

APPENDICES

APPENDIX A – COURSE SYLLABI

Course Number and Name	414EngC-3 Reinforced Concrete Design (1)
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr.Hassan Magbool and Dr. Hesham Sakr Sherbeni Abou El-Mal
Textbook	Hasson, M. N., “Structural Concrete- Theory and Design”, 3rd Edition, ADDISONWesley 2008 McCormac, Design of Reinforced Concrete, 9th Edition, 2014.
Other supplemental materials	1- Saudi Building Code, Concrete Structures Requirements, SBC 304 2- Saudi Building Code (Concrete Structures commentary, SBC 304C. 3- Saudi Building Code, Loads and Forces Requirements, SBC 301.
Specific course information	
a. Catalog description	This course focuses on the properties and behavior of reinforced concrete as materials. Also, on developing the analysis and design procedures of reinforced concrete structural members (beams, slabs and columns).
b. Prerequisite	324 EngC-3 Structural Analysis (1)
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to: 1-Evaluate the behavior of reinforced concrete and its mechanical properties as compressive strength, tensile strength, shear force and bending moment capacities, and bond between concrete and steel 2- Identify the fundamentals of Ultimate limit state method and approach the design of beams and solid slabs subjected to bending moments in addition to design of short columns subjected to pure compressive force. 3- Differentiate between different types of concrete elements based on shape, alignment, and internal applied force or moment. 4- Design of solid slabs, Beams, and short columns. 5- Prepare detailed design and workshop drawings to be execute in the field. 6- Create small programs or spread sheets for analysis and design of concrete sections and elements. Demonstrate experiments to obtain familiarity with the properties of steam.	

Course number and name	324EngC-3 Structural Analysis (1)
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr.Ali Altom and Dr.Hassan Magbool
Textbook	R. C. Hibbeler, Structural Analysis, 8th Edition, 2012.
Other supplemental materials	Handout Notes, prepared by the lecturer. Hibbeler R.C.; "Structural Analysis", Eight Edition., Prentice Hall, 2012. AslamKassimali, Structural Analysis, 4th edition, CengageLearning, 2011 Wang, C.K, Intermediate Structural Analysis, 7th Ed., Mc Graw Hill, 2008. Journal of Structural Engineering
Specific course information	
a. Catalog description	Analysis of statically determinate trusses, beams, frames and arches; determination of forces in structural members; effects of moving loads; and deflections.
b. Prerequisite	311EngC-4 Strength of Materials.
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Review basics of structural analysis include types of structures, types of loads and types of supports and joints. [a] 2. Understand the deformations of structures under action of loading. [a] 3. Identify stable, unstable determinate structures and introduce the equations of equilibrium for analyze and calculate the internal forces in the statically determinate structures and draw diagrams of shearing force, normal force and bending moment distributions in beams and frames. [a,e] 4. Estimate slope and deflection for various load cases in cantilever and simply supported beams. [a,e] 5. Introduce influence lines for reactions and internal forces under moving load.[a,e] 	

Course number and name	311EngC-4 Strength of Materials
Credits hours	4 Credit hours
Contact hours	6 Contact hours; 3 for lecture, 2 for tutorial and 1 for practical
Instructor name	Dr.Hassan Magbool
Textbook	R. C. Hibbeler, Mechanics of Materials, 8th Edition, 2011.
Other supplemental materials	Cengel. Y. A, "Heat Transfer", 2nd ed. , McGraw- Hill (2003) Geankopliis. C., Toliver. P. R, "Transport processes and separation process principles", 4th ed. Pearson, (2003).
Specific course information	
a. Catalog description	The Concepts and Principles of the structural analysis. Internal forces. The relation between stresses and strains. The properties of the engineering materials
b. Prerequisite	221EngC-3 Engineering Mechanics
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Recall the basic principles and concepts of structural analysis [ABET criteria (a,e)]. 2. Describe properties and behavior of the engineering materials under different types of loading patterns [ABET criteria (a)]. 3. Calculate and Diagram stresses and strains due to axial forces and shearing forces [ABET criteria (a,e)]. 4. Evaluate bending stress due to bending for symmetrical sections [ABET criteria (a,e)]. 5. Evaluate and diagram shear stresses in beams [ABET criteria (e)]. 	

Course number and name	EngC322
Credits hours	4 Credit hours
Contact hours	6 Contact hours; 3 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Souhail Mohammed Bouzgarrou
Textbook	- Wolf .R.P.(1997) Elementary Surveying.
Other supplemental materials	<ol style="list-style-type: none"> 1. Engineering Surveying , W.SCHOFIELD and M.BREACH, 6th Edition, Elsevier Publishing Company, 2007. 2. Guide to Understanding land Surveys, Stephen V.Estopinal, 3rd Edition, WILEY Publishing Company, 2009.
Specific course information	
a. Catalog description	This course illustrates fundamentals and methods of surveying engineering and applications of surveying works in Civil engineering. It helps students to understand practical methods, solve problems and use survey instruments in field. Also, this course to provide the student with map reading.
b. Prerequisite	229MATH 3G-3 Mathematics(3)
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Identify the fundamental principles of land surveying science.(a,e) 2. Classify sources and types of errors in surveying measurements. (a,e) 3. Apply the correction formulae to the measured distances using the tape. (a,e) 4. Compute the unknown survey parameters such as points coordinates , the reduced levels of the ground points, the area of a closed traverse and the related volumes and earthworks. (a,e) 5. Operate the automatic and digital level and digital Theodolite in field measurements. (a,e) 6. Measure the horizontal and vertical angles in a closed traverse using digital Theodolite. (a,e) 7. Evaluate the horizontal and vertical distance using stadia method. (a,e) 	

Course number and name	222EngC-3 Civil Engineering Drawing
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 0 for tutorial and 3 for practical
Instructor name	Lecturer: Afzal Husain Khan
Textbook	Civil Environmental Drawing French&Vierck McGraw-Hill
Other supplemental materials	Drawing for Civil Engineering” by J. A. Van Der Westhuizen, (Paperback - Jan 1, 2000).
Specific course information	
a. Catalog description	Building drawing and steel drawing
b. Prerequisite	222EngC-3 Civil Engineering Drawing(1)
c. Required / Elective	Required
Specific goals for the course	
<p>By the end of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1-Understand basics and fundamentals of civil engineering drawing and its skills. 2- Practice the use of hand drawing tools and drawing sheets. 3- Acquirement of the imaginary skills to understand civil engineering drawings. 4- Understand how reinforcements are distributed inside R.C. elements. 5- Recognize details of connections and splices of steel members. 6- Imagining of projections of common sections of steel and their connections. 7- Estimating dimensions of sections and members during preliminary design. 	

Course number and name	512EngC-4 Environmental Engineering
Credits hours	4 Credit hours
Contact hours	6 Contact hours; 3 for lecture, 1 for tutorial and 2 for practical
Instructor name	Lecturer: Afzal Husain Khan
Textbook	Environmental Engineering Peavy, Rowe and Tchobanoglous McGraw-Hill
Other supplemental materials	Water and Wastewater Technology, Hammer and Hammer Jr. Pearson
Specific course information	
a. Catalog description	Introduction to Environmental Engineering ,water quality, water and wastewater treatment, solid waste management, Air pollution control
b. Prerequisite	422EngC-3 Hydrology and Water Resources Engineering
c. Required / Elective	Required
Specific goals for the course	
<p>By the end of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1- Water and wastewater quality and treatment 2- Air quality, emissions and pollution control 3- Hazardous and solid waste engineering 4- Environmental health (toxicology, industrial hygiene, ecological impacts) 	

Course Number and Name	311EngC-4 Strength of materials
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 3 for lecture, 2 for tutorial and 1 for practical
Instructor name	Dr. Amr Sakr Sherbeni Abou El-Mal
Textbook	Hasson, M. N., "Structural Concrete- Theory and Design", 3rd Edition, ADDISONWesley 2008 McCormac, Design of Reinforced Concrete, 9th Edition, 2014.
Other supplemental materials	Saudi Building Code, Concrete Structures Requirements, SBC 304 Saudi Building Code (Concrete Structures commentary, SBC 304C. Saudi Building Code, Loads and Forces Requirements, SBC 301.
Specific course information	
a. Catalog description	Assessment and Structural Design of Reinforced Concrete Elements
b. Prerequisite	221EngC-3 Engineering Mechanics: Statics
c. Required / Elective	Required
Specific goals for the course	
<p>By the end of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1-Evaluate the behavior of reinforced concrete and its mechanical properties as compressive strength, tensile strength, shear force and bending moment capacities, and bond between concrete and steel 2- Identify the fundamentals of Ultimate limit state method and approach the design of beams and solid slabs subjected to bending moments in addition to design of short columns subjected to pure compressive force. 3- Differentiate between different types of concrete elements based on shape, alignment, and internal applied force or moment. 4- Design of solid slabs, Beams, and short columns. 5- Prepare detailed design and workshop drawings to be executed in the field. 6- Create small programs or spread sheets for analysis and design of concrete sections and elements. <p>Demonstrate experiments to obtain familiarity with the properties of steam.</p>	

Course Number and Name	321EngC-4 Geotechnical Engineering
Credits hours	4Credit hours
Contact hours	6 Contact hours; 3 for lecture, 1 for tutorialand 2 for practical
Instructor name	Dr. Amr Sakr Sherbeni Abou El-Mal and Dr. Abdullah Zeyad
Textbook	Das, B.M., Principles of Geotechnical Engineering, Textbooks. (Hardcover, 2006).
Other supplemental materials	Amr Radwan. 2007.Fundamentals of Soil Mechanics Fethi Azizi. 2000. Applied Analysis in Geotechnics", by, E&FN Spon, Taylor and Francis, London and New York
Specific course information	
a. Catalog description	This course deals with planning and construction of harbors. It includes the hydrodynamics of waves, wind, tidal, and the wave forces on the coastal structures. It presents the design of coastal structures. The course can be improved by applying the software packages for simulation of soil behavior under stresses, so the department should provide with software. There is shortage in soil mechanics books and references at the university library. Technical trips should be arranged for student to polish their knowledge with field applications. The course should comprise topic of site investigation and bearing capacity calculations.
b. Prerequisite	312EngC-3 Geology for Civil Engineering
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Recognize importance of course and lay out of intended subjects. 2. Outline introduction to the fundamentals of soil mechanics 3. Recognize variable types of soils and theories of soils formation 4. Outline distribution of soil pressure. 5. Compare different classifications of soils 6. Compare Settlement of shallow foundations 7. Evaluate Bearing capacity of shallow foundations results in a manner consistent with professional engineering expectations. 	

Course Number and Name	421EngC-3 Foundation Engineering
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Abdullah Mohsen Ahmed Zeyad
Textbook	Das, B.M, Principles of Foundation Engineering, Textbooks. (Hardcover, 2006).
Other supplemental materials	Joseph E. Bowles, Foundation Analysis and Design 5th edn McGraw Hill (1997).
Specific course information	
a. Catalog description	Prepare engineering students to analyze and design shallow (isolated, strip, combined, and raft) foundations and deep foundations and give sufficient drawings and details of these foundations.
b. Prerequisite	321EngC-4 Geotechnical Engineering
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. To identify key Bearing capacity of soil. 2. To interpret report test results in a manner consistent with professional engineering expectations. 3. To design and conduct a simple experiment as well as analyze and interpret the data derived from experiment. 4. To design of deep and design shallow footing. 5. To prepare and test representative samples of these materials and their combinations in accordance with standardized procedures. 6. Analysis and design for bending moments. 7. Calculate required reinforcement for the foundation. 8. Perform calculations for required development lengths of different reinforcements. 9. Perform drawing of the plans and cross sections of foundation. 	

Course Number and Name	412EngC-3 Construction Management
Credits hours	3 Credit hours
Contact hours	4 Contact hours; 2 for lecture, 2 for tutorial and 0 for practical
Instructor name	Dr. Ali Almaliki
Textbook	Daniel W. Halpin, "Construction Management", 3rd Edition, 2006, John Wiley & Sons, New York
Other supplemental materials	Joseph E. Bowles, Foundation Analysis and Design 5th edn McGraw Hill (1997).
Specific course information	
a. Catalog description	construction phases, types of contract, cost estimation, and quality control
b. Prerequisite	Geotechnical Engineering – EngC 321
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ul style="list-style-type: none"> 1- Evaluate the factors to success or fail the construction project 2- Identify the different types of construction projects 3- Differentiate between the quality control and quality assurance 4- Estimate the cost of construction using the design and conceptual design 5- Prepare Bill of Quantities for the construction buildings 6- Create the Critical Path to end any construction project 	

Course Number and Name	413EngC-3 Transportation Engineering
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Hisham Abou Mohammed Halima
Textbook	Traffic and Highway Engineering, Nicholas Garber and Lester Hoel, 5th edition, PWS Publishing Company, 2015.
Other supplemental materials	Transportation Engineering- An Introduction: C. Jotin Khisty and B. Kent Lall, 3rd Edition, Prentice Hall, 2003.
Specific course information	
a. Catalog description	The objective of this course is to teach students the essential components of Transportation Engineering and basic elements of Highway Engineering and Geometric Highway Design; Highway Engineering, Elements of Geometric Design, Stopping and passing Sight Distances, Geometric Design of Horizontal and Vertical Alignments (Plan and Profile) , Transportation Planning, Zoning system characteristics, Origin destination matrix, Travel demand forecasting, Trip generation models, Trip distribution models, Modal split, Traffic assignment.
b. Prerequisite	313EngC-3 Surveying.
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1- Explain the transportation planning process. 2- Design basic horizontal and vertical alignment of the highway 3- Develop a relationship between socioeconomic measures and trip production. 4- Determine the trip interchange between the traffic zones using the gravity model. 5- Determine the percentage of these trips by transit using a mode choice curve. 	

Course Number and Name	522EngC-3 Traffic Engineering
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Hisham Abou Mohammed Halima
Textbook	Traffic Engineering", William McShane, Roger Roess, Elena Prassas, 4 th edition, Prentice Hall (2010).
Other supplemental materials	Traffic and Highway Engineering, Nicholas Garber and Lester Hoel, 5th edition, PWS Publishing Company, 2015.
Specific course information	
a. Catalog description	The purpose of this course is to provide students with the knowledge of traffic operations including traffic data collection, safety and crash studies, traffic flow theory, highway capacity analysis, signalized intersection design and analysis.
b. Prerequisite	413EngC-3 Transportation Engineering.
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Describe the character, elements and impacts of human factors and vehicle characteristics on traffic operations and safety; 2. Identify traffic stream characteristics. 3. Understand the basic traffic flow theory, 4. Use statistical concepts and applications in traffic engineering. 5. Apply the capacity analysis methods for both highway and signalized intersections. 6. Identify level of services for Freeway and multilane Highways. 	

Course Number and Name	415EngC-3 Structural Analysis 2
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Ali Eltom Hassaballa
Textbook	" Handout Notes, prepared by the lecturer
Other supplemental materials	Hibbeler R.C.; "Structural Analysis", Eight Edition., Prentice Hall, 2012. Aslam Kassimali, Structural Analysis, 4th edition, Cengage Learning, 2011 Wang, C.K, Intermediate Structural Analysis, 7th Ed., Mc Graw Hill, 2008. Journal of Structural Engineering Digital library of Jazan University:
Specific course information	
a. Catalog description	Analysis of statically indeterminate structures by slope-deflection method and moment distribution method. Introduction to matrix methods of structural analysis by using flexibility method and stiffness method. Influence lines for statically indeterminate structures. Computer applications.
b. Prerequisite	324EngC-3 Structural analysis 1
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Understand indeterminate structure and methods of analysis. [a] 2. Analysis of indeterminate beams and frames by slope deflection method [a,e] 3. Analysis of indeterminate beams and frames without and with side-sway by using moment distribution method. [a,e] 	

4. Calculation the deflection of trusses, beams and frames by using unit load method.[a,e]
5. Analysis of two pinned arches. [a,e]
6. Apply influence line for indeterminate beams. [a,e]
7. Understand matrix method and its application for computer-based analysis of structure [a,e,k]

Course Number and Name	111Eng C-3 Eng. Mechanics (Static)
Credits hours	3 Credit hours
Contact hours	4 Contact hours; 2 for lecture, 2 for tutorial and 0 for practical
Instructor name	Dr. Abdalla Mostafa Sabaa
Textbook	Engineering Mechanics - Statics, 14th ed., Hibbeler, Prentice Hall, 2012
Other supplemental materials	Vector Mechanics for Engineers - Statics, 8 th Edition, Beer, Johnston & Eisenberg, McGraw-Hill, 2004. 5. Specific Course Information: a. Catalog Description: General description in the form to be used for the Bulletin or Handbook should be attached) b. Prerequisites and/or Co-requisites: EngC 112 (General Physics)
Specific course information	
a. Catalog description	The students will learn about statics
b. Prerequisite	324EngC-3 Structural analysis 1
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Understand the Introduction to basic operations of vector algebra and forces' vectors 2. Analysis the free body diagram representation of a rigid body, and equilibrium analysis of particle(s) in 2D & 3D 3. calculate the moment of a force, force-couple systems force-couple systems 	

4. analysis of rigid bodies in 2D Equilibrium analysis of rigid bodies in 3D
5. apply the structural analysis of plane trusses
6. Analysis of internal actions, and drawing the shear, force and bending moment diagrams.

Course Number and Name	OO5EngC-3 Elective Course (1)
Credits hours	3 Credit hours
Contact hours	3 Contact hours; 3 for lecture, 0 for tutorial and 0 for practical
Instructor name	Dr. Ali Eltom Hassaballa
Textbook	Handout Notes, prepared by the lecturer. Building Code Requirements for Structural Concrete (ACI 318-11) and Commentary, American Concrete Institute, Farmington Hills, MI, 2011.
Other supplemental materials	-State of the Art Report on High-Strength Concrete, ACI 363R-11, ACI Committee 363 Report, American Concrete Institute, Detroit, 2011-1992. -Steven H. Kosmatka, Beatrix Kerkhoff, and William C. Panarese, "Design and Control of Concrete Mixtures", fourteenth edition, Illinois, USA, 2003. -Digital library of jazan university: http://deanships.jazanu.edu.sa/lib/Pages/Default.aspx Academic Students Website: http://www.ceofju.org/vb/
Specific course information	
a. Catalog description	Review of concrete materials, Tests procedures of concrete materials, admixtures and construction materials, fresh concrete, hardened concrete, tests of fresh and hardened concrete.
b. Prerequisite	311EngC-4 strength of materials

c. Required / Elective	Elective
Specific goals for the course	
<p>By the end of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Review concrete materials and testing. 2. Understand and apply admixtures at concrete mixes. 3. Study fresh concrete. 4. Study hardened concrete. 5. Performing laboratory tests for fresh and hardened concrete. 	

Course Number and Name	322EngC-4 Fluid Mechanics
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 3 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Souhail Mohamed Bouzgarrou
Textbook	Fundamentals of Fluid Mechanics by Bruce R. Munson, Donald F.
Other supplemental materials	2. Young, Theodore H. Okiishi, and Wade W. Huebsch (Hardcover Jan 9, 2009).
Specific course information	
a. Catalog description	This course deals with the flow through closed pipes and open channels and defining the flow regimes. The course includes the study to pumps and turbines.
b. Prerequisite	112PHYS-4 General Physics 229 MATH-3 Mathematics (3)
c. Required / Elective	Required
Specific goals for the course	
<p>By the end of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Understand the fluid properties, the hydrostatic pressure force on plan and curved surfaces. 2. A analysis the laws of continuity, energy and momentum. 3. Apply the dimensional analysis and dynamic similarity. 	

Course Number and Name	312EngC-3 Geology for civil engineering
Credits hours	3 Credit hours
Contact hours	4 Contact hours; 2 for lecture, 2 for tutorial and 0 for practical
Instructor name	Dr. Souhail Mohamed Bouzgarrou
Textbook	1. "Introduction To Physical Geology", By Thompson And Turk ISBN 0 030243456 2. Bell, F.G. 2007. Engineering Geology 2 nd Edition, Elsevier Ltd. UK.
Other supplemental materials	Software named surfer 7 for contour maps in 2-D and 3-D
Specific course information	
a. Catalog description	This course deals with Earth, rock, tectonic plates, and soil properties
b. Prerequisite	None
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. Understand the Rock forming minerals, physical and mechanical properties of rock and soils. 3. Learn the Engineering geology 	

4. Describe the stages in the formation of sedimentary rocks
5. Geologic structure: faults and folds
6. Classify rocks based on physical and mineralogical properties
7. Know about the Ground water effect on building and its salt components and study how caverns,

Course Number and Name	411EngC-3 Hydraulics
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Souhail Mohamed Bouzgarrou
Textbook	Fundamentals of Fluid Mechanics by Bruce R. Munson, Donald F.
Other supplemental materials	Young, Theodore H. Okiishi, and Wade W. Huebsch (Hardcover Jan 9, 2009).
Specific course information	
a. Catalog description	This course deals with the flow through closed pipes and open channels and defining the flow regimes. The course includes the study to pumps and turbines.
b. Prerequisite	322EngC-4 Fluid Mechanics
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	

1. Understanding the basics of hydraulics
2. Estimate the flow rate through closed pipes- design the pipe cross-sections
3. Estimate the flow rate through the open channel and design the cross-section.
4. Estimating the powers of pumps and turbines

Course Number and Name	423EngC-3 Design of Steel Structures
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Prof. Ahmed El-Abbasy
Textbook	American Institute of Steel Construction, Inc. (AISC); "DESIGN EXAMPLES", version 15.0, USA, 2017.
Other supplemental materials	Jack C. McCormac, Stephen F. Csernak, "Structural Steel Design", 5th Edition, PEARSON, 2012.
Specific course information	
a. Catalog description	The students will learn about how to analyze and design tension members, compression members, beams, welded connections, and bolted connections.
b. Prerequisite	324EngC-3 Structural Analysis(1)

c. Required / Elective

Required

Specific goals for the course

By the end of this course, the student will be able to:

1. Analysis of tension members
2. Design of tension members
3. Analysis of compression members
4. Design of compression members
5. Design of beams
6. Analysis of welded connections
7. Design of welded connections
8. Analysis of bolted connections
9. Design of bolted connections
10. Layout of steel structures

Course Number and Name	513EngC-3 Harbor & Coastal Engineering
Credits hours	3 Credit hours
Contact hours	5 Contact hours; 2 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Yasser Abdallah Moussa
Textbook	Harbors, Navigational Channels, Estuaries, and Environmental Effects", (Handbook of Coastal & Ocean Engineering) by John B. Herbich (Hardcover - Jan 27, 1992)
Other supplemental materials	b) Digital library of jazan university. http://deanships.jazanu.edu.sa/lib/Pages/Default.aspx
Specific course information	
a. Catalog description	This course deals with planning and construction of harbors. It includes the hydrodynamics of waves, wind, tidal, and the wave forces on the coastal structures. It presents the design of coastal structures
b. Prerequisite	411EngC-3 Hydraulics
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. List and define the fundamentals of wave mechanics, wave forces, and tidal on the coastal structure. [ABET criteria (a)] 2. summarize the processes of coastal wave transformation, and the effects of these transformations on the near shore environment [ABET criteria C-E] 3. Planning and designing harbors. [ABET criteria (C-E)] 4. Design the coastal structures. [ABET criteria (C-E)] 	

Course Number and Name	422EngC-3 Hydrology and water resources
Credits hours	3 Credit hours
Contact hours	6 Contact hours; 3 for lecture, 1 for tutorial and 2 for practical
Instructor name	Dr. Yasser Abdallah Moussa
Textbook	Subramanya, K. Engineering Hydrology, 3rd Edition, Tata-McGraw Hill, 2008
Other supplemental materials	b) Digital library of Jazan University. http://deanships.jazanu.edu.sa/lib/Pages/Default.aspx
Specific course information	
a. Catalog description	This course is designed to teach concepts and physical principles of water flow as well as the techniques that can be used to solve hydrologic problems. The occurrence and distribution of water on Earth is driven by the hydrological cycle, which consists of a set of linked processes that cycle water between the ocean, atmosphere, and land surface. A major objective of the course is to study the individual components of the hydrologic cycle, as well as interactions between these components and their influence on water systems. The physical concepts and methods will be addressed from the perspective of practical applications in water management and associated environmental and infrastructure management. Knowledge of engineering hydrology is required for the design of water distribution, drainage systems, reservoirs, and for the management of flooding. The skills and knowledge required carrying out the hydrologic analyses and designs that are often encountered in engineering practice will be provided..
b. Prerequisite	411EngC-3 Hydraulics
c. Required / Elective	Required
Specific goals for the course	
By the end of this course, the student will be able to:	
<ol style="list-style-type: none"> 1. To list and define the fundamentals of ground water and surface water hydrology [ABET criteria (a)] 2. Define the equations of determining rains, evaporation and storage capacity of reservoir 3. Applied equation to determine the average depth of rains, infiltration through soil, optimum number of rain gage station, and flood routing [ABET criteria C-E] 4. Designing the reservoir capacity. [ABET criteria (C-E)] 	

APPENDIX B – FACULTY VITAE

Ali Yahya Almalki

1. Education:

- 2018 Ph.D., Construction Engineering and Management, North Carolina State University, United States.
- 2011 Master of Construction Engineering and Management, King Fahd University of Petroleum & Minerals (KFUPM), Saudi Arabia.
- 2003 Bachelor of Science, Civil Engineering, King Fahd University of Petroleum & Minerals (KFUPM), Saudi Arabia.

2. Academic experience – institution, full time:

- May 2018 – Present: Jazan University, Saudi Arabia, Assistant Professor
- August 2011 – August 2012: Jazan University, Saudi Arabia, Lecturer.

3. Non-academic experience – company or entity, title, brief description of position, when (ex. 1993-1999), full time or part time

None

4. Certifications or professional registrations.

- Construction Management, Asset Management, Quality Control, Cost Estimating, Inspection, Time Control, Safety at Construction Sites, Data Collecting.

5. Current membership in professional organizations

- Saudi Engineering Council
- American Society of Civil Engineers
- Institute of Transportation Engineers

6. Honors and awards

None

7. Service activities (within and outside of the institution)

None

8. Briefly list the most important publications

- Almalki, A., Rasdorf, W., Pilson, C., Arnold, J., and Whitley, M., “An Infrastructure Maintenance Funding Framework for a Transportation Agency,” Proceedings of the 2016 Construction Research Council, ASCE, San Juan, Puerto Rico, Pgs. 1435-1444 (May 31 –

June 2, 2016).

- Troutman, D., Rasdorf, W., and Almalki, A., “Comparative Analysis of Condition Ratings for North Carolina Highways,” 31st annual National Conference on Undergraduate Research, Council on Undergraduate Research, Memphis, TN, (April 6-8, 2017).
- Rasdorf, W. and Almalki, A., Highway Asset Deterioration Rates, Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C., 2019.
- Almalki, A. and Rasdorf, W., Prediction of Future Asset Condition Ratings, Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C., 2019.

9. Briefly list the most recent professional development activities

None

Mahmoud Abdelrahim Abdelgiom Abdelmahmoud

1. Education – degree, discipline, institution, year

- Ph.D. in surveying, Surveying Engineering- Faculty of Engineering- University of Khartoum (2013).

Specialist: Geographical Information Systems (GIS).

Ph.D. Thesis title: A multi-Purpose Utility Model for Urban Areas in Northern Khartoum using GIS.

- M.Sc. in surveying, Surveying Engineering- Faculty of Engineering- University of Khartoum (2005).

Specialist: Geographical Information Systems (GIS).

M.Sc. Thesis title: Optimum site selection strategies using GIS analysis Techniques.

- B.Sc. (Honours) in surveying, Surveying Engineering- Faculty of Engineering- University of Khartoum (2000).

B.Sc. Graduation Project: Establishing network control points using Total station and automatic level instruments.

2. Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 1990-1995), full time or part time

- Assistant professor, Jazan university -Faculty of Engineering, Department of Civil Eng. from 2016 up to date(Full time)
- Assistant professor, U.OF.K -Faculty of Engineering, Department of surveying Eng. from 2013 -2016(Full time)
- Head Department of Basics and Engineering Sciences, University of Khartoum (U of K), Faculty of Engineering (2013-2015). (Full time)
This department consists of many different mathematical courses in which include:
 - Calculus (I), Calculus(II),Linear algebra(I) and Statistics and probability.(First class students).
 - Mechanical and vectors and differential equations. (2nd class students).
 - Numerical analysis and Complex numbers. (3rd class students).
- Lecturer in U.OF.K-Faculty of Engineering, Department of surveying Eng. from 2005 to 2013. (Full time).
- Teaching Assistant in University OF Khartoum (U.OF .K) department of surveying engineering from 2002 to 2005. (Full time).

3. Non-academic experience – company or entity, title, brief description of position, when (ex. 1993-1999), full time or part time

None

4. Certifications or professional registrations

- GIS and AutoCAD Civil 3D Instructor certificate, UofK- Faculty of Engineering Training

centre (from 2010 to2013).

5. Current membership in professional organizations

- Member of the Department of Civil Engineering Council Since, Jazan University, from 2016 to date.
- Member of the Department Committee of Accreditation Board for Engineering and Technology (ABET), March 2013 to June 2014.
- Department Coordinator of the National Commission for Academic Accreditation and Assessment (NCAAA), from to 15/2/2017 to date.
- Civil Engineering Department Member of the National Commission for Academic Accreditation and Assessment (NCAAA), from 2016 to date.

6. Honors and awards

- PhD., M.Sc. and B.Sc. transcript (University of Khartoum, Faculty of Engineering)
- University Prize for the best academic performance, in the fifth year (1999/2000), in Department of Surveying, Faculty of Engineering & Architecture, University of Khartoum.
- GIS and AutoCAD Civil 3D Instructor certificate, UofK- Faculty of Engineering Training centre (from 2010 to2013).
- International Journal of the current Research Certificate(2019)
- Noor Publishing, bears ISBN 978-3-330-97453-1.(2017)

7. Service activities (within and outside of the institution)

NCAAA and ABET Coordinator of Civil Engineering Department

8. Briefly list the most important publications

- a) Optimum site selection strategist using GIS analysis techniques, International Journal of Multidisciplinary and Scientific Emerging Research (IJMSER), October 2014, Vol.3, No.1
- b) A multi-purpose utility model for urban areas in northern Khartoum using GIS, International Journal of Multidisciplinary and Scientific Emerging Research (IJMSER), October 2014, Vol.3, No.1.
- c) Evaluating Settlement on King Faisal Road Using GIS Analysis Techniques, Springer International Publishing AG, Advancements on Sustainable Civil Infrastructures, Sustainable Civil Infrastructures, 2019, ch.8, ch.8, https://doi.org/10.1007/978-3-319-96241-2_8
- d) INTEGRATION BETWEEN GIS MODEL AND WATER DETECTORS FOR MONITORING AND MANAGING OF WATER NETWORK IN KHARTOUM CENTER AREA, International Journal of Current Research, Vol. 11, Issue, 01, pp.501-507, January, 2019 ,DOI: <https://doi.org/10.24941/ijcr.34067.01.2019>
- e) Modeling the Relative Humidity in New Halfa Agricultural Scheme (Sudan) Volume 5, Issue 2, 2019, PP 23-28 ISSN No. (Online) 2454-9444 DOI: <http://dx.doi.org/10.20431/2454-9444.0502004> www.arcjournals.org

9. Briefly list the most recent professional development activities:

- Supervision of 8th B.Sc. Projects in Road Design, Surveying and GIS, college of Engineering, University of Jazan (2016-up to date)

- Supervision of more than 45 graduate research projects (Final project of 5th year), in the field of, land surveying, and GIS (Geographical Information System). (2005-2016):
- Supervision of 8th M.Sc. Projects in GIS (2013-2014).

Yasser Abdallah Moussa

1. Education

B.S. Science in Civil Engineering in 1997.

M.S. Environmental Sciences, **Civil Engineering in 2002.**

2. Academic experience

University of Zagazig, Professor of hydraulics, college of engineering, 2019 till present (Full time)

University of Jazan, Associate Professor, college of engineering, 2012 till present (Full time)

University of Jazan, Assistant Professor, college of engineering, 2010-2012 (Full time)

University of Zagazig, Assistant Professor, college of engineering, 2005 –2010

University of Zagazig, Assistant lecturer, college of engineering, 2002 –2005

University of Zagazig, Demonstrator, college of engineering, 1998 –2002

3. Non-academic experience

Participating in the gtz project for development the water sector in the governorate of KafrElshikh (w10 zone), Egypt (collaboration project between Germany and Egypt). 2006

4. Certifications or professional registrations:

5. Current membership in professional organizations

Member of Engineering Syndicate since 1997.

Member of the teaching staff of Eng. College, Zagazig University, Zagazig, Egypt, since 2006.

Delegated member of the teaching staff of High Technical Institute in 10th of Ramadan City (2006-2010), Egypt.

Professor of hydraulics, Jazan University, KSA since 2010 until now.

6. Honors and awards

1- Supervise the student paper " Experimental investigation of energy dissipation through Stepped spillway" Which has the First Rank in 4th scientific conference for students of Higher education in K.S.A, Makkah, 19-22 Jumada Alakharea 1434H.

2- Have a certificate from prince Mohamed ben Nasser for participating "day of water world"2018

7. Service activities

a. University Level: NoN

b. College Level: Non

c. School Level: Non

d. Professional Service: Non

e. Community Service: Volunteer for Food Bank in Jazan hospitals

8. Briefly list the most important publications

- a) Mohammed, Y.A., Saleh, Y.K., and Ali, A.M., 2015. Experimental investigation of local scour around multi-vents bridge piers. Alexandria Engineering Journal, Volume 54, Issue 2, June 2015, Pages 197–203
- b) Mohamed, Y.A., Abdel-Aal, G.M., Nasr-Allah T.H., and Awad, A.S. 2016. Experimental and theoretical investigations of scour at bridge abutment. Journal of King Saud University - Engineering Sciences Volume 28, Issue 1, January 2016, Pages 32–40
- c) Nasr-Allah, T.H., Mohamed, Y.A, Abdel-Aal, G.M. and Awad, A.S., 2016. Experimental and numerical simulation of scour at bridge abutment provided with different arrangements of collars. Alexandria Eng. J., <http://dx.doi.org/10.1016/j.aej.2016.01.021>.
- d) Mohamed, Y.A, Nasr-Allah, T.H., Abdel-Aal, G.M. and Awad, A.S., 2015. Investigating the

effect of curved shape of bridge abutment provided with collar on local scour, experimentally and numerically. Ain Shams Engineering Journal 6 (2), 403-411

9. Professional Development Activities:

None

Ahmed Ahmed Abdou El-Abbasy

1. Education:

PhD of structural engineering, Cairo University, 1994.

2. Academic experience:

- Higher Technological Institute, Tenth of Ramadan City, Egypt, Lecturer, 1993-1994, full time.
- Higher Technological Institute, Tenth of Ramadan City, Egypt, Assistant Professor, coordinator of capstone projects, 1994-2000, full time.
- Higher Technological Institute, Tenth of Ramadan City, Egypt, Associate Professor, coordinator of summer training, 2000-2005, full time.
- Higher Technological Institute, Tenth of Ramadan City, Egypt, Professor, Chair of the civil engineering department and vice dean, 2005-2008, full time.
- Russian Egyptian University, Egypt, Professor, Chair of the civil engineering department, 2008-2011, full time.
- Jazan University, Saudi Arabia, Professor, coordinator of capstone projects, 2011-2018, full time.
- Jazan University, Saudi Arabia, Professor, coordinator of the department web site, 2011-till now, full time.

3. Non-academic experience:

- Elwady Algadeed Company for Contracting, Egypt, site engineer, supervision of works in site and quantity surveying, 1986-1990, full time.
- Educational Buildings Organization, Egypt, structural designer, design of educational buildings, 1990-1993, full time.
- Projects Management of Jazan University, Saudi Arabia, structural designer, design of educational buildings of the University, 2012-2014, part time.
-

4. Certifications or professional registrations

- B.S. Civil Engineering, Faculty of Engineering, Cairo University, July 1986.
- Post Graduate Diploma in Earthquake Engineering, Faculty of Engineering, Cairo University, May 2007.
- M.S. Civil Engineering – Structural Engineering, Faculty of Engineering, Cairo University, November 1990.
- Ph.D. Civil Engineering – Structural Engineering, Faculty of Engineering, Cairo University, June 1994.

5. Current membership in professional organizations

- Member of the Syndicate for Egyptian Engineers (SEE),
- Member of the Egyptian Society of Earthquake Engineering (ESEE),
- Member of the American Concrete Institute (ACI),
- Member of the American Society of Civil Engineering (ASCE).

6. Honors and awards:

none

7. Service activities:

- Lecturers in a workshop about earthquake engineering for Civil Defense in Jazan, Saudi Arabia.
- Lecturers for engineers in the Saudi Councils of Engineers, Jazan, Saudi Arabia.

8. Publications in the last five years:

- Al-Maghrabi, M. N. N., **El-Abbasy, A.A.**, "Educational Computer Program for Simulating Behavior of Structures under Dynamic Loads", the American Society of Engineering Education (ASEE), Zone 1, Conference at the University of Bridgeport, April, 3-5, 2014.
- **El-Abbasy, A.A.**, Sharaky, I.A., Sallam, HEM., "Misuse of transfer plate/floor concept in the traditional buildings in KSA", Saudi Council of Engineers, Riyadh. Saudi Arabia, December, 4 – 7, 2017.
- **Ahmed A. El-Abbasy**, "Performance Based Seismic Design of Skyscrapers", Egypt's First Skyscraper Conference, June, 19-20, 2019.

9. The most recent professional development activities:

- An Author of the following book: Mohamed Saad Issa, **Ahmed A. El-Abbasy**, "Examples Oriented Reinforced Concrete Text Book According to ACI318", Dar Elmaarefa, Cairo, Egypt, 2019.

Souhail Mohamed Faraj Bouzgarrou

1. **Education** – degree, discipline, institution, year

Ph.D in Civil Engineering speciality hydraulic- National Engineering School of Tunis (ENIT) - University of Tunis El-Manar(mars 2016). **Mention: Very honorable**

2. Academic experience

Assistant professor in Civil Engineering, ISSAT University of Sousse, Tunisia(Sept. 2018-present)

Assistant in Civil Engineering, ISTLS University of Sousse, Tunisia(sept. 2015- Juin 2018)

Assistant in Civil Engineering, ENIG, University of Gabes, Tunisia.(Sep. 2009- juin2015)

3. Non-academic experience – company or entity, title, brief description of position, when (ex. 1993-1999), full time or part time.

Working as a civil engineer on various construction and civil engineering programmers, creating detailed plans, monitoring/ updating progress, and projects management in general directorate of building and equipment, in the Ministry of Higher Education and Scientific Research in Tunisia. **(Professional experience 2006-2009 full time).**

4. Certifications or professional registrations

- ❖ Certificate of Training on Autodesk Revit Architecture Software
- ❖ Study and dimensioning the structures of some building projects (in professional engineering office)

5. Current membership in professional organizations

Researcher, Research Unit “Energetic And Environment” ENIT, University Of Tunis El-Manar, Tunisia

6. Honors and awards

None

7. Service activities (within and outside of the institution)

- Participate to a three days (December 13-15, 2006), training organized by the National Observatory of public markets in the regulation and execution of public and file preparation of final settlement markets.
- Participate in a three-day training (March 25-29, 2009), organized by the National Observatory of public markets for execution of public contracts, their controls and monitoring as well as participation in workshops work for practical cases.
- Internship in civil engineering design office for 4 months

8. Briefly list the most important publications

- a) **S. Bouzgarrou, H. Jedli, N. Stiti, N. Hamdi, K. Slimi and M. Magana**, Experimental Adsorption and Modelisation of CO₂ on Adsorbents Collected from Elborma Field in South Tunisia. *Journal of Surface Engineered Materials and Advanced Technology*, Vol. 5, pp. 52-63, 2015.<http://dx.doi.org/10.4236/jsemat.2015.51006>
- b) **S. Bouzgarrou, H. Jedli, K. Slimi and M. Bagana**, Etude de l'Adsorption du CO₂ par le sol Tunisien: Adaptation à la Séquestration du CO₂ dans les Aquifères Salins Profonds. *International Journal of Scientific Research & Engineering Technology*, Vol.3, pp.109-115, 2015.http://ipco-co.com/IJSET_Journal/CIER-2014/44.pdf

- c) **S. Bouzgarrou, H.S. Harzallah, H. Jedli and K. Slimi**, Modélisation numérique de l'injection du CO₂ dans le contexte de la séquestration géologique. *International Journal of Scientific Research & Engineering Technology*, Vol.3, pp.50-55, 2015.
- d) http://ipco-co.com/IJSET_Journal/CIER-2014/22.pdf
- e) **H. Jedli, H. Hedfi, A. Jbara, S. Bouzgarrou and K. Slimi**, Mineralogical and Geochemical Characteristics of Caprock Formations used for Storage and Sequestration of Carbon Dioxide. *Journal of Minerals and Materials Characterization and Engineering*, Vol. 3, pp. 409-419, 2015.DOI: 10.4236/jmmce.2015.35045.
- f) **Hedi Jedli , Abdessalem Jbara , HachemHedfi , Souhail Bouzgarrou , Khalifa Slimi** dioxide adsorption isotherm study on various cap rocks in a batch reactor for CO₂ sequestration processes. *Journal of Applied Clay Science*, Science Direct. Vol 143 pp199–207, (2017).DOI:10.1016/j.clay.2016.11.02
- g) **F.Aouaini, S. Bouzgarrou, N. Khemiri, M. Ben Yahia, E. Almogait, F. AlHarbi, A. Almuqrin & A.Ben Lamine**, Study of the CO₂ adsorption isotherms on El Hicha clay by statistical physics treatment: microscopic and macroscopic investigation, *Journal Separation Science and Technology*, received 18 Sep 2018, Accepted 12 Nov 2018, published online: 25 Dec 2018.

9. Briefly list the most recent professional development activities

Scientific framework of two students in research master, three students in professional master, 5students engineer and 8 students in bachelor degree.

Name: Afzal Husain Khan

1. Education

M.Tech, Environmental Engineering, Aligarh Muslim University (AMU), India,2011
BE, Civil Engineering, Aligarh Muslim University (AMU), India,2009

2. Academic experience

Jazan University, Lecturer (2013 up to date)

Integral University, India, Teaching Assistant,2012-2013

3. Non-academic experience –

None

4. Certifications or professional registrations

None

5. Current membership in professional organizations

None

6. Honors and awards

- Graduate with honors (BE degree at AMU)
- Qualified GATE-2011 (Graduate Aptitude Test in Engineering) conducted by Indian Institute of Technology

7. Service activities (within and outside of the institution)

8. Briefly list the most important publications

Akhalakur Rahman Ansari; Mohd Imran; I.S. Yahia; Mohamed Shaaban Abdel-Wahab; Ahmed Alshahrie; **Afzal Husain Khan**; Chandan Sharma, '*Effect of microwave power on morphology of AgO thin film grown using microwave plasma CVD*', 'International Journal of Surface Science and Engineering', Volume 12, Number 1(2018) ,pp.1 - 12

9. Briefly list the most recent professional development activities

- Member of NCAAA committee, standard 8 and 9, 2016-17.

Dr. Hesham Sakr Sherbeni Abouelmal

1. Education

Philosophical Degree of Structural Engineering (Zagazig University, 2007)

2. Academic experience

Assistant Professor (2007-2019)

3. Non-academic experience

None

4. Certifications or professional registrations:

PEng.1993

5. Current membership in professional organizations :

Egysynd.1993

6. Honors and awards:

Governmental Scholar ship for PhD

7. Service activities (within and outside of the institution)

None

8. Briefly list the most important publications

None

9. Briefly list the most recent professional development activities

None

Abdullah Mohsen Ahmed Zeyad

1. **Education** – degree: PhD, discipline: Civil. Eng, institution: University Science Malaysia, year: 2013

2. **Academic experience** – institution, full time:

- Assistant Professor, Department of Civil Eng., Faculty Engineering, Civil of Eng. Department, Jazan University, Jazan, Kingdom of Saudi Arabia (2015- Present).

- Assistant Head of Department of Civil Engineering, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2013-2015).
- Assistant Professor, Department of Civil Eng., Faculty Engineering, Civil of Eng. Department, Jazan University, Jazan, Kingdom of Saudi Arabia (2015- Present).
- Assistant Head of Department of Civil Engineering, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2013-2015).
- Assistant Professor, Department of Civil Eng., Faculty Engineering, Science and Technology University, Sana'a, Yemen (2013-2015).
- Member of Academic Accreditation Committee (APET), Department of Civil Eng., Faculty Engineering, Science and Technology University, Sana'a, Yemen (2014-2015).
- Committee Member of Program Specification Document, Department Civil of Engineering (PSD), Faculty Engineering, Science and Technology University, Sana'a, Yemen (2014-2015).
- Head of the Academic Development Committee, Civil of Eng. Department, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2014-2015).
- Graduate Research Assistant (GRA) in the School of Civil Engineering, University Science Malaysia, (1May-30Jun 2013).
- Lecturer, Department of Civil Engineering, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2004-2006) and (2007-2009).
- Head of Quality Assurance Committee, Department of Civil Eng., Faculty Engineering, Science and Technology University, Sana'a, Yemen (2004-2006) and (2007-2009).
- Head of Discipline Committee, Department of Civil Eng., Faculty Engineering, Science and Technology University, Sana'a, Yemen (2004-2006) and (2007-2009).

3. **Non-academic experience** – company or entity, title, brief description of position, when (ex. 1993-1999), full time:

- General Supervisor of the Department of Civil Engineering Laboratories, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2004-2006) and (2007-2009), part time
- Supervisor of the Laboratory Experiments for the Graduation Projects, Civil of Eng. Department, Faculty Engineering, Science and Technology University, Sana'a, Yemen (2004-2006) and (2007-2009), part time

4. **Certifications or professional registrations.**

None

5. **Current membership in professional organizations**

- Certified Engineer at the Municipality, Al-Madinah Al-Munawarah, Kingdom Saudi Arabia, (2006).
- Certified Engineer at the Municipality Dubai, United Arab Emirates (2009).
- Member of Yemeni Syndicate of Engineers (YEA), Yemen, (1999-Present).

6. Honors and awards

- Awarded of University Science Malaysia of Research Grant No. (1001/PAWAM/814103), Short-Term Grant Schemes for undertaking the research work.
- Awarded Silver Medal in Malaysia Technology Exhibition 2013 for the invention titled: U-POFA: A Highly Efficient Cement Supplement for High Strength Green Concrete, held in PWTC Kuala Lumpur (21-23 February 2013), organized by Ministry of Science, Technology and Innovation.
- Awarded Silver Medal in Malaysia Bio Innovation 2013 for the innovation titled: U-POFA: Green Palm Oil Fuel Ash Based Supplementary Binder for High Performance Concrete, held in Kuala Lumpur, Malaysia.

7. Service activities (within and outside of the institution)

8. Briefly list the most important publications

- M. A. Megat Johari, A. M. Zeyad, N. Muhamad Bunnori, K. S. Ariffin (2012). Engineering and transport properties of high-strength green concrete containing high volume of ultrafine palm oil fuel ash. *Construction and Building Materials*, 30, pp. 281-288.
- A. M. Zeyad, M. A. Megat Johari, N. Muhammad Bunnori & K. S. Ariffin (2013). Early age characteristics and compressive strength of high-strength green concrete containing palm oil fuel ash. *Caspian Journal of Applied Sciences Research*, 2(4), pp. 01-10.
- A. M. Zeyad, M. A. Megat Johari, N. N. Muhammad Bunnori & K. S. Ariffin & Nurdeen M. Altwair (2013). Characteristics of treated palm oil fuel ash and its effects on properties of high strength concrete. *Advanced Materials Research*, 626, pp. 152-156.
- Nurdeen M. Altwair, M. A. Megat Johari, S. F. Saiyid Hashim & A. M. Zeyad (2013). Mechanical properties of engineered cementitious composite with palm oil fuel ash as a supplementary binder. *Advanced Materials Research*, 626, pp. 121-125.
- Nurdeen M. Altwair, M. A. Megat Johari, A. M. Zeyad & S. F. Saiyid Hashim (2013). Pozzolanic characteristics of palm oil waste ash (POWA) and treated palm oil fuel ash (TPOFA). *Advances in Civil Engineering and Building Materials-Chang, Al Bahar & Zhao(Eds)*, CRC Press, Taylor & Francis Group, pp.145-149.
- Bassam A. Tayeh, B. H. Abu Bakar, M. A. Megat Johari & A. M. Zeyad (2013). The role of silica fume in the adhesion of concrete restoration systems. *Advanced Materials Research*, 626, pp. 265-269.
- Bassam A. Tayeh, B. H. Abu Bakar, b, M. A. Megat Johari & A. M. Zeyad (2013). Flexural Strength Behavior of Composite UHPFC-Existing Concrete. *Advanced Materials Research*. 701, pp. 32-36.
- Ahmed N. Mohammed, Megat A. Megat Johari, Abdullah M. Zeyad, Bassam A. Tayeh and Moruf O. Yusuf (2014). Improving the Engineering and Fluid Transport Properties of Ultra-High Strength Concrete Utilizing Ultrafine Palm Oil Fuel Ash. *Journal of Advanced Concrete Technology* Vol. 12, 127-137.
- Bassam A. Tayeh, B H Abu Bakar, M A Megat Johari, A.M. Zeyad (2014). Microstructural Analysis of the Adhesion Mechanism between Old Concrete Substrate and UHPFC. *Journal of Adhesion Science and Technology*, doi.org/10.1080/01694243.2014.925386.
- A.M. Zeyad, M.A. Megat Johari. B. A. Tayeh, Moruf Olalekan Yusuf (2016). Efficiency of treated and untreated palm oil fuel ash as a supplementary binder on engineering and fluid

transport properties of high-strength concrete. *Construction and Building Materials*. 125 , 1066–1079.

- A.M. Zeyad, M.A. Megat Johari. B. A. Tayeh, Moruf Olalekan Yusuf (2016). Pozzolanic reactivity of ultrafine palm oil fuel ash waste on strength and durability performances of high strength concrete. *Journal of Cleaner Production*. 144, 511–522.
- Abdullah M. Zeyad (2017). Effect of curing methods in hot weather on the properties of high-strength concretes. *Journal of King Saud University – Engineering Sciences*, DOI: 10.1016/j.jksues.2017.04.004.
- Lawend K. Askar, Bassam Tayeh, B. H. Abu Bakar, A.M. Zeyad (2017). Properties of Ultra-High Performance Fiber Concrete (UHPC) under different curing regimes, *International Journal of Civil Engineering and Technology*, 8, 4, 965–974.
- Abdullah M. Zeyad and Abdalla M. Saba. (2018). INFLUENCE OF PULVERIZED FLY ASH ON THE PROPERTIES OF SELF-COMPACTING FIBER REINFORCED CONCRETE. *Scientific Journal of King Faisal University (Basic and Applied Sciences)*. Acceptance letter.
- A. M. Zeyad, Bassam A. Tayeh, M. A. Megat Johari and Abdalla M. Saba. (2018). Workability, Setting Time and Strength of High-Strength Concrete Containing High Volume of Palm Oil Fuel Ash. *The Open Civil Engineering Journal*. Volume 12, 2018, 35-46.
- A. M. Zeyad, M. A. Megat Johari, Bassam Tayeh, Ibrahim M. Alshaikh. Influence of Palm Oil Fuel Ash on Properties of High-Strength Green Concrete. (2018). *Scientific Journal of King Faisal University (Basic and Applied Sciences)*, vol.19, Iss.2, 55-68.
- A. M. Zeyad, Bassam A. Tayeh, M. A. Megat Johari and Abdalla M. Saba. (2017). Ultrafine Palm Oil Fuel Ash: From an Agro-Industry By-Product into a Highly Efficient Mineral Admixture for High Strength Green Concrete. *Journal of Engineering and Applied Sciences*. Vol. 12, Issu. 7 SI, 8187-8196.

- INTERNATIONAL CONFERENCES
 - A. M. Zeyad, M. A. Megat Johari, N. Muhammad Bunnori, K. S. Ariffin (2012). Influence of treatment palm oil fuel ash on properties of high-strength green concrete. 11th International Conference on Concrete Engineering and Technology 2012 (CONCET2012), 12th–13th June 2012 Putrajaya, Malaysia, pp. 343-348.
 - A. M. Zeyad, M. A. Megat Johari, N. Muhammad Bunnori, K. S. Ariffin. (2012). Early age characteristics and compressive strength of high-strength green concrete containing palm oil fuel ash. *Awam International Conference on Civil Engineering (AICCE'12) and Geohazard Information Zonation (GIZ'12)*, 28th-30th August 2012, Penang, Malaysia, pp. 98-107.
 - Abdullah M. Zeyad, Abdalla M. Saba, Abdulalrahman B. Shathly, Turki H. Alfaufy. (2018). Influence of steel fiber content on fresh and hardened properties of self-compacting concrete. *International Conference on Advances in Civil Engineering and Science Technology (ICACEST 2018)*, organized by the faculty of civil engineering, universiti teknologi MARA (UiTM), 5th- 6th of September 2018, Penang, Malaysia,

9. Briefly list the most recent professional development activities

None

Hisham Mohamed Shehata Abou Halima.

1. **Education:** PhD of Geodesy and applied surveying, TU-Dresden, Germany, 1992.

2. **Academic experience:**

- Mansoura University, Egypt, Demonstrator, 1980 – 1985, full time.
- Mansoura University, Egypt, Lecture, 1985 – 1987, full time.
- Mansoura University, Egypt, Assistant professor, 1992 – 1995, full time.
- Gar younis University, Libya, Assistant professor, 1995 – 1997, full time.
- Mansoura University, Egypt, Assistant professor, 1997 – 2002, full time.
- Mansoura University, Egypt, Associate professor, 2002 – 2008, full time.
- Jazan University, Saudi Arabia, Associate Professor, 2008- till now, full time.
- Jazan University, Saudi Arabia, Associate Professor, coordinator of the surveying Lab, 2010- 2017, full time.

- Jazan University, Saudi Arabia, Associate Professor, coordinator of capstone projects, 2018- till now, full time.

3. Non-academic experience:

- Urban Studies & Design Center – Consulting Engineers, Egypt, design and site engineer, supervision of works in site and quantity surveying, 1993-2003, part time.
- Educational Buildings Organization, Egypt, consulter and designer, design of educational buildings, 1992-1999, part time.
- Engineering Studies, Research and Consulting Center, Mansoura University, 1992-2005, part time.

4. Certifications or professional registrations

- B.S. Civil Engineering, Faculty of Engineering, Mansoura University, 1980.
- M.S. Civil Engineering (Geodetic Surveying), Mansoura University, 1985.
- Ph.D. Civil Engineering (Geodetic Surveying), TU-Dresden, Germany, 1992.
- Post doctor, Technical University of Dresden, Germany, 1996.
- Post doctor, Technical University of Hannover, Germany 2000.
- Post doctor, Technical University of Karls Ruhe, Germany 2004.

5. Current membership in professional organizations

- Member of the Syndicate for Egyptian Engineers (SEE),
- Member of the Egyptian Survey Authority (ESA),
- Member of the Deutsche Vermessungswesen (DVW),
- Member of the Deutsche Geodaetische Kommission (DGK).

6. Honors and awards:

None

7. Service activities:

- Lecturers in the workshops about GPS as a new technique of satellite surveying, for Civil engineers in Mansoura, Egypt.
- Lecturers for engineers in the Syndicate for Egyptian Engineers, Mansoura, Egypt.

8. Publications in the last five years:

None

9. The most recent professional development activities:

None

Abdalla Mostafa Aly Sabaa

1. Education

- 2002 Ph.D., Engineering Materials (Civil Engineering), Zagazig University, EGYPT.
- 1995 M.Sc., Engineering Materials (Civil Engineering), Zagazig University, EGYPT.
- 1987 B.Sc., Civil Engineering (very good with honor), Zagazig University, EGYPT.

2. Academic experience – institution, full time:

2012-NOW	Associate professor	Jazan University-Saudi
2006-2012	Associate professor	7 th of April University-Libya
2002-2006	Assistant Professor	Zagazig University-Egypt
1994-2001	Adjunct Professor	Agriculture Department, Zagazig University
1987-1993	Teaching Assistant	Zagazig University-Egypt

3. Non-academic experience:

None

4. Certifications or professional registrations.

Engineering Materials, Composite Materials, Stress Analysis, Fracture Mechanics, Failure Analysis, and repair and strengthening of reinforced concrete and Concrete Design.

5. Current membership in professional organizations

6. Honors and awards

- Supervised graduation projects for B.Sc. students in engineering materials in Zagazig University, and 7th of April University.
- Supervised M.Sc. degrees in engineering materials in the following topics:
 - Fracture of Engineering materials, Fiber Reinforced concrete, High Performance Concrete, Fiber Reinforced polymers.
 - Supervised projects

7. Service activities (within and outside of the institution)

8. Briefly list the most important publications

- a) **6th International Conference on Production Engineering, Design and Control.** February 1997, Alexandria, Egypt.
- b) **International conference on Engineering Against Fatigue,** March 1997, Sheffield, UK.
- c) **Third Alexandria Conference On Structural and Geotechnical Engineering,** December 1997, Alexandria, Egypt.
- d) **First International Conference On Civil Engineering,** March 1998, Helwan University, Cairo.
- e) **8th International Conference On Aerospace Science And Auitation Technology,** May 1999, Cairo.
- f) **6th International Conference On Building And Construction, Interbuild 99,** June 1999, Cairo.
- g) **Al-Azhar Engineering Sixth International Conference,** September 2000, Cairo, EGYPT.
- h) **III- Middle East Regional Conference On Civil Engineering Technology, Asce-Egs,** April 2002, Cairo.
- i) **Fourth International Conference On Civil And Architecture Engineering, ICCAE,** May 2002, Cairo.
- j) **Al-Azhar Engineering 7th International Conference,** AEIC 2003, April 2003, Cairo, EGYPT.
- k) H.E.M. Sallam, A.A.M. Badawy, A.M. Saba, F.A. Mikhail (Flexural **behavior** of strengthened steel_concrete composite beams by various plating methods) **Journal of Constructional Steel Research** 66 (2010) 1081-1087
- l) A.M.Zeyad, M.A.Megat Johari, Bassam A.Tayeh and Abdalla Saba (Ultrafine Palm Oil Fuel Ash: From an Agro-Industry By-Product into a Highly Efficient Mineral Admixture for High Strength Green Concrete) *Journal of Engineering and Applied Sciences* 12(Special Issue 7):8187 -8196,2017 ISSN:1816-949X
- m) A.M. Zeyad, Bassam A. Tayeh,*, Abdalla M. Saba and M.A. Megat Johari (Workability, Setting Time and Strength of High-Strength Concrete Containing High Volume of Palm Oil Fuel Ash) *The Open Civil Engineering Journal* Vol.12, pp.35-46,2018 1874-1495

- n) A.M.Zeyad, Abdalla M. Saba(Influence of Pulverized Fly Ash on the Properties of Self-Compacting) **Scientific Journal of King Faisal University (Basic and Applied Sciences)** 2018, 1658-0311

9.Briefly list the most recent professional development activities: non