This course intent is to provide a practical demonstration of the basic management techniques commonly used or encountered on a construction project.

Course Outlines: Project need determination and feasibility studies; Project Cost Evaluation and Estimating; Project Schedule development; Design/Construction Contract Development; Project Engineering/Design; Engineering Procurement Specification development; Cost Accounting and Control; Labor availability Evaluation; Quality Assurance and Control; Safety; Project Closeout

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
CIS 411: Structural Dynamics

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  Prerequisite: CIS 311

Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%
CIS 421 : Design of Concrete Structures 3

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite: CIS 321


Textbook:

References:

Assessment:
- Final Exam: 60%, Quizzes: 20%, Year Work: 20%
CIS 431 : Design of Bridges

3 Cr. hrs.  = [2 Lect. + 2 Tut + 0 Lab]  Prerequisite: CIS 331


References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%,
CIS 432 : Structural Analysis 1

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab] Prerequisite: CIS 211, CIS 221, CIS231

Examines structural aspects of high rise buildings, particularly fundamental approaches to the analysis of the behavior of different forms of building structures including frame, shear wall, tubular, core and outrigger - braced systems. Introducing the forces to which the structure is subjected, design criteria which are of the greatest relevance to tall buildings, and various structural forms which have developed over the years since the first skyscrapers were built at the turn of the century. Modeling of real structures for both preliminary and final analyses. Assessment of the stability of the structure, and the significance of creep and shrinkage. Dynamic response of structures subjected to wind and earthquake forces. Includes both accurate computer-based and approximate methods of analysis.

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

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CIS 451 : Foundations Engineering 2

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]

Types of earth retaining systems; Overview of fill wall systems; Overview of cut wall systems; Earth pressure theory; Mohr’s circle; At rest, active, and passive earth pressures; Influence of movement on earth pressures; Earth pressure from surcharge loads and due to compaction; Earth pressures from seismic forces; Design of externally stabilized walls; Design of gravity and semi - gravity walls; Design of modular gravity walls; Design of sheet pile walls; Design of anchored walls; Reinforcing elements; Fundamentals of soil - reinforcement interaction; Functions and types of geosynthetics; Mechanical properties of geosynthetic reinforcements; Design of internally stabilized walls; Internal stability; Design of mechanically stabilized earth (MSE) walls; Design of segmental retaining walls; Design steps for reinforced steep slopes; Design of soil nail walls; Construction aspects; Deformability analysis of earth retention systems; Performance monitoring of retaining structures, Embankments over soft foundations.

Textbook:

References:
- FHWA, Earth Retaining Structures, National Highway Institute, US Department of Transportation, 2005

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%

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CIS 461: Construction Engineering

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]

The major factors involved in heavy and building construction projects. The material is presented from the point of view of a field engineer with several assignments to illustrate the production planning required for construction projects. Course outline:

- Operational planning assignment;
- Project plans and specification;
- Earthwork fundamentals and calculations;
- Equipment production fundamentals;
- Tractors, Dozers, Rippers, Scarpers, Haulers, Loaders, Excavators;
- Aggregate production systems;
- Conveying systems;
- Formwork;
- Concrete pumps.

Textbook:

Assessment:
- Final Exam: 60%
- Quizzes: 20%
- Year Work: 20%

government. The main factors involved in heavy and building construction projects. The material is presented from the point of view of a field engineer with several assignments to illustrate the production planning required for construction projects. Course outline:

- Operational planning assignment;
- Project plans and specification;
- Earthwork fundamentals and calculations;
- Equipment production fundamentals;
- Tractors, Dozers, Rippers, Scarpers, Haulers, Loaders, Excavators;
- Aggregate production systems;
- Conveying systems;
- Formwork;
- Concrete pumps.

Textbook:

Assessment:
- Final Exam: 60%
- Quizzes: 20%
- Year Work: 20%
CIS 491 : Project

\[ 6 \text{ Cr. hrs.} = \left[ 1 \text{ Lect.} + 1 \text{ Tut} + 0 \text{ Lab} \right] \]

The graduation project is the last, but arbitrary and important step in practical instruction, which students have to complete upon the completion of all the required courses stipulated in the teaching program, and is a necessary transit period for students to go from study to practical work. During the graduation project, students are required to fulfill independently all the content and workload set up in the Task Book, understand the previous work and achievements of the same kind and the same topic done by others, relevant policies and principles of both the state and regions, and have basic economic concept. As a result of the project, students will further improve their abilities of protracting civil engineering drawings, theoretical analysis, structural design, computer applications, reading capabilities in foreign languages, and comprehensive capabilities of solving engineering problems using the theoretical knowledge they have learned in civil, structural and construction engineering.

نوع 491 : مشروع

مشروع التخرج هو الخطوة الأخيرة، والأهمية في عملية التعليم الهندسي، والتي يجب إكمالها بعد الانتهاء من كافة الدراسة اللازمة المنصوص عليها في برنامج التدريس، وتعتبر خطوة العبور اللازمة للطلاب للانتقال من الدراسة إلى العمل التطبيقي. خلال مشروع التخرج، يطلب من الطلاب تحقيق مستقل عن مضمون وحجم المشروع وإعداد موروثات العمل وفهم موضوع المشروع والتشريفات السابقة من نفس النوع ونفس الموضوع الذي قام به الآخرون، والسياسات ذات الصلة والمبادئ والأحكام الخاصة بموضوع المشروع، وفهم الجوانب الاقتصادية للموضوع. نتيجة لهذا المشروع، سوف يتمكن الطلاب من تحسين قدراتهم في إعداد السومات الهندسية، وتحليل النظرية، والتصميم البصري، وتطبيقات الحاسوب، والقراءة باللغات الأجنبية، ومهارات شاملة على حل المشاكل الهندسية باستخدام المعرفة النظرية التي تعلموها في مجال الهندسة المدنية والانتقائية وهندسة التشييد.

Assessment:
Year Work: 50% , Experimental/Oral: 50%
CIS 141: Behavior of Materials

3 Cr. hrs. = [2 Lect. + 1 Tut + 2 Lab]


Laboratory:

1. Test tension and bending on cold and hot bars and test on the machine.
2. Test tension and bending on cold and hot bars and test on the machine.
3. Test tension and bending on cold and hot bars and test on the machine.
4. Test compression and bending on cold and hot bars and test on the machine.
5. Test compression and bending on cold and hot bars and test on the machine.
6. Test compression and bending on cold and hot bars and test on the machine.
7. Test compression and bending on cold and hot bars and test on the machine.
8. Test compression and bending on cold and hot bars and test on the machine.
Assessment:
Final Exam: 50%, Quizzes: 20%, Year Work: 15%, Experimental/Oral: 15%.
CIS 231 : Design of Steel Structures 1

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]  Prerequisite : CIS 112


Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
CIS 111 : Principles of Construction & Building Engineering

2 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab]

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 112 : Structural Analysis 1

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]

Types of loads, Types of supports, Reactions, Stability of statically determinate structures, Internal forces in statically determinate plane beams, Frames and arches, Two and three dimensional analyses of statically determinate trusses, Influence lines for statically determinate beams, Frames, Arches and trusses.

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
CIS 113 : Solid Mechanics

3 Cr. hrs. = [2 Lect. + 2 Tut + 0 Lab]

Rigid and deformable solids; Method of sections for evaluating internal forces in bodies - review of free body diagrams; Axial force, shear and bending moment diagrams; Concept of stress, normal and shear stress; Concept of strain, normal and shear strains; Constitutive relations, Hooke's law; Axially loaded members, force and deflections; Bending and shearing stresses in beams of symmetrical cross - section, concept of shear flow; Torsion of circular shafts; Stress in cylindrical and spherical shells; Combined stress; Principle of superposition and its limitations; Transformation of plane stress and strain, principal stresses and strains, Mohr's circle, strain methods; Bending deflection of simple beams by direct integration methods; Buckling of compression members. Energy concepts; Castigliano's theorems.

Textbook:

References:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20% ,
CIS 151  Geology

2 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab]
Rock forming minerals; Rock types and soil types; Soil and rock properties; Geological structure analysis; Plate tectonics; Geological time (relative and absolute geological age); Geological maps and sections; Discontinuities analysis (Hemispherical projection); Weathering and soils; Surface processes (Floodplains and Alluvium, Glacial Deposits, Climatic Variants), Coastal processes; Groundwater flow; Geological and geophysical site Investigation; Engineering geophysics; Assessment of difficult grounds; Rock excavation; Rock as construction materials.

Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%,
IEN 131 : Monitoring & Quality Control Systems

1 Cr. hrs.  = [1 Lect. + 0 Tut + 0 Lab]


Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.

Textbook:

References:

References:

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IEN 351 : Engineering Economics

2 Cr. hrs = [2 Lect. + 1 Tut + 0 Lab]


Textbook:

References:
• Thusen, G.J. & fabrycky, W.J., Engineering Economy, Prentice Hall, inc. Englewood Cliffs, New Jersey,
Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
IEN 314 : Project Management

2 Cr. hrs = [2 Lect. + 1 Tut + 0 Lab]

Project management overview, organizational structures, assessing success, planning, learning curves, network scheduling techniques, CPM analysis, precedence networking, resource allocation and constraints, cost management, risk management, project performance measurement and control.

Textbook:

References:

Assessment:
Final Exam: 60%, Quizzes: 20%, Year Work: 20%.
MEP 111 : Principles of Mechanical Power Engineering

2 Cr. Hrs. = [2 Lect. + 1 Tut + 0 Lab] Prerequisite : BAS 022, BAS 031

2 Cr. hrs1st. Law of Thermodynamics - Energy conversion - Power cycles - principles of fluid mechanics - Prime movers(Gasoline & Diesel Engines) - Pumps & Turbines
Principles of heat transfer - Simple steam plants - Refrigerators.

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%.
ELE 121 : Principles of Electronic Engineering

2 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab]

Electronic components: PN junction diodes, special diodes, diode circuits applications, rectifiers and peak detectors - Bipolar junction transistors (BJT), Operational amplifiers, Analog signals and measurement, Digital signals and logic circuits - Introduction to microprocessors, CPU - Interfacing with memory - Interfacing with input and output ports.

Textbook:

Assessment:
Final Exam: 60% , Quizzes: 20% , Year Work: 20%
ELP 111 : Principles of Electrical Engineering

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Lectures + Tutorials + Laboratories</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>2</td>
<td>[2 Lect. + 1 Tut + 0 Lab]</td>
<td>BAS 022</td>
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</tbody>
</table>


Textbook:

Assessment:
- Final Exam: 60%, Quizzes: 20%, Year Work: 20%
ARC 111 : Arts & Architecture

2 Cr. hrs. = [2 Lect. + 1 Tut + 0 Lab]

History of Arts, fine arts (painting - Sculpture - ornaments - ... etc) artistic movements in the twentieth century: cubism, Expressionism, futurism and surrealism. Artist groups like de stijl and Bauhaus and their new ideas about the interrelation of the arts, architecture, design and art education. Trends of art through ears and parallel trends of Architecture - Contemporary trends of art and its influence on architecture. Values in art works (contrast, balance, proportion, color, rhythm, movement ...) Artistic values and design principles in architecture.

References:

• الفن يحيى حمودة، نظريات وقيم الجمال المعماري، دار المعارف – القاهرة، 1981.
• ريد، هربرت وترجمة: خشبة سامي، معنى الفن، الهيئة المصرية العامة للكتاب - القاهرة، 1998.
• على رأفت، ثلاثية الإبداع المعماري: الإبداع الفني في العمارة، مركز ابحاث انتر كونسلتي – القاهرة، 1997.
• فيشر، إرنست، ضرورة الفكر، ترجمة: خليفة، الهيئة المصرية للكتاب، القاهرة، 1998.
• محسن عيد غطية، تنويع الفن، الأسسيات - الثقافات - المذاهب، دار المعارف، القاهرة، 1995.

• Whilford, frank, the world of art, hundson, 1984.

Assessment:
Final Exam: 50% , Quizzes: 20% , Year Work: 30%

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ARC 131 : Building Construction 1

3 Cr. hrs. = [1 Lect. + 4 Tut + 0 Lab]

Full understanding of building construction process and related technologies: Study methods of building construction systems and bearing walls construction systems, skeleton construction, and different process of building such as, building with brick and building with stone. Study process of insulation layers, flooring and staircases, and study how to implement the various stages of construction theoretically and practically in sites. Course develops student's skills in understanding building construction process and stages theoretically and practically by identifying the common structural systems, materials and equipment used.

References:

Assessment:
Final Exam: 50%, Quizzes: 20%, Year Work: 30%.