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1. Chairman's Welcoming Message

Welcome to the Department of Civil Engineering which is one of the major and active engineering departments at Eastern Mediterranean University (EMU). We offer BS, MS and PhD in Civil Engineering. This department has more than 30 years history of producing more than 2000 high quality graduates to the national and international construction industries. Civil Engineering graduates have a wide variety of employment opportunities in both the private as well as the public sectors. Civil engineering has become an extremely diverse field with many areas of application in many countries of our graduates during last decades. As a matter of fact, civil engineers play a key role in the development of nations.

Civil engineering is the profession which designs, constructs, operates and maintains the basic systems that make our life simple and sustainable. These systems and natural environment have mutual impacts on each other which may cause social, economic, legal and environmental issues.

Civil engineering programs are intended to satisfy the needs of the society from technical points of view. The rapid introduction of modern materials, measurement techniques, construction methods and management tools require properly trained civil engineers. Our program objectives are continuously updated keeping in view these factors. The undergraduate program of civil engineering at EMU is designed to develop knowledgeable and creative engineers with strong capabilities for innovation and management. The Civil Engineering Department was accredited by ABET in 2010. The well equipped and sophisticated extensive teaching and research laboratories play a major role in the professional and practical development of our students.

Civil Engineering Department has qualified and experienced full-time faculty comprising 2 professor, 6 associate professors, 6 assistant professors, 1 lecturer, apart from the supporting laboratory and secretarial staff. We have 19 research assistants and 5 personnel. All of the faculty members have national and international reputations. We also provide consultancy services to local community and industry. In this way, Civil Engineering Department contributes to the economic, social and cultural development of the nation. The Civil Engineering Department has tried to include information in this leaflet that will be useful to our prospective students, present undergraduate students, parents, former students, interested colleagues and friends of the department.

Prof.Dr. Serhan ŞENSOY
Acting Chairman

2. Vision, Mission, Educational Objectives and Program Outcomes of EMU Civil Engineering Program According to ABET Engineering Criteria 2000

2.1 Vision

The Civil Engineering Department is envisioned to become one of the leading departments in the region that has internationally acknowledged education and research yielding graduates who are well equipped with knowledge on contemporary issues and requirements of the profession.

2.2 Mission

The Civil Engineering Department is dedicated to educate students at a level where they will have adequate depth and breadth of knowledge to be competitive in industry, public service and academia. Department provides services to the university, industry and the public by increasing their awareness and helping in their development via state-of-the-art research.

2.3 Program Educational Objectives

Three to five years after graduation, the Civil Engineering undergraduate program graduates are expected to accomplish the following educational objectives;

1. work successfully in industry and/or have successful career in government or academia, contribute to the development of the civil engineering profession, conform to ethical values and environmentally friendly policies,
2. specialize through further studies and/or work experience in the areas of civil engineering,
3. stay up to date in their profession and contribute to the advancement of the society
4. depict effective leadership in multicultural work environment of the competitive world

2.4 Student Outcomes

- a) an ability to apply knowledge of mathematics, science, and engineering,
- b) an ability to design and conduct experiments, as well as to analyze and interpret data,
- c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as social, political, ethical, health and safety, manufacturability, and sustainability,
- d) an ability to function on multidisciplinary teams,
- e) an ability to identify, formulate, and solve engineering problems,

- f) an understanding of professional and ethical responsibility,
- g) an ability to communicate effectively,
- h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- i) a recognition of the need for, and an ability to engage in life-long learning,
- j) a knowledge of contemporary issues,
- k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice,
- l) capability of independent learning as a consequence of laboratory and field research and competitions on design experiences.
- m) an ability to communicate in a bilingual environment.

3. Academic Staff Members

Özgür Eren, Professor, (Vice-Rector)

BS 1990 Eastern Mediterranean University, Civil Engineering
 MSc 1991 University of Leeds, Construction Materials
 PhD 1999 Eastern Mediterranean University, Construction Materials
 Fiber reinforced concrete, high strength concrete, self-consolidating concrete, mineral admixtures in concrete, natural building stones, repair and maintenance of concrete.
 Phone: 630-1098; e-mail: ozgur.eren@emu.edu.tr

Zalihe Sezai, Professor

BEng 1986 Higher Technological Institute, Civil Engineering
 MS 1988 İstanbul Technical University, Geotechnics
 PhD 2001 Eastern Mediterranean University, Geotechnics
 Expansive soils, soil stabilization, soils of arid environment, soil behaviour, calcareous soils.
 Phone: 630-1320; e-mail: zalihe.nalbantoglu@emu.edu.tr

Serhan Şensoy, Associate Professor, (Acting-Chair)

BS 1993 Eastern Mediterranean University, Civil Engineering
 MS 1995 Eastern Mediterranean University, Structural Engineering
 PhD 1999 Eastern Mediterranean University, Structural Engineering
 Non-linear dynamics and stability of engineering systems, seismic vulnerability assessment of existing buildings, earthquake resistant design of buildings, inelastic stability of structures, performance based design of structures.
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Umut Türker, Associate Professor (Vice-Chair)

BS 1994 Middle East Technical University, Civil Engineering,
MS 1998 Middle East Technical University, Water Resources,
PhD 2002 İstanbul Technical University, Coastal Engineering,
Coastal sediment transport, environmental hydraulics, water resources management.
Phone: 630-1233; e-mail: umut.turker@emu.edu.tr

Mustafa Ergil, Associate Professor

BS 1987 King Abdulaziz Univ. (KSA), Civil Engineering
MS 1989 Middle East Technical University, Hydraulics
PhD 1999 Eastern Mediterranean University, Hydraulics
Groundwater and contamination, sediment transport and erosion, potable and waste water with drainage system designs, hydro-climatologic changes, and integrated water resources management.
Phone: 630-2333; e-mail: mustafa.ergil@emu.edu.tr

İbrahim Yitmen, Associate Professor

BS 1993 İstanbul Technical University, Civil Engineering
MS 1995 Eastern Mediterranean University, Construction Management
PhD 2002 İstanbul Technical University, Construction Management
New trends in project procurement systems, Strategic partnerships in construction industry, Culture and organizational learning in construction industry, Innovation in construction process, Information technology in construction management.
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Khaled Marar, Associate Professor

BEng 1988 Eastern Mediterranean University, Civil Engineering
MSc 1994 Eastern Mediterranean University, Construction Materials
PhD 2000 Eastern Mediterranean University, Construction Materials
Fiber Reinforced Concrete, Concrete Technology, High Strength Concrete, Cement Replacement Materials
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Mürüde Çelikağ, Associate Professor

BS 1984 Higher Technological Institute, Civil Engineering
Mphil 1986 University of Sheffield, Structural Mechanics
PhD 1990 University of Sheffield, Structural Mechanics
Steel beam to column connections, appraisal and repair of structures, lateral stability methods for high rise steel structures, progressive collapse in steel structures, optimization of trusses
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Mehmet M. Kunt, Assistant Professor

BS 1986 Middle East Technical University, Civil Engineering

MS 1991 University of Texas at Austin, Transportation

PhD 1995 University of Texas at Austin, Transportation

Pavement design, pavement behaviour stochastic modeling, pavement management systems, traffic engineering, simulations, reliability, traffic accident analysis, data collection, concrete behaviour, cost estimation, project management

Phone: 630-2353; e-mail: metin.kunt@emu.edu.tr

Giray Özey, Assistant Professor

BS 1992 Eastern Mediterranean University, Civil Engineering

MS 1994 Eastern Mediterranean University, Structural Mechanics

PhD 1999 Eastern Mediterranean University, Structural Mechanics

Structural dynamics, non-prismatic members, defects deterioration and strengthening in buildings, finite element analysis, historic buildings and their analysis.

Phone: 630-2338; e-mail: giray.ozay@emu.edu.tr

Tülin Akçaoğlu, Assistant Professor

BS 1986 Higher Technological Institute, Civil Engineering

MS 1988 Istanbul Technical University, Structural Engineering

PhD 2003 Eastern Mediterranean University, Materials

Fracture Behaviour of Concrete under uniaxial compression, Interfacial Transition Zone Effects on crack initiation and propagation, Drying Shrinkage Crack Effects on Concrete Performance, Repair and Maintenance of Concrete.

Phone: 630-1257; e-mail: tulin.akcaoglumu.edu.tr

Eriş Uygar, Assistant Professor

BS 1997 Eastern Mediterranean University, Civil Engineering

MS 1999 Eastern Mediterranean University, Geotechnics

PhD 2007 Eastern Mediterranean University, Geotechnics

Analysis and design of pile foundations, Deep excavations and soil structure interaction, Geotechnical modelling using Finite Element Method, Shearing and one dimensional compression of granular matter.

Phone: 630-1236; e-mail: eris.uygar@emu.edu.tr

Umut Yıldırım, Assistant Professor

BS 2000 Celal Bayar University, Civil Engineering

MSc 2008 İzmir Institute of Technology, Structural Mechanics

PhD 2014 University of Pavia, Structural Mechanics

System identification; Active control of structures, Structural health monitoring, Vibration based damage detection

Phone: 630-2024; e-mail: umut.yildirim@emu.edu.tr

Tolga Çelik, Dr.

BEng 2009 Cardiff University, Civil Engineering

MSc 2010 Loughborough University, Construction Management

PhD 2014 University of Salford, Construction Management

Cost estimation, Social costs, Life Cycle Cost Calculations, Cost-Benefit Analysis, Value

Management, Construction Planning and Scheduling

Phone: 630-2356; e-mail: tolga.celik@emu.edu.tr

4. Administrative Staff Members and Research Assistants**Name, function:**

Bedia Bales, Secretary

Hasan İnan, Officer

Ogün Kılıç, Laboratory Engineer

Orkan Lord, Laboratory Technician

Özlem Çakmak, System (IT) Administrator

Research Asistants;

Name /Surname	Office No	Telephone No
Sayed Mohammad Fard Mousavi	CE 224	1479
Amir Bahador	CE 223	1497
İsmail Safkan	CE 242	2337
Changiz Ahbab	CE 124	1235
Amin Riazi	CE 141	1298
Abiola Ayopo Abiodun	CE 123	1397
Sina Darban Khales	CE 244	2342
Aliye Dalcı	CE 243	2335
Ahmad Alkhouzei	CE 140	2026
Buğse İlman	CE 243	2335
Abdulhamid S. Mahmoud	CE 138	2937
Saeed Kamkar	CE 139	2362
Amir H. Azour	CE 236	2354
Sepher Alizadeh Salehi	CE 142	1496
Mohammad R. Golhashem	CE 140	2026
Borhan Ghazemzadeh	CE 236	2354
M. Hosein Masouminia	CE 137	2356
Rowad E. Farah	CE 137	2356
Hamed Rajabzadeh	CE 138	2937

5. Laboratories

Courses offered in construction materials, hydraulics, soil mechanics, structures, transportation, construction management and drawing are supported with experimental work in the laboratories. Although hands-on laboratory work is the major objective, some experiments can only be demonstrated. A written report, generally including analysis and interpretation of data, is required. In some cases, an oral presentation is also required at the end of a laboratory work. Interested students are always welcome to work in the laboratory and gain more experience. These students are encouraged to take higher level courses as area electives to further enhance their laboratory skills.

5.1 Construction Materials

Equipped with modern apparatus to perform all the physical and mechanical tests on materials of construction as well as most of the chemical tests and analyses. The properties of gypsum, lime, cements, bricks, blocks, aggregates, concrete, etc. can be determined in this laboratory, which is used both for instruction and research and for services to industry.

5.2 Geodesy Laboratory

Provides instruction and research in the field of geodesy. In addition to classical geodetical equipment, the laboratory includes electronic distance measuring units.

5.3 Okay Camgöz Geology Laboratory

Provides physical materials to study rocks, minerals and fossils to gain familiarity with geological methods and materials. The emphasis on problem solving leads to better understanding of the fundamental principles taught in the corresponding lecture course.

5.4 Tevfik Tarımcıoğlu Hydraulics Laboratory

Provides some instructional facilities in the fields of hydromechanics, hydrology, and water resources. At present there are hydraulic systems, a tilted flume, a hydrology bench, a sand-bed for porous media flow which are used primarily for demonstration purposes.

5.5 Soil Mechanics Laboratory

Facilities include all the necessary equipment for standard soil testing: specific gravity, grain size distribution, liquid limit, plastic limit, density, shear strength parameters of soils, CBR, compaction, and triaxial shear, etc. The laboratory is used for demonstrations, and for basic and applied research of academic and industrial interest.

5.6 Structural Mechanics Laboratory

Provides instructional, applied, and theoretical research facilities. Various types of tests can be conducted using the available testing machines, including tension, flexure, compression, torsion, and buckling tests on models and structural elements. This laboratory has also the necessary equipment for studying photo-elasticity.

5.7 Transportation Laboratory

Equipped to perform various tests on bituminous materials and mixtures, including Marshall, penetration, softening point, and bitumen extraction tests. The facilities are also used for traffic data collection processes.

5.8 Virtual Reality Laboratory

Virtual reality (VR) technology allows users to interact with a medium similar to an imaginary or real computer generated. It is a technology running through visual stereoscopic glasses or modified monitors. It allows the user to perform three-dimensional 3D analysis without the need for the model or the real building. When combined with other multi-dimensional technologies, VR visualizes construction phases, the work-space-relations tools in the third dimension 3D for the desired purpose.

5.8 Computer Laboratory (including Mustafa Harmancı Laboratory)

There are three PC laboratories equipped with modern computers, providing continuous Internet connection and access to campus network. These computers are installed with a wide range of software tools for various computing needs in courses, projects, and research. The software includes Etabs, Safe, SAP2000, AUTOCAD, Corsim, TRANSYT-7F, QuantumGIS, Matlab, Python, Grapher and PLAXIS V8. Students may use the laboratories between 8.00 -17.00 on week days.

6. Other Facilities

6.1 Departmental Library

Civil Engineering Department has a library being supplementary one to the university main library (Özay Oral Library). It contains mainly civil engineering books, journals and proceedings. Students can use them in place during day time. University main library has many opportunities for the students. In addition to the nominal book collection in the field of civil engineering on campus of EMU, books and journals in many other libraries can be obtained through inter-library loan services. The On-Line Database at the central library provides access to the publications of many professional organizations, such as the IMO, TUBITAK, EMU, and Anadolu University. The Department has its own library providing some reference books.

6.2 Construction Club

Civil Engineering Construction Club is a formal activity club of students to organize social, cultural and academic activities for them. The activities start with the orientation program at the beginning of the academic year and continue with seminars, conferences, and field trips. They arrange a diner party each semester and the traditional Civil Engineering Week in May of each year. During this week the professionals are invited to deliver seminars about the real engineering life, and problems in construction sites besides social and cultural activities.

7. Civil Engineering Department Curriculum

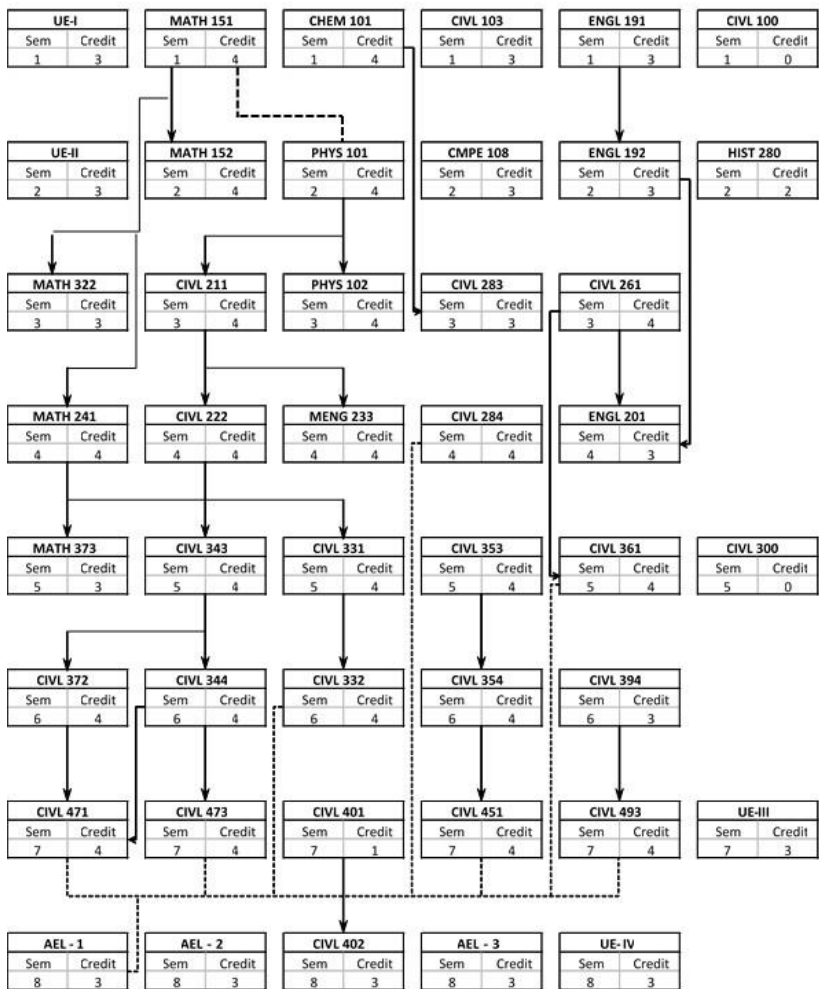
	REF. NO	COURSE CODE	COURSE NAME	CREDIT HOURS	PRE-REQUISITE(S)
1	22711	CIVL100	INTRODUCTION TO CIVIL ENGINEERING	(0,1) 0	
	22712	CIVL103	CIVIL ENGINEERING DRAWING	(2,3) 3	
	22713	CHEM101	GENERAL CHEMISTRY	(4,1) 4	
	22714	ENGL191	COMMUNICATION IN ENGLISH-I	(3,1) 3	
	22715	MATH151	CALCULUS-I	(4,1) 4	
	22716	UE - 01	UNIVERSITY ELECTIVE - 1 (CULTURE)	(3,0) 3	
	(TERM)/(CUMULATIVE) CREDITS=				(17)/(17)
2	22721	CMPE108	ALGORITHMS AND PROGRAMMING	(2,3) 3	
	22722	ENGL192	COMMUNICATION IN ENGLISH-II	(3,1) 3	22714 ENGL191
	22723	MATH152	CALCULUS-II	(4,1) 4	22715 MATH151
	22724	PHYS101	PHYSICS-I	(4,1) 4	
	22725	UE - 02	UNIVERSITY ELECTIVE - 2 (ENVIRONMENT)	(3,0) 3	
	22726	HIST280/TUSL181	HIST. TURK. REF./TURK. AS A SECOND LANG.	(2,0) 2	
	(TERM)/(CUMULATIVE) CREDITS=				(19)/(36)
3	22731	CIVL211	STATICS	(4,1) 4	22724 PHYS101
	22732	CIVL261	SURVEYING	(3,2) 4	
	22733	CIVL283	MATERIALS SCIENCE	(3,1) 3	22713 CHEM101
	22734	MATH322	PROBABILITY AND STATISTICAL METHODS	(3,1) 3	22715 MATH151
	22735	PHYS102	PHYSICS-II	(4,1) 4	22724 PHYS101
	(TERM)/(CUMULATIVE) CREDITS=				(18)/(54)
4	22741	CIVL222	STRENGTH OF MATERIALS	(4,1) 4	22731 CIVL211
	22742	CIVL284	MATERIALS OF CONSTRUCTION	(3,2) 4	
	22743	ENGL201	COMMUNICATION SKILLS	(3,0) 3	22722 ENGL192
	22744	MENG233	RIGID BODY DYNAMICS	(4,1) 4	22731 CIVL211
	22745	MATH241	LINEAR ALGEBRA AND ORD. DIFFERENTIAL EQUATIONS	(4,1) 4	22715 MATH151
	(TERM)/(CUMULATIVE) CREDITS=				(19)/(73)

5	22751	CIVL300	SUMMER PRACTICE	(0,0) 0	min.CUM.CRD.=73 /DC**
	22752	CIVL331	FLUID MECHANICS	(4,1) 4	22745 MATH241
	22753	CIVL343	INTRODUCTION TO STRUCTURAL MECHANICS	(4,1) 4	22741 CIVL222
	22754	CIVL353	EARTH SCIENCE	(4,1) 4	min.AT=4*
	22755	CIVL361	TRANSPORTATION ENGINEERING	(4,1) 4	22732 CIVL261
	22756	MATH373	NUMERICAL ANALYSIS FOR ENGINEERS	(3,1) 3	22745 MATH241
(TERM)/(CUMULATIVE) CREDITS=				(19)/(92)	
6	22761	CIVL332	HYDROMECHANICS	(4,1) 4	22752 CIVL331
	22762	CIVL344	STRUCTURAL ANALYSIS	(4,1) 4	22753 CIVL343
	22763	CIVL354	SOIL MECHANICS	(4,1) 4	22754 CIVL353
	22764	CIVL372	FUNDAMENTALS OF REINFORCED CONCRETE	(4,1) 4	22753 CIVL343
	22765	CIVL394	CIVIL ENGINEERING CONSTRUCTION & ECONOMY	(3,1) 3	min.AT = 4*
(TERM)/(CUMULATIVE) CREDITS=				(19)/(111)	
7	22771	CIVL401	INTRODUCTION TO CAPSTONE PROJECT	(0,2) 1	min.AT = 6*
	22772	CIVL451	FOUNDATION ENGINEERING	(4,1) 4	22763 CIVL354
	22773	CIVL471	DESIGN OF REINFORCED CONC. STRUCTURES	(4,1) 4	22762 CIVL344 & 22764 CIVL372
	22774	CIVL473	FUNDAMENTALS OF STEEL DESIGN	(4,1) 4	22762 CIVL344
	22775	CIVL493	CONSTRUCTION MANAGEMENT	(4,1) 4	22765 CIVL394
	22776	UE - 03	UNIVERSITY ELECTIVE – 3	(3,0) 3	
(TERM)/(CUMULATIVE) CREDITS=				(19)/(130)	
8	22781	CIVL402	CAPSTONE PROJECT	(2,3) 3	22771 CIVL401
	22782	AEL-01	AREA ELECTIVE - 1	(3,1) 3	
	22783	AEL-02	AREA ELECTIVE - 2	(3,1) 3	
	22784	AEL-03	AREA ELECTIVE - 3	(3,1) 3	
	22785	UE - 04	UNIVERSITY ELECTIVE - 4 (ETHICS)	(3,0) 3	
(TERM)/(CUMULATIVE) CREDITS=				(16)/(146)	

[TOTAL 40 CREDIT COURSES + 1 (TURK/HIST) + 1 CREDITED (CIVL401) + 2 non-credit: CIVL100 & CIVL300]

* MIN. ACADEMIC TERM PRIOR TO REGISTRATION, ** DEPARTMENT CONSENT

See the chart of the pre-requisites of Civil Engineering courses indicated in the table below.



Legend



Pre-requisite



Feeding course

8. Short Course Descriptions

8.1 Area Core Courses

CIVL100 Introduction to Civil Engineering (0,0) 0

Civil Engineering history, Introduction to Civil Engineering, Branches of Civil Engineering; water resources engineering, structural engineering, geotechnical engineering, concrete and materials engineering, construction technology and management, transportation engineering. Leadership and communication skills. Introduction to library. Field trips. Introduction to computer skills.

CIVL103 Civil Engineering Drawing (2,3) 3

Drawing instruments and their use. Types of lines and line quality. Orthographic drawing, Pictorial drawing. Sections. Architectural drawings. Civil engineering drawings. Computer-aided drawing.

CIVL211 Statics (4,1) 4

Basic definitions, concepts and principles. Statics of particles, resultant of forces in space, equilibrium and free-body concept. Statics of rigid bodies, moments, couples and equivalent force systems. Equilibrium of rigid bodies. Distributed forces, centroids, center of gravity and, moment of inertia. Definition of determinacy of structures, analysis of statically determinate structures, including trusses, beam, frames and arches. Friction.

Prerequisites: PHYS101

CIVL222 Strength of Materials (4,1) 4

Concept of Stress and Strain. Elastic deformation of axially loaded members. Internal forces and moments in beams and their diagrams. Stresses in beams. Torsion. Deflection of beams, buckling of columns. Energy theorems.

Prerequisites: CIVL211

CIVL261 Surveying (3,2) 4

Introduction. Distance measurement. Taping. Linear surveying principles and mapping. The level. Methods and principles of levelling. Applications of levelling: vertical sections, contouring, setting out of level. Errors and adjustment. Traverse computations, errors and adjustments. Tachometry. Working with coordinates. Electronic Distance Measurement (EDM) equipment. Trigonometric levelling. Areas and volumes of irregular figures.

CIVL283 Materials Science (3,1) 3

The fundamentals of materials (atomic bonding, the architecture of solids, development of microstructure, surface properties), behaviour of materials under stress (response of materials to stress, failure and fracture, rheology of fluids and solids fatigue), particulate composites: portland cement and asphalt concretes (particulate composites, aggregates, portland cement concrete, asphalt cements and asphalt concrete).

Prerequisites: CHEM101

CIVL284 Materials of Construction (3,2) 4

Production, types, uses in construction, properties and related tests for the following materials are covered: gypsum, lime, cement, aggregates. Properties of fresh and hardened concrete and concrete mix design calculations. Bricks, building stones, plasters, steel, timber and polymers will also be covered.

CIVL300 Summer Practice (0,0) 0

Students who have completed their 4th academic term or who are in higher academic terms will do their Summer Training for a duration of 40 working days. All of the training must not be in the same establishment. At least 5 activities should be observed during this training. These could be setting out works, excavation, concreting, curing, reinforcement works, formworks, etc. Each student will write a Summer Training Report. The report will be presented as a seminar. To consider the Summer-Training as "Completed", the student must receive an "S" grade for the report and the seminar.

*Prerequisites: Min. CUM. CRH = 73/DC***

CIVL331 Fluid Mechanics (4,1) 4

Definitions, physical properties. Hydrostatic, forces on plane and curved surfaces, buoyancy, hydrostatics in moving and rotating containers. Lagrangian and Eulerian descriptions, derivatives, rate of deformation, flow lines. System and Control volume approach, Reynolds Transport Theorem, principles of conservation of mass, momentum and energy, Bernoulli equation. Dimensional analysis, Buckingham pi theorem, similitude.

Prerequisites: MATH241

CIVL332 Hydromechanics (4,1) 4

Laminar and turbulent flows. Friction factor in pipe flow. Computation of flow in single pipes. Hydraulic machinery, turbines and pumps. Pipe line system and networks. General characteristics and classification of open channel flow: pressure

and velocity distribution. Continuity equation. Energy concept. Momentum principle. Uniform flow. Rapidly varied flow. Gradually varied flow. Design of non-erodible and erodible channels.

Prerequisites: CIVL331

CIVL343 Introduction to Structural Mechanics (4,1) 4

Modeling of structures. Unsymmetrical bending. Shear center. Determinacy, indeterminacy and stability. Virtual work. Deformation and deflected shapes. Force method of analysis. Plastic behavior of structural members.

Prerequisites: CIVL222

CIVL344 Structural Analysis (4,1) 4

Slope deflection method. Stiffness method of analysis. Modeling and analysis of continuum. Loads acting on structures. Computer applications. Influence lines.

Prerequisites: CIVL343

CIVL353 Earth Science (4,1) 4

Overview of earth science, composition of the earth and atomic structure. Some physical properties of minerals. The dynamic earth, theory of plate tectonics and plate boundaries, drifting continents. Earthquakes, mountain building. Geologic time scale, age dating of rocks, early earth. Earthquakes, earthquake classification and prediction. Seismic waves, liquefaction. Surface processes on earth weathering, erosion, mass movements, wind, and glaciers, surface water, groundwater. The rock cycle and rock deformation. Rocks: Igneous, sedimentary and metamorphic rocks. Soil formation and clay mineralogy. Phase relationships. Classification of soils.

Prerequisites: Min AT = 4

CIVL354 Soil Mechanics (4,1) 4

Introduction of engineering problems involving soils. Soil compaction. Effective stress concept. Permeability and its measurement. Seepage. One and two dimensional flow conditions. Flow nets. Stresses in a soil mass. Consolidation process. Immediate and consolidation settlement. Terzaghi's theory of one-dimensional consolidation. Degree of consolidation. Shear strength of soils. Lateral earth pressure theories: Rankine and Coulomb wedge theories. Stability of retaining walls. Slope stability.

Prerequisites: CIVL353

CIVL361 Transportation Engineering (4,1) 4

Transportation Modes. Vehicle and Human Characteristics. Vehicle Motion. Sight Distance. Geometric Design. Pavements. Traffic Flow. Highway Capacity.

Prerequisites: CIVL261

CIVL372 Fundamentals of Reinforced Concrete (4,1) 4

Behavior of RC members: Single reinforced beams, double reinforced beams, T-beams, short columns, slender columns. Moment curvature relations of reinforced concrete beams and columns. Torsion in RC members. Bond and anchorage.

Prerequisites: CIVL343

CIVL394 Civil Engineering Construction & Economy (3,1) 3

Introduction to micro and macro economy. Basics of engineering economy. Fundamentals of life cycle costing. Equipment cost. Equipment Acquisition methods. Fundamentals of earth moving materials. Excavating machines: shovels, dragline, backhoe, and clamshell. Loading and hauling equipments: dozers, trucks, wagons, scrapers. Compacting equipment. Rippers.

Prerequisites: Min AT = 4

CIVL401 Introduction to Capstone Project (0, 2) 1

To prepare the senior year students for their capstone design projects provides guidance with the selection of their project advisors, topics and teams. First the students form their team, select project topic, and carry out literature review, performing preliminary design and feasibility study of the project. Prepare schedule for project completion in capstone project. Lecture will be given on different topics such as, team work, leadership and communication skills, project report, oral and written presentation. Basic concepts regarding major civil engineering branches will be reviewed.

Prerequisites: Min AT = 6

CIVL451 Foundation Engineering (2,3) 3

Geotechnical properties of soils. Exploration, sampling, and in-situ soil measurements. Bearing capacity of foundations. Foundation settlements, improving site soils for foundation use. Factors to consider in foundation design. Spread footing design: Structural design of spread footings. Rectangular, eccentrically loaded spread footings, wall footings, design of spread footings with overturning moment. Special foundations: Rectangular combined footings, trapezoid-shaped footings, strap footings, mat foundations. Design of reinforced concrete retaining walls. Piles, piers, sheet pile walls: Introduction to design.

Prerequisites: CIVL354

CIVL471 Design of Reinforced Concrete Structures (4,1) 4

Design of slabs: One-way and two-way edge supported slabs, joist floors. Earthquake resistant design principles: Seismic behavior of moment resisting frames. Ductility.

Earthquake code requirements. General principles of footing design and its applications. Computer aided design.

Prerequisites: CIVL344 and CIVL372

CIVL473 Fundamentals of Steel Design (4,1) 4

General concepts in steel design. Design methods, loads, codes, safety. Behavior of steel structures. Tension members, compression members, trusses, beams, beam-columns, column base plates, bolted and welded connections, single storey and multi-storey steel frames with simple connections, bracing systems for stability.

Prerequisites: CIVL344

CIVL493 Construction Management (4,1) 4

Gives information to the students about project management and construction management. It prepares the senior year students for real life projects that could be faced on a construction site. It covers contract administration, contractual organizations, specifications, bill of quantities, construction planning techniques, resource management, least cost calculations and cash flow calculations.

Prerequisites: CIVL394

CIVL402 Capstone Project (4,1) 4

An interdisciplinary project based course involving engineering design, cost estimating, environmental impacts, project schedule and team work. Students are expected to work in pre-assigned team under the supervision of faculty on a predetermined project. Each team will submit final report including drawing, specification, and cost estimate that completely describe their proposed design. Each team will make oral presentation defending their final design and project feasibility for their peers and for faculty members.

Prerequisites: CIVL401

8.2 Civil Engineering Department Area Electives

CIVL431 Engineering Hydrology (3,1)3

Hydrologic cycle, system approach in hydrology, world water balance, precipitation, initial losses and infiltration, groundwater hydrology, evaporation and evapotranspiration, stream flow and basin characteristics, hydrograph analysis, hydrologic flood routing, statistical analysis in hydrology, urban hydrology.

Prerequisite: min AT 6

CIVL433 Water Supply and Sewerage (3, 1) 3

Quantity of water and wastewater, consumption for various purposes, the sources of water supply, types of transmission lines, water storage, water treatment, design of water distribution network, wastewater collection, sewers, flow in sewers and sewer appurtenances, design of sewer systems for domestic sewage and storm water, waste water treatment, reuse.

Prerequisites: CIVL332

CIVL434 Coastal and Harbor Engineering (3, 1) 3

Linear wave theory, wave processes, wind-generated waves and their prediction, wave climate, the interaction between waves and structures, coastal currents, coastal sediment problems, coastal structures and their functions, harbors, site selection, ship problems, optimum capacity of harbors.

Prerequisites: CIVL332

CIVL435 Open Channel Hydraulics (3, 1) 3

Introduction: General equation of gradually varied flows - GVF. Types of channel slopes. Characteristics and classification of GVF profiles. Solution of GVF equations. Characteristics of rapidly varied flow. Flow over spillways. Crest shape and discharge of the overflow spillways. Basic characteristics of the jump. Stilling basins. Flow measurement in open channel. Types of flows measurement structures. Sharp, short, and broad-crested weirs. Design of open channels.

Prerequisites: CIVL332

CIVL436 Sediment Transport (3, 1) 3

General consideration, initiation of motion, the critical conditions in free surface flows, scour criteria, bed load-suspended load-and total load theories, bed-form mechanics and resistance laws, regime concept and stable channel design, flow of solid liquid mixtures in pipes, sediment transport under wave action.

Prerequisites: CIVL332

CIVL437 Environmental Impact Assessment (3, 1) 3

Planning and management of impact studies. Description of environmental settings. Environmental indices and indicators, affected environment. Prediction and assessment of impacts on air, surface water, soil and ground water, noise, biological, cultural, visual and

CIVL442 Advanced Structural Analysis (3, 1) 3

Review of basic concepts in structural analysis. Approximate methods of structural analysis. Flexibility and stiffness matrices, special topics in structural analysis. Variable loading analysis for indeterminate structures.

Prerequisites: CIVL344

CIVL452 Deep Foundations (3, 1) 3

Types of deep foundations: piles, drilled shafts. Classification of piles. Load transfer mechanism. Methods of estimation of pile capacity. Settlement of piles and pile groups. Uplift resistance of piles. Lateral load capacity of piles. Structural design of piles: pile design issues and procedures. Drilled shafts: load transfer mechanism, load bearing capacity, settlement.

Prerequisites: CIVL451

CIVL454 Ground Modification Techniques (3, 1) 3

Introduction to engineering ground modification and some problematic soils. Site exploration and characterization. Field reconnaissance, surface and subsurface exploration. Classification of ground modification techniques. Modification by admixtures. Types of admixtures and their effect on soil properties. Mechanical modification: shallow surface compaction. Deep compaction techniques, and hydromechanical compaction. Preloading and the use of vertical drains. Preloading with and without vertical drains. Introduction to grouting. Definition and purpose of grouting. Grout materials, and grouting techniques. Geosynthetics. Thermal modification. Electroosmosis and electrokinetic dewatering and stabilization.

Prerequisites: CIVL451

CIVL455 Earth Retaining Structures (3, 1) 3

Lateral earth pressures: classical lateral earth pressure theories, equivalent fluid method, presumptive lateral earth pressures. Rigid and flexible wall systems: gravity walls, reinforced concrete cantilever walls, sheet piles and braced cuts. Seismic analysis and design of rigid and flexible retaining walls. Mechanically stabilized earth (MSE) retaining walls: metallic strip and geotextile. In-situ reinforced walls: soil nailing. Prerequisites: CIVL451

CIVL461 Highway Materials (3, 1) 3

Sources of asphalt. Manufacture of asphalt. Chemistry and composition of asphalt. Classification of asphalt. Physical properties of asphalt. Application type of surfacing. Classification and properties of mineral aggregates. Physical properties of aggregates. Gradation analysis and combination of aggregates. Surface area calculations. Types of asphalt pavements. Properties of asphalt mixtures. Asphalt mix design.

Prerequisites: CIVL361

CIVL463 Setting Out Works (3, 1) 3

Setting out instruments. EDM and Total Station. Setting out of highways centerline and curves. Setting out of grades for sewers, pipelines and slope stakes. Horizontal control, working with coordinates. Contours and map preparation.

Prerequisites: CIVL261

CIVL465 Intersection Signal Design (3, 1) 3

Traffic Engineering overview; traffic flow at intersection; conflict points and accidents at intersections; proper intersection design; volume counts; intersection types; signalized intersections; signal timing; simulations for signal timing; simulation models; TEXAS Model overview, assumptions, input/outputs; benefits of using model; collecting local traffic data and applying TEXAS Model to local intersections; interpreting simulation results.

Prerequisites: CIVL361

CIVL466 Urban Public Transportation: Systems and Technology (3, 1) 3

History and role of Public Transportation in Urban Development. Urban Passenger Transport Modes. Vehicle Characteristics and Motion. Highway Transit Modes: Buses and Trolleybuses. Rail Transit Modes: Street Cars, Light Rail, Rapid Transit and Regional Rail. New Concepts and Proposed Modes. Transit System Performance: Capacity, Productivity, Efficiency and Utilization.

Prerequisites: CIVL361

CIVL467 Public Transportation (3,1)3

History and role of Public Transportation in Urban Development. Urban Passenger Transport Modes. Vehicle Characteristics and Motion. Highway Transit Modes: Buses and Trolleybuses. Rail Transit Modes: Street Cars, Light Rail, Rapid Transit and Regional Rail. New Concepts and Proposed Modes. Transit System Performance: Capacity, Productivity, Efficiency and Utilization.

CIVL476 Prestressed Concrete (3, 1) 3

Basic concepts and principles. Types of pre-stressing: Posttensioning and pretensioning. Material properties. Prestressed concrete bridges. Losses in prestress. Elastic analysis of concrete beams. Design of prestressed concrete elements.

Prerequisites: CIVL372

CIVL481 Design and Quality Control of Concrete (3, 1) 3

This course provides insight into proven construction practices that will produce quality concrete construction. Contents include how to organize for quality, concrete mix designs, foundations, formwork, reinforcement and embedments in structures,

joints and reinforcement for slabs on grade, preparing for concreting, concrete placing and finishing common field problems, and safety.

Prerequisites: CIVL284

CIVL482 Advanced Materials of Construction (3, 1) 3

Review of production of metals. Polymers: different types, polymerization reactions. Production of clay products. Refractories. Glass: manufacturing, various types and uses in construction. Timber. Lightweight aggregates. Fiber reinforced concrete. Ferrocement. Insulation of buildings: heat, sound and moisture. Asbestos. Burning of concrete. Assessment of fire damaged buildings.

Prerequisites: CIVL284

CIVL484 Repair & Maintenance of Concrete (3, 1) 3

Concrete behaviour: embedded metal corrosion, disintegration mechanisms, moisture effects, thermal effects, load effects, faulty workmanship, concrete evaluation: test methods for concrete evaluation, surface repair: analysis strategy & design, material requirements, material selection, surface preparation, reinforcing steel cleaning repair & protection, bond repair materials to existing concrete, placement methods, strengthening & stabilization: techniques/design considerations, beam shear capacity strengthening, shear transfer strengthening between members, stress reduction techniques, column strengthening, flexural strengthening, connection stabilization and strengthening, crack stabilization, protection: strategies, methods.

Prerequisites: CIVL284

CIVL497 Procurement Systems in Construction (3,1)3

Categorization of procurement systems in construction, Concept and evolution of construction procurement systems, Level of use of procurement systems, Integrated procurement systems, Management-oriented procurement systems, Successful procurement system selection, Partnerships, Integrated project delivery, Emerging trends and future developments in procurement systems.

CIVL498 Implementation of Information Technology in Construction (3,1)3

The role of information technology within the construction industry, Information technology drivers within the industry, people and information technology systems, contemporary business processes in construction, capturing knowledge within the construction industry, capturing information at the project level, electronic document management system, the implementation of information technology within construction organizations.

CIVL499 Collaborative Working in Construction (3,1)3

Collaboration: key concepts, Planning and implementation of effective collaborative working in construction, Information management and collaboration, Mobile technologies and wireless technologies, Multidisciplinary collaborative design optimization, Change management, Change management framework, Collaboration implementation in construction: case studies, Industry perspective.

8.3 Courses from Other Departments and Faculties

CHEM101 General Chemistry (4,1) 4

Atoms molecules and ions; mass relations in Chemistry; stoichiometry. Gases, the ideal gas law, partial pressures, mole fractions, kinetic theory of gases. Electronic structure and the periodic table. Thermochemistry, calorimetry, enthalpy, The First Law of Thermodynamics. Liquids and Solids. Solutions. Acids and Bases. Organic Chemistry.

ENGL191 Communication in English I (3,1) 3

ENGL191 is a first semester Basic Academic English course for students at the Faculty of Engineering. The purpose of the course is to introduce students to writing, reading, speaking and listening in academic settings as well as provide an introduction to appropriate study skills.

ENGL192 Communication in English II (3,1) 3

ENGL192 is a second semester Basic Academic English course for students at the Faculty of Engineering. The purpose of the course is to further develop students' writing, reading, speaking and listening skills in academic settings and to improve their study skills. (Prerequisite: ENGL191)

ENGL201 Communications Skills (3,0) 3

ENGL201 is a second year English course for students at the Faculty of Engineering. This course is intended for students with an upper intermediate level of English. The course aims to enhance a range of skills, including effective written and oral communication, research skills and study skills. Throughout the course the students will be involved in project work, intended to help them in their immediate and future academic and professional life. This will include library research, technical report writing and an oral presentation. By investigating a topic of their own choice students will develop an understanding of independent research skills. During the report writing process, students will improve their writing and develop the ability to produce organized, cohesive work. The oral presentation aims to enhance spoken fluency and accuracy and provide training in the components of a good presentation. In addition to the project work, students will work on their job search skills by writing a curriculum vitae (CV) and an application cover letter. (Prerequisite: ENGL192)

PHYS101 Physics I (4,1) 4

Families of physical quantities having different dimensions, units and rules of mathematics. Vector mathematics and calculus, their applications to motion. Newton's laws. Integrals of the second law, work-energy, impulse-momentum, conservation of energy and momentum, applications. Rotations. Static equilibrium.

PHYS102 Physics II (4,1) 4

Heat, heat transfer and heat conduction. Kinetic theory of ideal gases, equipartition of energy. The laws of thermodynamics, applications to engine cycles, Coulombs law and electrostatic fields. Gauss's law, symmetry. Electric potential. Magnetic fields. Amperes law. Faradays law. (Prerequisite: PHYS102)

MATH151 Calculus I (4,1) 4

Limits and continuity. Derivatives. Rules of differentiation. Higher order derivatives. Chain rule. Related rates. Rolle's and the mean value theorem. Critical Points. Asymptotes. Curve sketching. Integrals. Fundamental Theorem. Techniques of integration. Definite integrals. Application to geometry and science. Indeterminate forms. L'Hospital's Rule. Improper integrals. Infinite series. Geometric series. Power series. Taylor series and binomial series.

MATH152 Calculus II (4,1) 4

Vectors in \mathbb{R}^3 . Lines and Planes. Functions of several variables. Limit and continuity. Partial differentiation. Chain rule. Tangent plane. Critical Points. Global and local extrema. Lagrange multipliers. Directional derivative. Gradient, Divergence and Curl. Multiple integrals with applications. Triple integrals with applications. Triple integral in cylindrical and spherical coordinates. Line, surface and volume integrals. Independence of path. Green's Theorem. Conservative vector fields. Divergence Theorem. Stokes' Theorem (Prerequisite: Math 150/151).

MATH241 Linear Algebra and Ordinary Differential Equations (4,1) 4

Review of Matrix Algebra; Basic operations on matrices, Determinants, Adjoint and inverse matrices, Linear equations, Rank of matrices, Gauss Elimination-LU, decomposition-Cholesky Decomposition. Vector spaces; Linear Independence, Transformation between Bases. The Eigenvalue Problem; The Characteristic Equation, Eigenvalues and Eigenvectors, Repeated Eigenvalues, Some Useful properties of Eigenvalues, Symmetric Matrices. Ordinary differential equations; First order differential Equations; Basic idea and terminology, Separable differential Equations, First order Linear DE, Change of variables, Exact differential equations. Second Order Differential Equations; Basic theoretical Results, Reduction of order, Second order Homogeneous constants coefficients LDE, The method of undetermined coefficients, The variation of parameters, A differential equations with nonconstant coefficients. Partial Differential Equations; Solution of the Wave

Equations, Solution of the Heat *Conduction* diffusion equation, Solution of the Laplace Equation. (Prerequisite: MATH151)

MATH322 Probability and Statistical Methods (3,1) 3

Introduction to probability and statistics. Operations on sets. Counting problems. Conditional probability and total probability formula, Bayes' theorem. Introduction to random variables, density and distribution functions. Expectation, variance and covariance. Basic distributions. Joint density and distribution function. Descriptive statistics. Estimation of parameters, maximum likelihood estimator. Hypothesis testing (Prerequisite: Math 151).

MENG233 Rigid Body Dynamics (4,1) 4

This course deals with the motion of bodies under the action of a single or multiple forces. It covers kinematics and kinetics of particles in rectilinear and curvilinear motions using various coordinate systems, work and energy, impulse and momentum, planar kinematics using analytical and graphical methods. Kinetics of rigid bodies using force and acceleration, work and energy, and impulse and momentum principles. Vibration of single and two-degree of freedom systems.

ECON231 Introduction to Economics (3,1) 3

The course will cover fundamental concepts of both macro- and microeconomics at the introductory level. Microeconomics aspects of the course include supply and demand; elasticity; market efficiency; cost of production; and profit maximization in competitive and monopolistic markets. Macroeconomics aspects include national income accounting; unemployment; inflation; LR and SR aggregate demand and supply curves; economic growth and international trade.

IENG355 Ethics (3,1) 3

This course is designed to introduce moral rights and responsibilities of engineers in relation to society, employers, colleagues and clients. Analysis of ethical and value conflict in modern engineering practice. Importance of intellectual property rights and conflicting interests. Ethical aspects in engineering design, manufacturing, and operations. Cost benefit-risk analysis and safety and occupational hazard considerations. Prerequisite: consent of instructor [Offered also as a service course to non-IE engineering students]

CMPE102 Programming Fundamentals (2,3) 3

Problem-Solving concepts for computer. Program structures for computer languages. Sequential logic structures: algorithm instructions and flowcharts. Problem-Solving with: decisions, loops and case logic structures. Data structures: arrays, lists. File processing. Laboratory applications will be done with programming languages such as Fortran, C or Visual Basic or other languages.

9. 2016-2017 Academic Calendar

July 2016	
11	SYSTEM WILL BE ACCESSIBLE FOR ENTERING COURSES TO BE OFFERED IN FALL 2016 - 2017
August 2016	
5	LAST DAY FOR ENTERING COURSES TO BE OFFERED IN FALL 2016 - 2017
9	ON LINE COURSE REGISTRATION COMMENCES (REGISTERED STUDENTS)
September 2016	
11	KURBAN BAIRAM EVE
12-15	KURBAN BAIRAM
09-30	ORIENTATION DAYS FOR NEW STUDENTS
19	LAST DAY FOR CHANGING 'INCOMPLETE' GRADES
19	ENGLISH PROFICIENCY TEST; 1 st STAGE (PLACEMENT TEST)
20	ENGLISH PROFICIENCY TEST; 2 nd STAGE (LISTENING, READING, WRITING)
21	LAST DAY FOR ONLINE REGISTRATION
21	ENGLISH PROFICIENCY TEST; 2 nd STAGE (SPEAKING)
22-23	COURSE REGISTRATION PERIOD (WITH ADVISOR)
26	CLASSES COMMENCE
26	FIRST DAY OF REGISTRATION WITH PENALTY
October 2016	
03	ENGLISH PROFICIENCY TEST (SPEAKING)
03	COURSE REGISTRATION PERIOD (WITH ADVISOR)
03	ORIENTATION DAYS FOR NEW STUDENTS
04	CLASSES COMMENCE
10	FIRST DAY OF REGISTRATION WITH PENALTY
29	LAST DAY FOR LATE REGISTRATION
November 2016	
10	COMMEMORATION OF ATATÜRK
15	TRNC REPUBLIC DAY (NATIONAL HOLIDAY)
16-26	MID-TERM EXAMS
21	SYSTEM WILL BE ACCESSIBLE FOR ENTERING COURSES TO BE OFFERED IN SPRING 2016 - 2017
December 2016	
09	LAST DAY FOR COURSE WITHDRAWAL
09	LAST DAY FOR APPLYING TO GET LEAVE OF ABSENCE
11	RELIGIOUS HOLIDAY (KANDIL)
12	LAST DAY FOR ENTERING COURSES TO BE OFFERED IN SPRING
15	ON LINE COURSE REGISTRATION COMMENCES
25	Christmas Day*

30	LAST DAY OF CLASSES
* On 25 December 2016, attendance will not be taken in classes and no quizzes or any other exams will be administered.	
January 2017	
01	NEW YEAR'S DAY
03-20	FINAL EXAMS
25	LAST DAY FOR THE SUBMISSION OF GRADES TO THE REGISTRAR
26	LAST DAY FOR SUBMISSION OF THE GRADUATION DECISIONS TO THE REGISTRAR
31	GRADUATION CEREMONY FOR FALL GRADUATES
February 2017	
07	LAST DAY FOR CHANGING 'INCOMPLETE' GRADES
13	ENGLISH PROFICIENCY TEST; 1st STAGE (PLACEMENT TEST)
14	ENGLISH PROFICIENCY TEST; 2nd STAGE (LISTENING, READING, WRITING)
15	LAST DAY FOR ONLINE REGISTRATION
15	ENGLISH PROFICIENCY TEST; 2nd STAGE (SPEAKING)
16-17	COURSE REGISTRATION PERIOD (WITH ADVISOR)
20	CLASSES COMMENCE
20	1st DAY OF REGISTRATION WITH PENALTY
27	LAST DAY FOR LATE REGISTRATION
27	LAST DAY FOR SUBMISSION OF GRADUATION MAKE – UP EXAM GRADES TO THE REGISTRAR
27	LAST DAY FOR SUBMISSION OF GRADE CHANGE TO THE REGISTRAR
March 2017	
06	LAST DAY FOR ADD / DROP
April 2017	
08-19	MID-TERM EXAMS
17	SYSTEM WILL BE ACCESSIBLE FOR ENTERING COURSES TO BE OFFERED IN SUMMER 2016 - 2017
23	NATIONAL SOVEREIGNTY & CHILDREN'S DAY
May 2017	
01	WORKERS' AND SPRING DAY
05	LAST DAY FOR COURSE WITHDRAWAL
05	LAST DAY FOR APPLYING TO GET LEAVE OF ABSENCE
05	LAST DAY FOR ENTERING COURSES TO BE OFFERED IN SUMMER
08	ON LINE COURSE REGISTRATION FOR SUMMER SCHOOL COMMENCES
18-21	SPRING FEST
19	ATATÜRK COMMEMORATION, YOUTH AND SPORTS DAY
26	LAST DAY OF CLASSES
30-31	FINAL EXAMS
June 2017	
01-12	FINAL EXAMS

15	LAST DAY FOR THE SUBMISSION OF GRADES TO THE REGISTRAR
16	LAST DAY FOR SUBMISSION OF THE GRADUATION DECISIONS TO THE REGISTRAR
20	GRADUATION CEREMONY FOR SPRING GRADUATES
24	RAMADAN BAIRAM EVE
25-27	RAMADAN BAIRAM
July 2017	
05	LAST DAY FOR CHANGING 'INCOMPLETE' GRADES
05	LAST DAY FOR ONLINE REGISTRATION
06-07	COURSE REGISTRATION PERIOD (WITH ADVISOR)
10	CLASSES COMMENCE
11	SYSTEM WILL BE ACCESSIBLE FOR ENTERING COURSES TO BE OFFERED IN FALL 2017 - 2018
12	LAST DAY FOR LATE REGISTRATION
17	LAST DAY FOR ADD / DROP
20	PEACE AND FREEDOM DAY
August 2017	
01	NATIONAL HOLIDAY
04	LAST DAY FOR ENTERING COURSES TO BE OFFERED IN FALL 2017 - 2018
07	ONLINE COURSE REGISTRATION (FALL SEMESTER 2017 - 2018)
11	LAST DAY FOR COURSE WITHDRAWAL
30	VICTORY DAY
31	KURBAN BAIRAM EVE
September 2017	
01-04	KURBAN BAIRAM
08	LAST DAY OF CLASSES
11-13	FINAL EXAMS
14	LAST DAY FOR THE SUBMISSION OF GRADES TO THE REGISTRAR
15	LAST DAY FOR SUBMISSION OF THE GRADUATION DECISIONS TO THE REGISTRAR
19	DIPLOMA AWARDING TO SUMMER SCHOOL GRADUATES

10. Student Admissions

Specific categories and regulations for admission of students to the program are as follows:

Turkish Students:

- i) Turkish students seeking admission for the first time must take the Turkish University Entrance Examination (ÖYS) administered by the Office of Student Selection and Placement (ÖSYM). The number of students taking this exam each year exceeds one and a half million. Only those students

whose names appear on the official list of ÖSYM indicating that they have been placed at EMU University can be admitted.

- ii) The Turkish Cypriot students admitted through central entrance exam organized by EMU.
- iii) The “Dikey Geçiş Sınavı”, which can be translated as the Upward Mobility Exam, is an exam for graduates of vocational schools. A very small number of exceptionally successful Turkish students are placed in the Program through this exam by the ÖSYM. Since these students have studied some subjects at their respective vocational schools prior to admission to the Program, they are treated as transfer students once they are admitted and a special exemption course list is prepared for them which is detailed in transfer student section.

Foreign Students:

All foreign students having secondary school diploma are accepted to the department.

All Students:

All students, whether Turkish or foreign, who have been admitted to the program are required to take the EMU University English Proficiency Test. Those who pass this test can enrol in Freshman Courses. Those who fail are admitted to the School of Foreign Languages to study English for a period of up to two years. These students can continue their undergraduate studies only upon successful completion of their English preparatory year.

11. Evaluating Student Performance

During registration for each semester, the on-line registration system initially screens the tentative list of courses proposed by the student to ensure that it complies with the academic rules and the curriculum (i.e. number of allowed credits, prerequisites, performance status, etc.). The advisors then review the proposed schedule of each student, as well as their up-to date performance, and provide guidance so that the student’s entire program is of a nature which is best suited to his interests and capacity, as well as to the curriculum of the Civil Engineering Program.

A student is granted one of the letter grades below for each course he/she has attended, in accordance with the instructor's evaluation of the student's grades in the course requirements:

11.1 Course Grades and Grade-Points

Thirteen categories of scholastic achievement, ranging from "superior" to "failure" (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, NG), are recognized as valid end-of-course grades or letter grades. These grades are indexed on a scale of "0 to 4", termed "Grade-Points." The symbol "NG" (Nil Grade), indicates poor attendance and/or a failure to complete assigned work (including exams). The letter grades are indexed to Grade-Point equivalents as shown in the table.

Four other symbols are also used in grading, for special circumstances. "W" (withdrawn), indicates withdrawal from a course before the end of a term. In case where a student has been authorized to delay completion of course work past the normal end-of-term, the an "I" (incomplete) grade may be given until a formal grade is reported by latest one week before the starting date of the following semester. For project courses this date cannot be extended beyond the above mentioned deadline. Achievement in a non-credit-hour course is indicated by the symbol "S" (satisfactory) or "U" (unsatisfactory).

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F	NG
Grade Points	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0.7	0.0	0.0

In the case of repeated course work, the last grade earned is considered the official course grade. No grade-point equivalent is assigned for the notations I, W, S, and U.

11.2 Evaluation of a Course

A course is said to have been successfully completed if a student, obtains a grade of A, A-, B+, B, B-, C+, C, C-, D+, D or S. A course in which a student receives a grade of D-, F, NG or U is not satisfactorily completed, and the student is required to repeat such a course in the next semester if it is offered. A letter grade E (exemption) which will not contribute to GPA and CGPA calculations will be awarded for the courses of the students transferred from other institutions based on Department's transfer criteria.

Students must repeat required courses for which they have received a grade of D-, F, NG and U during the earliest semester the courses are offered. Students who have received D-, F or NG grade from an elective course must repeat that course in the first semester it is offered or take an equivalent course. In this case, the grade received in the new course replaces the D-, F or NG, but the previous grade will appear in the student's academic records. Depending on student's academic standing she/he must repeat courses with letter grades C- or below until his/her academic status improved to satisfactory level as defined in By-laws of the Senate.

Depending on student's entrance year there are two different categories that classify their academic status.

- a) Students registered before 2007-08 academic year their academic status is determined based on "Academic Term" criteria.

ACADEMIC STANDING TABLE DETAILS OF STUDENTS REGISTERED BEFORE 2007-08 ACADEMIC YEAR

AT THE END OF THE:	CGPA LIMITS
2 nd Academic Term	1.15
3 rd Academic Term	1.35
4 th Academic Term	1.55
5 th Academic Term	1.70
6 th Academic Term	1.80
7 th Academic Term	1.90

- b) Students registered in 2007-08 academic year and/or after, their academic status is determined based on "Actual Term" criteria.

ACADEMIC STANDING TABLE DETAILS OF STUDENTS REGISTERED IN 2007-08 ACADEMIC YEAR AND AFTER

AT THE END OF X th ACTUAL TERM:	SATISFACTORY PROGRESS	ON PROBATION	UNSATISFACTORY	COMPULSORY TRANSFER
1 st Actual Term	CGPA < 2.00	-	-	-
2 nd Actual Term	CGPA ≥ 1.50	1.00 ≤ CGPA < 1.50	CGPA < 1.00	-
3 rd Actual Term	CGPA ≥ 1.50	1.00 ≤ CGPA < 1.50	CGPA < 1.00	-
4 th Actual Term	CGPA ≥ 1.50	1.00 ≤ CGPA < 1.50	CGPA < 1.00	CGPA < 1.00
5 th Actual Term	CGPA ≥ 1.80	1.50 ≤ CGPA < 1.80	1.00 ≤ CGPA ≤ 1.50	CGPA < 1.00
6 th Actual Term	CGPA ≥ 1.80	1.50 ≤ CGPA < 1.80	1.00 ≤ CGPA ≤ 1.50	CGPA < 1.00
7 th Actual Term	CGPA ≥ 1.80	1.50 ≤ CGPA < 1.80	1.00 ≤ CGPA ≤ 1.50	CGPA < 1.00
8 th Actual Term	CGPA ≥ 2.00	1.80 ≤ CGPA < 2.00	1.00 ≤ CGPA ≤ 1.80	CGPA < 1.00

A student's achievement is determined by his/her "Grade Point Average" (GPA), which pertains to courses he/she has taken in the semester he/she has completed, and his/her cumulative "Cumulative Grade Point Average" (CGPA) that pertains to all courses he/she has completed to date. To calculate a student's CGPA, the numeric value of each letter grade earned in a course is multiplied by the number of credits awarded to that course, and their sum is divided by the total number of credits completed. The number of credits awarded to each course is determined by the University Senate.

Students with poor academic performance are placed on "probation" status as detailed in tables above. A student on probation for two consecutive semesters is put on "repeating" status. "Probation" students cannot register more than 2 new credits, whereas students on "repeating" status should first repeat their all the courses lower than C until they raise their CGPA to the required level depending on his/her academic/actual term. The course load of a "repeating" student cannot exceed his/her academic term course quota requirement.

When a course is repeated, the last credit earned is substituted in place of the previous value.

Example:

Assume that a student is registered the following courses and got the following grades.

Semester I:			Semester II:		
<u>Course</u>	<u>Grade</u>	<u>Credit</u>	<u>Course</u>	<u>Grade</u>	<u>Credit</u>
CHEM101	B-	(4)	CIVL103 (repeat)	B+	(3)
CIVL103	D-	(3)	CMPE102	B	(3)
ENGL191	D	(3)	ENGL192	D	(3)
MATH151	F	(4)	MATH151(repeat)	C+	(4)
NTE	C	(3)	PHYS101	D	(4)
	+			+	
		<hr/> 17			<hr/> 17

Total of new credits = 10

Semester I

Credits earned = $(4 \times 2.7) + (3 \times 0.7) + (3 \times 1) + (4 \times 0) + (3 \times 2) = 21.9$

GPA = $21.9 / 17 = 1.28$

CGPA = $21.2 / 17 = 1.28$

Semester II

Credits earned = $(3 \times 3.3) + (3 \times 3) + (3 \times 1) + (4 \times 2.3) + (4 \times 1) = 35.1$

GPA = $35.1 / 17 = 2.06$

Total credits registered = $17 + 10 = 27$

(excluding repeated MATH151 and CMPE103)

Total credits earned = $19.7 + 35.1 = 54.8$

CGPA = Total credits earned/total credits registered = $54.8/27 = 2.02$

The Letter Grades

Grade	Grade Point Equivalent	Description
A	4.0	Pass
A-	3.7	Pass
B+	3.3	Pass
B	3.0	Pass
B-	2.7	Pass
C+	2.3	Pass
C	2.0	Pass
C-	1.7	Conditional Pass
D+	1.3	Conditional Pass
D	1.0	Conditional Pass
D-	0.7	Failure
F	0.0	Failure
NG	0.0	Nil Grade
S	-	Satisfactory
U	-	Unsatisfactory
I	-	Incomplete
W	-	Withdrawal

11.3 Honour and High Honour Students

A student who (with a normal course load) obtains a GPA between 3.00 and 3.49 is designated an "Honour Student". A student who obtains a GPA between 3.50 and 4.00 is designated a "High Honour Student".

11.4 Compulsory Transfer

If a student who received a Final Academic Warning (4 W) fails to raise his/her CGPA above the limit in the following semester, he/she will be given a compulsory transfer from the Civil Engineering Department program.

12. Advising Students

Once the students are admitted, they are guided through their academic programs by their assigned academic advisors. Students are given an undergraduate catalogue and an orientation program describing the registration and academic rules and procedures of the University.

The students are constantly encouraged to meet with their advisors regularly to discuss their academic/social affairs and general well-being. Each student demand including registration, add-drop, withdrawal, credit overload or underload, and enrolment in a student exchange program, must be first approved by the advisor before submittal of an application to the Dean's Office. The on-line registration system allows the advisor to keep a file for each student, including copies of the registration forms, records of add-drops and withdrawals, flowchart of curriculum course content showing the prerequisite chain, and semester grade records and transcripts.

Few students with disabilities and/or having emotional problems need special advisor-student interaction. Advisors act as frontline resource in advising the students to seek help at the University Counselling Office (PDRAM).

13. Transfer Policies of the Civil Engineering Department

There are two categories of transfer students that can transfer to the civil engineering department.

13.1 Internal Transfer within the Eastern Mediterranean University

Students from the different departments of the engineering faculty or from other faculties of the Eastern Mediterranean University may apply to transfer to the civil

engineering department provided that their existing CGPA is 1.50 or above. In addition to the minimum CGPA requirement, the following criteria are applied:

Students with Turkish nationality must have the minimum entrance examination score required by the Turkish Higher Educational Council (YÖK) for entrance to the civil engineering department in the year they were accepted for registration to the Eastern Mediterranean University.

No entrance examination requirements are needed for students from other countries, since there are no entrance examinations for such students. The TRNC nationals have the right to transfer irrespective of their entrance exam scores.

Students accepted for transfer to the civil engineering department are given exemptions for several courses that they have succeeded in their previous departments or faculties. The exemptions are granted by the transfer committee of the civil engineering department. The transfer committee consists of three faculty members of the civil engineering department. The number of the exempted courses determines the students' academic term. Therefore utmost care is taken so that the transfer students do not fall into a warning status with the number of exempted courses. In no case courses with grades F, D- and NG are exempted. The existing grades for the exempted courses are placed as they are (with no change) to their new transcripts.

13.2 Transfers from Other Universities

This type of transfer may be from the civil engineering departments of other universities or from other engineering faculties of universities. Two different groups of students may apply for this type of transfer.

A- Turkish Nationals

B- Other Nationalities

A. Turkish Nationals

These applicants are subdivided into two categories:

- 1. Students attending university level institutions**
- 2. Graduates of two-year vocational schools**

1. Students attending university level institutions

Four types of applications are accepted.

- i. Students attending departments other than civil engineering: These students must pass the entrance examinations conducted by Turkish Higher Educational Council (YÖK). The courses taken at their previous university are considered and equivalents ones are given exemptions. CGPA requirements are not taken into consideration in these cases. For the exemptions E letter grade is used.
- ii. Students attending from the civil engineering department of other universities: These students must pass the entrance examinations conducted by Turkish Higher Educational Council (YÖK). The courses taken at their previous university are considered and equivalents ones are given exemptions (E letter grade). CGPA requirements are not taken into consideration in these cases. In these cases the number of exempted courses does not exceed the half of the total number of courses required by the civil engineering department of the Eastern Mediterranean University.
- iii. Students attending departments other than civil engineering and whose entrance examinations marks conducted by Turkish Higher Educational Council (YÖK), is equivalent to the mark required to enter civil engineering departments in the year of their registration. Additional requirements for such students are that their CGPA must be minimum 2.00 and must not have failed courses in their transcript. The courses taken at their previous university are considered and equivalents ones are given exemptions (E letter grade). CGPA requirements are not taken into consideration in these cases. But the number of exempted courses should not exceed the half of the total number of courses required by the civil engineering department of the Eastern Mediterranean University.
- iv. Students attending departments of civil engineering and whose entrance examinations marks conducted by Turkish Higher Educational Council (YÖK), is equivalent to the mark required to enter civil engineering departments in the year of their registration. Additional requirements for such students are that their CGPA must be minimum 2.00 and must not have failed courses in their transcript. The courses taken at their previous

university are considered and equivalents ones are given exemptions (E letter grade). CGPA requirements are not taken into consideration in these cases. But the number of exempted courses does not exceed the half of the total number of courses required by the civil engineering department of the Eastern Mediterranean University.

2. Graduates of two-year vocational schools

Two groups of applicants exist in this category.

- i. Student that have passed the special exam (DGS) given by the Turkish Higher Educational Council (YÖK). This exam is for graduates of two-year vocational schools. Any student transferred through this special system is given exemption for approximately half of the courses (E letter grade) in the first and second year curriculum of the civil engineering. Such students are in probation until they complete all the courses of the first and second year curriculum that they are being assigned to. These exempted courses are approved by the departmental faculty board. The remaining courses (the assigned ones) must be completed within three semesters plus one additional summer term if the student needs. The probation status is lifted if the student passes all these assigned courses. These students have the right to fail in maximum two courses at the end of their probation period. If a student is unsuccessful in more than two courses then automatic dismissal from the university follows. During his/her probation period the academic warning criteria are not applied.
- ii. Students who graduated from vocational schools but instead of attending the special exam (DGS) but attended and passed the entrance examination (ÖSYM) given by the Turkish Higher Educational Council (YÖK): These students are given exemption in approximately one quarter of the courses in the first and second year of the civil engineering curriculum. The exemptions (E letter grades) are subject to the approval of the departmental faculty board. University regulations for students' progress are applied to these transfer students.

B. Other Nationalities

Students accepted for transfer to the civil engineering department are given exemptions (E letter grades) for several courses that they have succeeded in their previous departments or faculties. The exemptions are granted by the transfer committee of the civil engineering department and approved by the departmental faculty board. The number of the exempted courses determines the students' academic term. Therefore utmost care is taken so that the transfer students do not fall into a warning status with the number of exempted courses. In no case courses with failing grades are exempted. There is no CGPA restriction for these students. In these cases the number of exempted courses does not exceed the half of the total number of courses required by the civil engineering department of the Eastern Mediterranean University.

14. Graduation Requirements

A student is entitled to graduate if he/she:

1. Satisfactorily completes all the required number of credited and non-credited courses depending on the syllabus followed by the student
2. Completes the 40-day summer training, and
3. Attains a CGPA of at least 2.00.

If at the time of his/her graduation a student has achieved a CGPA of 3.00 or greater, this will be indicated on his/her graduation Diploma/Certificate and official transcript as follows: students with a CGPA in the range 3.00-3.49 "Honours"; students with a CGPA in the range 3.50-4.00 "High Honours."

If a student fails to meet the above mentioned criteria for graduation then depending on his/her marks and CGPA then he/she would have two options.

- a) Student could take **Graduation Make-Up Exams**, if he/she failed from maximum two courses and has either adequate level of CGPA or after taking the exam will have a CGPA more than or equal to 2.00. Graduation Make-Up Exams could take place at the earliest 15 days after the last day of the final exam and latest by the last day of the Add/Drop Period of the following semester. Students could attend up to two Graduation Make-Up Exams from

courses that they failed within the last two semesters prior to the date of the exam or if they fail to achieve a CGPA= 2.00 then they can take two Graduation Make-Up Exams from courses that they achieved letter grades of D, D+, or C-. Students have the right to attend Graduation Make-Up Exams only once during their complete time of study in the Department of Civil Engineering. If they fail these exams then they have to register with the department in the following semester.

- b) After consulting his/her Academic Adviser, if it is clear that the student cannot achieve the necessary criteria for graduation by attending Graduation Make-Up Exams then the student should register to failed courses or preferably courses with letter grades of D, D+, or C- in the following semester.
- c) Graduation Make-Up Exam will not be given to any student who receives NG grade.

Graduation is conferred by the University Senate upon the request of Faculties and Schools. The Diplomas/Certificates are prepared by the Office of the Registrar, and describe the name of the program, the date of graduation, and the degree or title obtained.

15. Özay Oral Library

The Eastern Mediterranean University Özay Oral Library offers highly qualified service by providing all the resources that students need successfully to complete their studies at the University. The EMU Library's operations (such as borrowing, searching, etc.) are computerized. All materials, students and staff are likely to need are recorded in the computer catalogue system which can be accessed at terminals in the library or computer centres around the Campus. You can do your search by looking up author title, subject or keyword, and can also check to see if the books have been checked out, or in the Reference Section or in the Reserve Section.

The Library contains a stock of about 140,000 books in all subjects studied within the University. The books in the Library collection are classified into some general categories and arranged accordingly as follows:

15.1 Classification

Number Category

000	GENERALITIES
100	PHILOSOPHY
200	RELIGION
300	SOCIAL SCIENCE
400	LANGUAGE
500	PURE SCIENCE
600	TECHNOLOGY (Applied Sciences)
700	FINE AND PERFORMING ARTS
800	LITERATURE
900	HISTORY AND GEOGRAPHY

Note that Civil Engineering related books are mostly located in the categories TECHNOLOGY and GENERALITIES. For any queries or difficulties you may have in locating materials, please contact the information desks located on all floors.

15.2 Membership

Students, Academic and Administrative Personnel may become members. Individuals from outside the university may use the library resources, but cannot become members. Students who are not members may apply in the beginning of each semester.

- * Student members must renew their library cards at the start of each semester.

- * When completing membership or renewal form, an identification card must be shown.

- * Members, who, for any reason leave the university, must return their library card.

- * Members of the library must abide by the rules of the Library.

- * The Circulation desk should be notified of any changes in address, or when a library card is lost.

15.3 Reserve Section

The books, which are most frequently used, are kept in the Reserve Section. Each semester instructors may fill in a form indicating the materials to be placed in the Reserve Section for particular courses. Items on reserve may be lent out for one hour, one night, or for-three days.

15.4 Audio-Visual Library & Music Room

700 video cassettes are housed in the Audio-Visual Library which is on the first floor of the library. Compact disks are also available for listening in the Music Room.

15.5 Borrowing

- * Students may borrow up to 3 books for a period of 15 days.
- * Students are required to sign books out in their own name.
- * When borrowing books, students are required to show their library cards and their identification cards together.
- * Reference books, current periodicals, master theses, doctoral dissertations, handwritten or rare books cannot be checked out.
- * Books which are overdue cannot be borrowed from the library.
- * Books which have already been borrowed by another reader can be reserved. Reserved books which are not collected within two days will have their reservations cancelled.
- * Members who have overdue books or who have not paid all the fines cannot borrow new books.
- * The borrowing period cannot be extended; books can be taken out again 24 hours later if not reserved.
- * The Library Administration may ask for the borrowed books to be returned earlier if the necessity arises.

15.6 Fines

- * Borrowers who fail to return books on time will have to pay a fine (assessed on an hourly basis for reserve books and daily basis for other books). Ask the circulation desk the current rates. Lost or damaged material will also have to be paid for.
- * Borrowers will receive only 2 reminders requesting to return books. An overdue book that is not returned within a month will then identified as lost. A penalty will be charged for lost materials. Replacement cost is then calculated by adding 50% to the actual cost (calculated at a daily rate of exchange announced by the Central Bank.)
- * Students who have not returned books or have not paid their fines will not be allowed to renew their library cards, borrow books, register, and/or will not be able to receive their diplomas until they return all due books and pay all due fines.
- * Appropriate legal action will be taken towards members who leave the university owing fines or holding library books.
- * Fines schedule is determined by the Rector Office.

15.7 Working Hours

Monday – Friday	09:00 am - 07:00 pm
Saturday	10:00 am - 04:30 pm
Reserve & Reference	09:00 am - 10:30 pm

Changes in working hours will be announced in advance, if any.