

## **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 both in Turkey and in other 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 1 professor, 6 associate professors, 6 assistant professors, 1 lecturer, apart from the supporting laboratory and secretarial staff. We have 18 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. Özgür EREN  
Chairman

**EASTERN MEDITERRANEAN UNIVERSITY  
GRADUATE PROGRAMME**

<b>PROGRAMME NAME:</b> MS in Civil Engineering	<b>PROGRAMME CODE:</b> 522
<b>FACULTY/SCHOOL:</b> Engineering	<b>DEPARTMENT:</b> Civil Engineering ( <a href="http://civil.emu.edu.tr/">http://civil.emu.edu.tr/</a> )
<b>LEVEL:</b> Graduate (2 <sup>nd</sup> Cycle)	<b>DEGREE AWARDED:</b> MS
<b>GRADUATION REQUIREMENTS:</b> To graduate with a Master of Science in Civil Engineering, students must	
<ol style="list-style-type: none"><li>1. Successfully complete a total number of seven courses (with at least Grade C, and the total CGPA 3.00/4.00)</li><li>2. Successfully complete two additional non-credit courses.</li><li>3. Succeed in the MS thesis defense</li></ol>	

## REGULATIONS

### MS PROGRAMME IN CIVIL ENGINEERING

#### I. INTRODUCTION

Under the by-laws of Institute of Graduate Studies and Research, Civil Engineering Department offers a Master Degree programme leading to “MS Degree in Civil Engineering”. All the necessary information and application forms are available at <http://civil.emu.edu.tr/> and <http://grad.emu.edu.tr>.

#### II. ADMISSION

All applications are evaluated by the Graduate Committee of the Civil Engineering Department. Applicants must have a Bachelor’s degree in Civil Engineering (or a related field) with a minimum CGPA of 2.50/4.00, and must be fluent in written and oral English. Applicants who hold a Bachelor’s degree in an engineering field other than Civil Engineering may be accepted at “probational” status and will be required to take some of the undergraduate courses related with their area of interest as “Deficiency Courses”. Such a student will be asked to take minimum three courses in the deficiency programme.

Turkish students are required to secure a central Graduate Studies Examination (ALES) score of at least 55 (received within last three years).

All MS candidates must take the “English Proficiency Examination” and get at least 75%. Candidates who cannot satisfy this requirement are asked to register for ENGL509, ENGL511, ENGL513 or ENGL515 depending on their mark from “English Proficiency Examination”.

The table below shows appropriate postgraduate level English courses that should be taken if mark obtained from the English Proficiency Examination is less than 75%. This table also shows the number of graduate level courses that can be taken in addition to postgraduate level English course.

Mark (%)	Postgraduate level English courses	Number of graduate level courses that can be taken in addition to postgraduate level English course
EMU-EPE*: 0-19	ENGL509	None
20-39	ENGL511	None
40-59	ENGL513	Up to two courses (MS program with thesis), up to three courses (MS program without thesis)
60-74	ENGL515	No limit

(\* Eastern Mediterranean University-English Proficiency Exam)

### III. MASTER OF SCIENCE DEGREE REQUIREMENTS

#### a) Research Proposal Requirement

All MS students must fill the MS proposal form and submit it to the Chair of the Civil Engineering Department until the end of add/drop period of the third semester of their graduate study.

#### b) Course Requirements

The MS programme in Civil Engineering Department is based on coursework totalling a minimum of 21 credit-hours, two non-credit courses and a MS thesis. Students who are accepted in the probation status must complete the “undergraduate deficiency courses” assigned to them by the assigned academic advisor of the Department. Civil Engineering graduate courses shall be selected by the student, with the approval of his/her academic advisor. Students can get at most one undergraduate course as part of the course requirement provided that s/he has not taken it before.

In order for a student to be considered successful in a course, s/he must receive a grade of at least “C”. Any student, who fails three times from any course, will be dismissed from the MS programme.

A GPA of 3.00/4.00 is expected at the end of each semester. The MS candidates are required to take the following courses:

Course Code	Course Title	Credit
ENGL523	Thesis Writing for Postgraduate Students	0
	Mathematics Related Course	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
(*)	Departmental/Area/* Approved Elective	(3,0) 3
CIVL598	Graduate Seminar	0
CIVL500	MS Thesis	0

(\* If there is no suitable course from the Department or Faculty of Engineering, student can take graduate courses from other Faculties of EMU. This course should be approved by the student’s supervisor and the Graduate Committee of Civil Engineering Department.

**c) Thesis Requirement**

All MS students are required to prepare and defend a MS thesis under the supervision of a faculty member approved by the Civil Engineering Department. To each student a MS thesis supervisor is appointed until the end of add/drop period of the third semester of their graduate studies.

**d) Time Requirement**

A MS student should complete all the required studies, including courses and thesis work, within the minimum/maximum time set by the EMU by-laws. Currently, this is 2/4 semesters for full-time students, and 3/6 semesters for part-time students. The maximum duration of studies indicated here may be extended by two semesters at the most provided that the request for extension is supported by the supervisor and approved by the Chair of Department and the Director of the Institute of Graduate Studies and Research is notified.

Periods of time spent in the EMU English Preparatory School or in the deficiency programme courses are not included in the duration of MS study.

If any graduate course is taken parallel to deficiency courses mentioned above, the duration of MS study will start on that semester.

**EASTERN MEDITERRANEAN UNIVERSITY  
GRADUATE PROGRAM**

<b>PROGRAMME NAME:</b> PhD in Civil Engineering	<b>PROGRAMME CODE:</b> 622
<b>FACULTY/SCHOOL:</b> Engineering	<b>DEPARTMENT:</b> Civil Engineering
<b>LEVEL:</b> Graduate (3 <sup>rd</sup> Cycle)	<b>DEGREE AWARDED:</b> PhD
<b>GRADUATION REQUIREMENTS:</b> To graduate with a Doctor of Philosophy in Civil Engineering, students must	
<ol style="list-style-type: none"><li>1. Successfully complete a total number of seven courses (with at least Grade B, and the total CGPA 3.00/4.00)</li><li>2. Successfully complete the PhD Qualifying Examination.</li><li>3. Obtain minimum 16 points from publications (at least one journal publication with SCI or SCI-E).</li><li>4. Succeed in the PhD thesis jury.</li></ol>	

**REGULATIONS**

**PhD PROGRAMME IN CIVIL ENGINEERING**

**I. INTRODUCTION**

Under the by-laws of Institute of Graduate Studies and Research, Civil Engineering Department offers a graduate education programs leading to the Doctor of Philosophy (PhD) degrees in Civil Engineering.

The basic objectives of the Civil Engineering Graduate program leading to the Doctor of Philosophy (PhD) degree in Civil Engineering are;

1. To ensure a deeper understanding of the fundamental aspects of the Civil Engineering field,
2. To provide opportunities for advanced specialization and creative research activities in Civil Engineering,
3. To stimulate independent study, critical thinking, and a team work,
4. To contribute to the education of prospective academicians for EMU and other Universities.

The offered programme helps achieving these objectives, through course studies and thesis preparation.

**II. ADMISSION**

All applications are evaluated by the Graduate Committee of the Civil Engineering Department. All applicants must have a MS degree with thesis in Civil Engineering or a related field of study with a minimum CGPA of 3.00/4.00, and must be fluent in written and oral English. Applicants who hold a MS degree in a field other than Civil Engineering may be accepted with “probational” status and will be required to take at least three courses from the deficiency programme.

Applicants should submit a research proposal together with their application form.

Candidates can be interviewed by the Graduate Committee of the Civil Engineering Department.

Turkish students are required to secure a central Graduate Studies Exam (ALES) score of at least 55 (received within last three years).

All PhD candidates must take the “English Proficiency Examination” and get at least 75%. Candidates who cannot satisfy this requirement are asked to register for ENGL509, ENGL511, ENGL513 or ENGL515 depending on their mark from “English Proficiency Examination”.

The table below shows appropriate postgraduate level English courses that should be taken if mark obtained from English Proficiency Examination is less than 75%. This table also shows the maximum number of graduate level courses that can be taken in addition to postgraduate level English course.

<b>Mark (%)</b>	<b>Postgraduate level English course</b>	<b>Number of graduate level courses that can be taken in addition to postgraduate level English course</b>
EMU-EPE* 0-19	ENGL509	None
20-39	ENGL511	None
40-59	ENGL513	Up to two courses
60-74	ENGL515	No limit

(\*) Eastern Mediterranean University-English Proficiency Exam

### **III. DOCTOR OF PHILOSOPHY DEGREE REQUIREMENTS**

#### **a) Course Requirements**

The PhD program of Civil Engineering is based on coursework totalling a minimum of 21 credit-hours, a non-credit CIVL699 (PhD qualifying examination) course and a PhD thesis. In order for a student to be considered successful in a course s/he must receive a grade of at least “B”. A candidate who has received a grade of less than “B”, will have to repeat the course. A GPA of 3.00/4.00 is expected at the end of each semester. A mathematics related course is compulsory in the PhD program.

The candidates are required to take the following courses:

Course Code	Course Title	Credit
ENGL523 or ENGL525	Thesis Writing for Postgraduate Students or Advanced Presentation Skills for Postgraduate Students	0
	Mathematics Related Course	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
	Department/Area /*Approved Elective	(3,0) 3
CIVL699	PhD Qualifying Examination	0
CIVL600	PhD Thesis	0

*(\*) If there is no suitable course from the Department or Faculty of Engineering, student can take graduate courses from other Faculties of EMU. This course should be approved by the student's supervisor and the Graduate Committee of Civil Engineering Department.*

#### **b) The Qualifying Exam**

PhD candidates are required to take a qualifying exam after their coursework is successfully completed. The purpose of the qualifying examination is to evaluate the students' knowledge related to the courses taken in the program, and to assess the student's research capabilities on written and oral basis. The PhD qualifying examination is held on a date determined by the Chair of Civil Engineering Department which is within the last 15 days before the end of the classes in that semester. The jury evaluates the student's performance as either "satisfactory" or "unsatisfactory" and informs the Institute of Graduate Studies and Research about the decision. The student should pass this examination in at most two trials. A student whose performance is twice evaluated as being "unsatisfactory" is dismissed from the PhD program.

Rules, regulations and forms related to PhD qualifying examination of Civil Engineering Department are available at <http://civil.emu.edu.tr/>.

#### **d) Thesis Requirement**

All PhD candidates are required to prepare and defend a PhD thesis under the supervision of a faculty member approved by the Department. The PhD thesis should demonstrate the student's ability to address a significant research problem in the field of Civil Engineering, and arrive at a successful resolution of the problem. A PhD thesis must give evidence of at least one of the following qualities: (a) a new scientific approach or innovation, (b) development of a new scientific method, (c) application of a known method to a new field.

To each candidate a thesis supervisor is appointed until the end of add/drop period of the third semester of their graduate studies. A form named "Thesis Supervisor/Co-Supervisor Appointment Form" should be filled and approved until end of above mentioned time. Candidates should also register for CIVL600 at this semester.

When a thesis topic proposal is ready, a “Thesis Monitoring Committee” will be established in consultation with the Thesis Supervisor and with the approval of Head of Department and Director of Institute of Graduate Studies and Research. This committee consists of three members including thesis supervisor. If possible one member should be from another institution or department. When a co-supervisor exists, the co-supervisor can attend the Monitoring Committee meeting without the right to vote. Following the establishment of Thesis Monitoring Committee, the candidate is required to present and defend his/her thesis proposal in front of the committee, at a date set by the Chair of the Department within 15 days.

The monitoring committee will meet once every semester for the candidate whose thesis proposal was accepted. The candidate is required to submit a report to the committee at least one month before the meeting date, explaining the progress on the thesis work, outlining future work plans and listing any national and/or international publications planned for the next academic year. The supervisor gives the semester grade to the student in consultation with the monitoring committee.

Prior to the appointment of a candidate’s thesis defence jury, the candidate must have 16 credits from publications (or accepted for publication).

#### **e) Time Requirement**

A PhD candidate should complete all the required studies, including courses and thesis work, within the minimum/maximum time set by EMU by-laws. Currently, this is 4/10 semesters for full-time candidates and 6/14 semesters for part-time candidates. The maximum duration of studies indicated here may be extended by two semesters at the most provided that the request for extension is supported by student’s supervisor and approved by the Chair of Civil Engineering Department and the Director of the Institute of Graduate Studies and Research is notified.

Periods of time spent in English Preparatory School or for deficiency courses are not included.

If any graduate course is taken parallel to deficiency courses mentioned above, the duration of PhD study will start on that semester.



## **IV GRADUATE COURSES OFFERED IN THE DEPARTMENT OF CIVIL ENGINEERING**

### ***GENERAL COURSES***

#### **CIVL500 MS Thesis**

The MS thesis should present the results of scholarly investigation of a topic related with one of the fields of Civil Engineering.

#### **CIVL598 Graduate Seminar**

To provide basic knowledge about the research and other activities related with MS Thesis. It includes a schedule of invited speakers on infrastructure-related to MS studies.

#### **CIVL600 PhD Thesis**

The PhD thesis should demonstrate the student's ability to address a significant research problem in the field of Civil Engineering, and arrive at a successful resolution of the problem. A PhD thesis must give evidence of at least one of the following qualities: (a) a new scientific approach or innovation, (b) the development of a new scientific method, (c) the application of a known method to a new field.

#### **CIVL699 PhD Qualifying Examination**

The qualifying examination is intended to test the student's understanding of basic courses at the undergraduate and graduate levels, as well as his/her capability to perform research on a specified thesis topic. It consists of two parts: a two-session written examination (general and specialty), and an oral examination.

### ***CIVIL ENGINEERING MATERIALS***

#### **CIVL582 Creep and Shrinkage of Concrete**

Creep. General form of strain-time relationship for concrete. Concrete as a composite material. Factors influencing creep. General prediction of creep. Behavior of cracks in brittle materials. Features of failure in concrete.

#### **CIVL583 Fiber Reinforced Concrete**

Concept of FRC. Fiber types. Physical and chemical properties of fibers. Properties of freshly mixed and hardened fiber reinforced concrete. Mix proportioning of FRC. Mechanical properties of FRC and high strength FRC. Cost and economical benefits of FRC.

#### **CIVL585 Concrete Construction**

Cement. Aggregate. Admixtures. Water, batching and mixing. Transporting, placing, compaction and curing. Strength of concrete. Deformations and cracks. Polymer reinforced concrete. Roller compacted concrete and shotcrete. Self compacting concrete. Temperature problems of concrete. Quality of concrete.

#### **CIVL586 Chemical Admixtures for Concrete**

Classification of cement admixtures. Water-reducing admixtures. Air-entraining admixtures. Pumping aids for concrete. Integral waterproofers. Mortar plasticisers. Superplasticisers. Accelerators. Polymer dispersion or lattices. Novel admixtures.

### **CIVL587 Cement Replacement Materials**

Hydration of Portland cement. Pozzolanic reactions. Portland-Pozzolan mixes. Calcined clay, shale and other soils. Slags and slag cements. Natural pozzolans. Silica fume. Fly ash.

### **CIVL588 Durability of Building Materials**

Factors causing deterioration of materials. Durability of building stones. Decay and preservation of timber. Mechanisms of metal corrosion. Corrosion protection for metals. Deterioration of concrete. Mechanisms of concrete corrosion. Effect of various chemicals, sea water, ground water and industrial wastes. Protective measures against concrete corrosion. Corrosion of steel reinforcement in concrete.

### **CIVL589 High Strength Concrete**

Historical review and materials used. Concrete mix design calculations for HSC. Properties of fresh and hardened concrete. Mechanical properties of hardened concrete. Durability of HSC. Quality assurance and quality control. HSC structures and economical considerations.

### **CIVL575 Sustainability of Building Construction**

Introduction to sustainability: Environmental, Economical and Social Impacts. Environmental management: what is environment, pollution and Sustainable Development (SD). Sustainability and construction: sustainable design, construction, use and end of life. Key issues of environmental concern: materials and resources, waste and land-use, energy, transport, emissions, recycle and reuse, performance and quality, health and well-being, social issues. Energy management: alternative energy sources.

### **CIVL685 Fiber Reinforced Concrete**

Basic physical and chemical properties of fiber reinforced concrete. Proportioning of concretes including fibers. Mechanical properties of fiber reinforced concrete and high strength fiber reinforced concrete. Economical benefits of fiber reinforced concrete.

## ***CONSTRUCTION TECHNOLOGY & MANAGEMENT***

### **CIVL591 Construction Management 1**

This course aims to provide graduate students with the necessary information related to project management in the construction industry, which will help them in their professional careers. It covers the topics such as advanced construction planning and scheduling, resource management and construction progress control such as, cost and time, as well as quality management and quality control.

### **CIVL592 Construction Management 2**

This course aims to provide graduate students with the information and practices in project appraisal, life cycle costing, value management and environmental management. This course covers a wide range of subjects that are required in the daily operations in the construction industry. Students will gain valuable experience through different types of projects which will require the application of life cycle costing methods, value management, environmental appraisal and management and an overall project appraisal.

### **CIVL593 Risk Management in Construction Projects**

This course aims to provide an overview of what is meant by risk and way in which it influences decisions made in the construction industry. It should provide graduate students with the necessary systems and techniques used in management of risk on construction

projects as well as the whole construction industry. This course also covers the theoretical aspects of risks as well as the application of risk to real life projects.

#### **CIVL595 Contract Administration**

This course aims to provide graduate students with the knowledge of contract administration and how contracts in the industry function. This course covers topics such as different contracting arrangements in the construction industry, fundamentals of contracts, significance of different forms of organization, different types of bonds, how contracts are awarded and how payment of contracts is performed.

#### **CIVL596 Construction Technology 1**

This course aims to provide graduate students with the necessary information related to Construction Technology in the construction industry, which will help them in their professional careers. Site work. Excavation equipments. Rock excavation. Protection of excavation. Lifting equipments. Transporting equipments. Soil compacting equipments. Masonry construction, and concrete construction.

#### **CIVL597 Construction Technology 2**

This course aims to provide graduate students with the necessary information related to Construction Technology in the construction industry, which will help them in their professional careers. Formworks technology, formwork design. Scaffolding system, scaffolding design. Foundation construction. Demolition & recycling. Compressed air system. Wood construction and dewatering technology.

#### **CIVL599 Occupational Health Safety and Management in Construction**

This course aims to provide graduate students with the necessary information related to Safety and health management in the construction industry, which will help them in their professional careers. Safety and health management. Development of the safety and health function. Information systems. Process safety and disaster preparedness. Building and facilities. Personal protection. Fire protection. Materials handling and storage.

#### **CIVL691 Design Management and Building Information Modeling (BIM)**

Principles of design management in Architecture, Engineering and Construction (AEC); processes by which building design activities are managed and the relationship between effective design management; knowledge about collaborative design management in AEC projects; fundamentals of working collaboratively and effectively within multi-disciplinary temporary project organizations; Building Information Modeling, procedures, protocols, software and implementation to projects.

#### **CIVL694 Project Management**

The project management context; Introduction to project management, project management context, project management processes. Project management knowledge areas; project integration management, Project scope management, project time management, project cost management, project quality management, project human resources management, project communication management, project risk management, project procurement management.

## ***GEOTECHNICAL ENGINEERING***

### **CIVL550 Special Topics in Geotechnical Engineering**

Advanced topics of special interest to graduate students on recent developments in geotechnical engineering. Specific topics and prerequisites identified for each section and varied from term to term.

### **CIVL551 Advanced Soil Mechanics**

The nature of soils. States of stress within a soil mass. Mohr circle and stress path. Stress-strain relationships under various soil conditions. Seepage theory and flow in anisotropic and multi-layered soils. Concept of failure. Failure theories. Shear strength of soils. Pore pressure coefficients.

### **CIVL552 Geotechnical Earthquake Engineering**

Vibratory motion. Single degree-of-freedom systems. Wave propagation through soils. Dynamic soil properties. Strength and deformation characteristics of cyclically loaded soils. Earthquake site response analysis. Ground motion characterization. Liquefaction. Ground settlement. Seismic analysis and stability of slopes. Seismic analysis and design of retaining structures.

### **CIVL553 Soil Behaviour**

The microscopic nature of soils. Crystallography. Clay mineralogy; determination of clay mineral composition. Physico-chemical properties of clays. Properties of double layer. Soil fabric and soil structure. Soil behavior in regard to soil composition and soil structure. Rheology.

### **CIVL554 Advanced Soil Stabilization**

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.

### **CIVL555 Expansive Soils**

Identification of expansive soils. Laboratory and in situ testing techniques on expansive soils. Soil suction applications to expansive soils. Influence of climatic changes on expansive soils: cyclic swell-shrink behaviour. Shrinkage of expansive soils. Heave prediction methods. Treatment of expansive soils. Remedial methods. Design of foundations on expansive soils.

### **CIVL556 Measurement of Shear Strength of Soils**

States of stress in geotechnical engineering (isotropic,  $K_0$  conditions). Shear Strength Failure Criteria. Concepts of critical state soil mechanics. Direct shear test: loose and dense sands. Triaxial equipment and testing philosophies: deformation behaviour (isotropic and shear loading). Unconsolidated undrained triaxial test. Consolidated undrained test with pore water pressure measurement. Skempton's A and B pore water pressure parameters. Cam Clay Model: framework and theoretical basis, predicted behaviour of NC and OC clays. Vane shear test for clays.

**CIVL557 Mechanics of Unsaturated Soils**

Introduction to unsaturated soil problems. Phase properties and relations. Effective stress concepts for unsaturated soils. Measurement of unsaturated soil properties. Flow of water in unsaturated soils. Steady state and transient flows. Soil water characteristic curve. Hydraulic conductivity-suction relations. Infiltration, evaporation and drainage and applications to soil covers and earth dams. Mechanical behaviour of unsaturated soils. Pore pressure parameters. Volume change constitutive relations under drained and undrained loading.

**CIVL558 Applications of Geosynthetics in Civil Engineering**

Physical, mechanical, chemical, biological, and endurance properties of geosynthetics including geotextiles, geogrids, geonets, geomembranes, geopipes and geocomposites. Standard testing methods for geosynthetics. Application and design procedures for the purposes of separation, reinforcement, stabilization, filtration, drainage and containment of solids and liquids.

**CIVL559 Computational Methods in Geotechnical Engineering**

Constitutive modeling for geomaterials. Finite element implementation of constitutive models, and coupled solid-fluid mechanical governing equations for inelastic porous media. Transient and steady state conditions. Geotechnical, geological, structural, and other related modern engineering problems. Analysis of engineering works using state of practice software to provide insight into geotechnical design and the performance of constructed facilities. Use of finite element software program for implementation and analysis.

**CIVL651 Advanced Geotechnical Engineering I**

Geotechnical site investigation methods and in situ tests used to estimate engineering parameters. In situ test methods: standard penetration test, cone penetration with and without pore pressure measurements (CPTU and CPT), self-boring and cone pressuremeters (SBPMT and CPMT), flat dilatometers (DMT) and field vane shear test. Correlations of strength and stiffness properties, in situ state parameters, consolidation coefficients, stress history, and other parameters. Bearing capacity of shallow and deep foundations. Settlements of shallow and deep foundations leading to structural damage. Soil-structure interaction models using finite element based softwares. Design procedures and construction considerations for shallow and deep foundation systems.

***HYDRAULICS ENGINEERING*****CIVL530 Special Topics in Hydraulics**

A hydraulic branch course offered to any graduate student related mainly to his/her thesis topic.

**CIVL531 Groundwater Engineering**

Occurrence of groundwater, techniques and methods in groundwater investigations, groundwater hydraulics, aquifer analysis, techniques and methods in groundwater extraction, groundwater contamination.

**CIVL532 Applied Hydrology**

System approach in hydrology, hydrologic modelling, probabilistic methods in hydrology, stochastic hydrology, synthetic flow generation, remote sensing techniques in hydrology, isotope techniques in hydrology.

### **CIVL533 Irrigation and Drainage Engineering**

Soil and water types, reclamation of saline and alkali soils, land classification, types of drainage, drainage structures, design of drainage systems, irrigation practices, types of irrigation and their requirements, moisture in soil and crop water requirements, design of irrigation systems, economic evaluation, operation and maintenance of irrigation systems.

### **CIVL534 Hydropower Engineering**

Fundamental of hydropower engineering; power in flowing water, hydropower potential, types of hydropower schemes, types of power stations, transmission of power by pipelines. Planning of hydropower schemes. Appurtenances for hydropower plants; intakes, canals and tunnels, head ponds, surge tanks, penstocks. Power house; classification, substructures, superstructures. Water turbines; historical background, velocity diagram, turbine constants, types of turbines, selection of turbines, cavitation and setting of turbines.

### **CIVL536 Coastal Hydraulics**

The coast and coastal processes, short-period waves (wind waves), wave climate, waves in coastal region, long-period waves (tides and tsunamis), coastal currents and storm surges, the interaction between waves and structures, coastal sediments problems, coastal pollution and control.

### **CIVL537 Advanced Sediment Transport**

Introduction; properties of sediment; incipient motion of a sediment particle; fall velocity; bed-forms mechanics and resistance laws (ripples, dunes and anti-dunes); bed load, suspended load and total load theories and calculations; regime concept and stable channel design (the design of erodable channels); settling basin types and intake structures; scour criteria, isotope techniques in sediment transport studies. Sediment transport under wave action.

### **CIVL538 Design of Coastal and Harbour Structures**

Types and functions of coastal and harbour structures, wave forces on coastal and harbor structures, principles of coastal sediment transport, coastal erosion and deposition, coastal pollution and pollutant transport processes in coastal waters, design of coastal defense structures and seawalls, design of breakwaters, design of quay walls, design of turning basin and approach channel, design procedures of marine outfalls.

## ***STRUCTURAL ENGINEERING***

### **CIVL512 Stability of Systems**

Fundamental concepts of stability, Lyapunov's definitions. Linear systems and stability criteria. Classification of systems. The concept of a stability boundary and multiply-parameter systems. Conservative systems and elastic buckling problems. Pseudo-conservative systems, gyroscopic systems and circulatory systems. Examples.

### **CIVL543 Finite Element Method**

Fundamental concepts, Principle of Minimum Potential Energy, Rayleigh-Ritz Method. Matrix algebra, Gaussian Elimination, Cholesky and symmetric banded matrices, Skyline solution. One dimensional problems: The steps include development of shape functions, derivation of element stiffness, formation of global stiffness, treatment of boundary conditions, solution of equations and stress calculations using potential energy formulation.

Trusses, two dimensional problems using constant strain triangles, beams, frames and axisymmetric solids subjected to axisymmetric loading. Computer implementation.

#### **CIVL544 Advanced Topics in Steel Structures**

Introduction to Limit State Design of structural elements. Initial sizing, analysis and design of single-storey and multi-storey buildings. Structural behaviour and practical aspects of connections, including semi-rigid connections. Understanding the behaviour and design of members that are subject to combined bending and torsion.

#### **CIVL547 Structural Reliability**

Development of probabilistic bases for the design and evaluation of structural safety and reliability. Concepts of probability and stochastic processes. Description of random occupancy, wind and earthquake loadings, and of variability in material properties. Structural system reliability. Quantitative risk evaluation, systematic assessment and analysis of uncertainties, optimum design accounting for uncertainty and failure consequences. New probability-based code specifications. Applications.

#### **CIVL548 Matrix Methods in Structural Analysis**

Structural analysis versus actual response. Principle of virtual displacements. Principle of virtual forces. Betti's law. Influence coefficients. Force and displacement transformations. Transformation of member flexibility and stiffness. Fixed end forces, automated matrix displacement and force methods of structural analysis. Releases. Substructures. Nonlinear analysis. Introduction to finite element method.

#### **CIVL573 Assessment, Repair and Strengthening of Structures**

Introduction to assessment of structures. Destructive and non-destructive tests on RC, Steel and masonry constructions. Repair and strengthening techniques of RC structures. Strengthening of beams, columns and walls. Repair and Strengthening of other types of constructions.

#### **CIVL574 Connections in Steel Structures**

Common connections and matters relating to their design, detailing, fabrication and erection. Behaviour of semi-rigid connections. Modelling of joint behaviour. Ductility of connections. Cyclic behaviour of beam-to-column connections. Blast and impact resistance of connections.

#### **CIVL577 Seismic Performance Assessment of Buildings**

Review of seismic performance objectives and code design criteria. Linear and nonlinear procedures of analysis. Procedures for evaluating existing buildings. Factors affecting vulnerability of buildings. Vulnerability assessment techniques: seismic response vs. damageability. Loss estimation.

### ***TRANSPORTATION ENGINEERING***

#### **CIVL561 Pavement Design**

Stresses in flexible pavements. Stresses in rigid pavements. Finite element modelling for flexible and rigid pavements. Definition of joint types. Stresses in reinforced pavements. Design methods for flexible pavements. Overlay design procedure for flexible pavements. Design methods for rigid pavements. Overlay design procedures for rigid pavements.

#### **CIVL562 Bituminous Materials and Mix Design**

Types of asphalts, production of mineral aggregates and their properties. ASTM testing of the compliance of bitumen and aggregates with specifications. Design of Hot-Mix Asphaltic Concrete, Marshall Asphalt Mix Design procedure to determine optimum bitumen content and calculations, and other criteria stated by specifications. Job-Mix formula, batching plants, laying and compaction of asphaltic concrete. Other asphalt pavement types. Maintenance of asphalt pavements. Visiting local batching plants and asphalt laying operations.

### **CIVL563 Special Topics in Traffic Engineering**

Vehicle operating characteristics. The driver. Traffic characteristics. Traffic volume studies. Speed characteristics and studies. Travel time and delay studies. Origin-Destination surveys. Parking studies. Traffic accidents. Highway capacity and levels of service. Traffic signs, markings, signals and intersections. At grade and grade-separated intersections and their control. Economic analysis of highways.

### **CIVL564 Special Topics in Transportation Engineering-Road Safety**

The nature and dimensions of the Road Safety Problem. Safety Management Systems. Human factors in Road Traffic. Data Needs and Limitations. Hazardous Road Locations. Diagnosis of Road Accident Problems. Development of Countermeasures. Road design. Intersections. Delineation, Signing and Lighting.

### **CIVL565 Pavement Management Systems**

Introduction to pavement management process. Systematic approach to pavement management. Framework for a PMS. Monitoring and evaluation. Pavement serviceability and performance concepts. Pavement design. Pavement condition data collection, equipment processing. Distress survey methods and use. Field measurement of serviceability and roughness. Non-destructive testing and evaluation. Pavement maintenance. Pavement rehabilitation. Overlay design concept. Pavement life cycle, costing and economic analysis.

### **CIVL567 Computer Applications in Transportation Engineering**

Multi-layered elastic theory, stress, strain and deflection analysis in flexible and rigid pavements. Thickness design of various pavement types for highways, streets, parking lots, and industrial areas. Westergaard's edge and interior loading models for airport pavements. Design of asphalt concrete and Portland cement concrete pavements for airports. Analysis of asphalt mixtures for pavement surface courses.

### **CIVL569 Airport Engineering**

Development in air transportation. Aircraft characteristics related to airport design. Air traffic control. Computation of runway length. Airport configuration. Geometric design of the airfield. Structural design of airport pavements.



## V. LIST OF ACADEMIC STAFF & THEIR RESEARCH INTERESTS

### Full Time Staff

Name Surname	Title	e-mail (@emu.edu.tr)	Field	Research Interests
EREN, Özgür	Prof.	<a href="mailto:ozgur.eren">@ozgur.eren</a>	Civil Engineering Materials	Fiber reinforced concrete, self - consolidating concrete, cement replacement materials.
AKÇAOĞLU, Tülin	Assist. Prof.	tulin.akcaoglu	Civil Engineering Materials	Fracture Behaviour of Concrete under uniaxial compression. Interfacial Transition Zone Effects on crack initiation and propagation under Uniaxial Compression. Drying Shrinkage Crack Effects on Concrete Performance.
MARAR, Khaled	Assoc. Prof	khaled.marar	Civil Engineering Materials	Fiber Reinforced Concrete, Concrete Technology, High Strength Concrete, Cement Replacement Materials
YİTMEN, İbrahim	Assoc. Prof.	ibrahim.yitmen	Construction Technology & 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.
ÇELİK, Tolga	Dr.	tolga.celik	Construction Technology & Management	Social Costs, Lean construction, IT in Construction, Cost estimation,, Life Cycle Cost, Cost-Benefit Analysis, Value Management, Construction Planning and Scheduling
SEZAI, Zalihe	Assoc. Prof.	<a href="mailto:zalihe.nalbantoglu">@zalihe.nalbantoglu</a>	Geotechnical Engineering	Problematic soils, soil stabilization and improvements, slope stability, liquefaction .
UYGAR, Eriş	Assist. Prof.	eris.uygar	Geotechnical Engineering	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.
TÜRKER, Umut	Assoc. Prof.	umut.turker	Hydraulics Engineering	Coastal erosion and beach profiles, Coastal vegetation hydraulics, GIS applications, Groundwater analysis and modeling.
ERGİL, Mustafa	Assist. Prof.	<a href="mailto:mustafa.ergil">@mustafa.ergil</a>	Hydraulics Engineering	Groundwater and contamination, sediment transport, basin hydrology.
ŞENSOY, Serhan	Assoc. Prof.	<a href="mailto:serhan.sensoy">@serhan.sensoy</a>	Structural Engineering	Earthquake performance assessment of structures, stability of systems, nonlinear dynamics.
ÇELİKAĞ, Müride	Assist. Prof.	<a href="mailto:murude.celikag">@murude.celikag</a>	Structural Engineering	Behaviour of steel-framed structures, influence of steel beam-colum-connections on frame response, RBW connections, sustainability issues in structural engineering, building maintenance and repair.
ÖZAY, Giray	Assist. Prof.	<a href="mailto:giray.ozay">@giray.ozay</a>	Structural Engineering	Structural dynamics, defects deterioration and strengthening in buildings, historical buildings and their analysis.
YILDIRIM, Umut	Assist. Prof	umut.yildirim	Structural Engineering	System identification; Active control of structures, Structural health monitoring,

Name Surname	Title	e-mail (@emu.edu.tr)	Field	Research Interests
				Vibration based damage detection
KUNT, Mehmet Metin	Assist. Prof.	<a href="mailto:metin.kunt">@metin.kunt</a>	Transportation Engineering	Pavement design analysis and management, traffic accident research, geographic information systems and network analysis.
<b>Part Time Staff</b>				
Name Surname	Title	e-mail (@emu.edu.tr)	Field	Research Interests
ÇELİK, Tahir	Prof.	tahir.celik	Construction Technology & Management	Life cycle cost, data warehouse, expert systems.
BİLSEL, Huriye	Assoc. Prof.	huriye.bilsel	Geotechnical Engineering	Mechanics of unsaturated soils, geo-environmental engineering, geotechnical earthquake engineering, bio-geotechnology.

## VI. 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.

### 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.

### Geodesy Laboratory

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

### 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.

### 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.

### 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.

### **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.

### **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.

### **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.

### **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.

## **VII. Research and Publication Ethics**

Below rules apply for all research activities and publications within EMU.

### **EASTERN MEDITERRANEAN UNIVERSITY REGULATION FOR SCIENTIFIC RESEARCH AND PUBLICATION ETHICS**

#### **EASTERN MEDITERRANEAN UNIVERSITY BY-LAW FOR STAFFING AND EMPLOYMENT**

(Senate Resolution: Date: 07.11.2012, No: 11/352-8)  
(Board of Trustees Resolution Date: 07.12.2012, No: 12-13/7-4)

By-law under Article 40 (4)

Eastern Mediterranean University Rector's Office prepared the following by-law in accordance with Article 40(4) of the Eastern Mediterranean University "By-law for Staffing and Employment" and with the approval of the North Cyprus Education Foundation Executive Board.

### **CHAPTER I GENERAL PROVISIONS**

- Aim**
1. The aim of these regulations is to define the ethical principles to be implemented in academic activities such as scientific research, publication, research based education, art-related work and all other similar activities carried out at Eastern Mediterranean University and to regulate the principles for the formation, duties, responsibilities and the working

principles of the Scientific Research and Publication Ethics Board.

## Scope

2. These regulations cover,
  - (1) Research ethics subjects related with all types of scientific activities carried out by the University community and taking place in the form of scientific research or work and the scientific research-development projects either funded by the University or carried out in units operating within the University;
  - (2) Matters of publication ethics related with publications either published or submitted for publication in Eastern Mediterranean University's different types of press or visual and audio press organs or all other press organs outside the University.
  - (3) Academic ethics subjects relating to lecturers or research person/s and institutions who are currently benefitting or who have applied to benefit from Eastern Mediterranean University's support;
  - (4) Basic principles of the research-based education ethics;
  - (5) Principles for institutional ethics;
  - (6) The formation, duties and operation methods of the Board of Ethics;
  - (7) Topics relating to procedures for applying to the Board of Ethics and ethical evaluation.

Applications for any type of theoretical and experimental work carried or to be carried out in areas strictly bound by professional and scientific ethical rules such as Medicine, Dentistry, Pharmacy, Engineering, Architecture and Law, including the preliminary permission applications which require the approval of the Board of Ethics, are evaluated in line with the relevant area's own ethical principles by the sub-committees formed by experts in consultation with the relevant faculties. If deemed necessary, the Board of Ethics may form sub-committees of experts in other areas depending on the application topics. Decisions taken by the sub-committees should receive the approval of the Board of Ethics. Additionally, the sub-committees may recommend that their decisions are communicated to various external professional organization's board of ethics such as chambers or bar association.

## Definitions

3. Unless otherwise stated,  
**Board of Ethics** represents Eastern Mediterranean University Board of Ethics,  
**Rector's Office** represents Eastern Mediterranean University Rectorate,  
**University** refers to the Eastern Mediterranean University (EMU),  
**University Community** represents academic administrators, academic staff members, researchers and students, regardless of their status as full or part-time,  
**Ethical Misconduct** refers to deliberate action against the ethical principles and rules in the scientific research, scientific publication and research-based educational activities taking place within the framework of an academic and scientific institution's duties, responsibilities and competence.

**Ethical Negligence** refers to unintentional action against ethical principles and rules in the scientific research, scientific publication and research-

based educational activities based on negligence, recklessness, imprudence, ignorance or lack of experience, taking place within the framework of an academic and scientific institution's duties, responsibilities and competence.

**Basic Academic Ethics, Principles and Values**

4. (1) Eastern Mediterranean University acknowledges personal honor, personal identity, and professional dignity of each member of the University community as well as the academic dignity of the academic community and believes that academic ethical principles are the most indispensable chain of values that encompasses the University community. Academic ethical principles are founded on the following five basic values:
  - a. Honesty,
  - b. Trust,
  - c. Justice,
  - d. Respect,
  - e. Responsibility.
- (2) The University believes that these principles are valid in each and every phase of the scientific and artistic activities of any type (e.g., research, publication, artistic production and presentation), in every context or environment where the University is represented, and in fulfilling other services/activities that are open to public.

**Ethical Principles in Science and Arts**

5. Honesty, self-criticism, objectivity and fairness, openness, scientific scepticism, critical view, openness to new concepts, protection of scientific research discipline, unique and creative thinking, respect for others' efforts and products, and sensitivity towards the nature and the rights of the living form the basis for Eastern Mediterranean University's ethics related with science and arts. The application of all types of scientific research, art-related work, and any other related activities encompasses the following principles in the University:
  - (1) **Research Ethics Basic Principles**
    - a. **The Principle of Being Scientific:** Data is collected through scientific methods. During the phases of the evaluation and interpretation of the data and obtaining theoretical outcomes, the researcher does not deviate from scientific methods or procedures or change the outcomes. The researcher cannot present any research findings that have not been obtained.
    - b. **The Principle of Nonmaleficence: The Act of Respect for "the Living" and Protection of the "Participants" in Scientific Research:** The principle of nonmaleficence requires us that no harm is inflicted on the subjects, participants and respondents or natural or cultural assets that are the focus of the artistic activity or research. The participants and respondents should directly be informed of the possible risks and the researcher/s should endeavor to ensure that the decision of participating in the experiment/research is taken independently without coercion as required by the principle of the informed consent. Regarding research involving human data, the participants should be informed on the use, confidentiality and sharing of the data and their consent should be obtained,

accordingly.

- c. **The Principle of Informing and Warning the Public and the Concerned about Applications Containing Possible Risks/Harm:** Researchers, artists and officials undertake the responsibility of informing and warning the public about the outcomes and related possible harmful applications of the scientific research and artistic work under discussion.
- d. **The Principle of Freedom in Research Publication:** Researchers have a right, as well as responsibility, to refrain from undertaking or continue undertaking any research or declarations that would, according to their understanding, yield harmful outcomes or involve applications not approved by them. No researcher can be forced to defend, publicly verbalize or declare a specific opinion, thought or action.
- e. **The Principle of Academic Freedom of Research:** Unless a misconduct in the ethical principles specified in these regulations occurs, any attempts of research or artistic work cannot be interfered or prevented. In return, keeping in mind the budgetary application principles of the University and topics which require regional or global sensitivity, researchers and artists act carefully and responsibly in determining their research topics and methods.
- f. **The Principle of Responsibility towards Society and Humanity:** On the condition that intellectual rights and copyright are reserved, scientific research and artistic research are public domains, owned by the public as well as the researchers. Hence, the content of the research and artistic work that are beneficial for the society, humanity and the environment cannot be hidden, altered, distorted or forbidden.
- g. **Joint and Individual Responsibility Principle:** Researchers and artists are responsible for adhering to these principles both individually and jointly. The University community takes the protection of these principles as a basis for its existence.

(2) **Basic Principles of Publication Ethics**

- a. Findings of any scientific research are published with the inclusion of the names of all those researchers who actually carried out the research. Names of those individuals who have not been actively involved in the design, planning, implementation and publication stages of the research are not or cannot be forced to be included in the authors section.
- b. In benefitting from research that has never been published or previously published, the source should be indicated in accordance with the scientific publication rules. Apart from universal scientific theories, math theorems and their proofs, neither the translation nor the original version of any scientific work can be published as a whole or partially without getting any approval or citing the main source.
- c. Names of the institutions or individuals who provide active support in the research are explicitly referred to in the publications. In this respect, the name of the institution where

most of the research has been carried out has to be referred to even if the researcher is no longer a member of it.

## CHAPTER II FORMATION AND WORKING PRINCIPLES OF THE BOARD OF ETHICS

- Formation of the Board of Ethics** 6.
- (1) The Board of Ethics is formed by the faculty, school and English Preparatory and Foreign Languages School representatives in line with the recommendation of the faculties, schools and, English Preparatory and Foreign Languages School.
    - a. Only full time academic staff who have no existing proven records of ethical misconduct can apply for the Board membership.
    - b. Following the Senate's approval, the members are appointed with formal writing from the relevant Vice Rector.
  - (2) The period of service for the Board members is 3 years. In the event of a member leaving the Board, a new member who will serve for the remaining period of service of the previous member is appointed through the same method.
  - (3) Members whose period of service expires can be re-appointed through the same method.
  - (4) Memberships of those members failing to attend two consecutive meetings annually without submitting any valid excuse are directly terminated.
  - (5) For memberships which become vacant for any reason, a new member is appointed through the same method within two months.
  - (6) During the first meeting of the Board of Ethics, members elect a chair, a vice chair and a reporter amongst the Board members.
- Responsibilities of the Board of Ethics** 7.
- Responsibilities of the Board of Ethics are as follows:
- (1) Ensuring the ethical appropriateness of the scientific research, either partially or fully supported by Eastern Mediterranean University (including those which have been proposed or finalised) or carried out by the university staff by defining, developing and, if necessary, proposing changes regarding the principles of ethics;
  - (2) Investigating applications regarding students', academic staff's or administrative staff's involvement in types of ethical misconduct specified in this document;
  - (3) Processing applications of alleged ethical misconduct, if necessary, consulting experts or consultants, corresponding with the relevant authorities, and inquiring and giving information regarding matters either observed or brought to their attention during the monitoring process of the University staff's research projects which are partially or fully supported by Eastern Mediterranean University (including those which have been proposed or finalised) and regarding publications appearing in or submitted to the University's scientific journals or other press organs;
  - (4) Regardless of their relevance with the University, investigating past research projects, publications and other similar activities of those individuals who have applied to benefit from any type of

support provided by the University upon the request of the relevant unit or institution and reaching conclusions in terms of the scientific ethics; if deemed necessary, consulting experts, corresponding with relevant people, inquiring and giving information regarding the matter;

- (5) Within one month after the finalisation of the investigation, ensuring that the final report, either prepared directly by the Board of Ethics or appointed consultants after the investigation of the relevant files and the analysis of the committee's or reporters' reports, is presented to the Rector's Office; Informing the Rector's Office in writing about files that have been determined to be out the Board's scope;
- (6) Ensuring that relevant bodies are informed by the Rector's Office about proven acts violating research and publication ethics;
- (7) Submitting proposals to the Rector's Office regarding the organisation of the educational activities in collaboration with the relevant units, institutions or organisations in eliminating unethical conduct especially to do with academic, research and publication ethics. .

**Method of Application to the Board of Ethics**

- (1) Applications related with ethical misconduct are submitted to the Rector's Office. The applicants are required to, along with their application, submit concrete information and evidence regarding the allegation to the Rector's Office. The applications are sent to the Board of Ethics by the Rector's Office for an investigation.
- (2) In the event of the allegations of ethical misconduct taking place via press, electronic methods or other similar communication tools, the Rector's Office, itself, may ask the Board of Ethics to start an investigation on the relevant misconduct.
- (3) Applicants are promptly informed about the procedures to be followed regarding their applications by the body to which the application has been submitted.
- (4) Applications with missing signatures are not accepted. However, the Rector's Office, itself, may ask the Board of Ethics to start an investigation about the applications with missing signatures, but supported by concrete information and evidence.
- (5) During the investigation process, the Board of Ethics corresponds with other institutions or organisations via the Rector's Office.

**Confidentiality Principle**

- (1) Applications to the Board of Ethics and any kind of inspection and evaluation process conducted or decisions taken by the Board are kept confidential. No other person apart from the applicant is informed about the subject.
- (2) Members of the Ethical Board and sub-committee/s as well as the academic administrators are all bound by the confidentiality principle, even if the subject of the application has been disclosed to public through press and media.
- (3) Actions against the confidentiality principle is a disciplinary offense. The Rector's Office reserves the right to initiate the relevant procedures for those engaging in such activity.

**Board of Ethics: 10.**

- (1) The Board of Ethics convenes at least once per academic semester.



## Method of Operation

The Chair informs the Board Members in writing about the meeting date, time, and agenda at least one week before the meeting.

- (2) Documents related with the meeting agenda items (if the concerned item is to do with research, samples of the research file) are sent to the members.
- (3) Apart from regular meetings, the Board Chair may call an emergency meeting due to the high number of applications or an urgent reason.
- (4) The minimum number of members required for the convening and decision making of the Board is the two thirds of the Board members.
- (5) The Board of Ethics bases their evaluations on the relevant file/s. If deemed necessary, the person for whom allegations of ethical misconduct has been made is given the right to defend himself/herself. Upon receiving the notification from the Board of Ethics, the subject/s of the investigation should respond within three weeks. Otherwise, s/he will lose the right to defend him/herself and a decision will be taken about him/her based on other information or evidence.
- (6)
  - a. After a report has been prepared, a voting process takes place following a discussion session in the Board of Ethics. The final report is signed by the Board members. Members not agreeing with the decision should state reason/s for their objection.
  - b. The Board of Ethics submits their decisions based on their views and investigation results to the Rector's Office.
  - c. In situations involving ethical misconduct or ethical negligence proven by the Board of Ethics, the Rector's Office initiates administrative and/or legal procedures and starts a disciplinary investigation regarding the issue.
  - d. The Board of Ethics investigates and evaluates the applications only in terms of ethics. The investigation criteria and recommendations are based on international agreements and declarations, including those specified in Article 4 and 5, and settled ethical principles and rules. In the event of the Board of Ethics dealing with an ethical problem not prescribed in the national or international literature, they may link the problem to a corresponding principle or rule.
  - e. Individuals or institutions who make allegations of ethical misconduct are informed about the decisions taken about their application by the Rector's Office through relevant units or institutions.
- (7) Investigations or inquiries made or being made by other boards or institutions do not constitute an impediment in the ethical misconduct investigations to be held within the framework of these principles..
- (8)
  - a. If deemed necessary, for the investigation of each file, the Board of Ethics may choose to form a a sub-committee consisting of experts with suitable expertise in the area or to benefit from expert/consultant investigation and

- views.
- b. The sub-committee appointed by the Rector's Office conducts the investigation under strict confidentiality and submits the findings, relevant views and decisions to the Board of Ethics in the form of a preliminary report within two months. If necessary, the Board may also consult the consultants, experts and witnesses who are also required to submit separate reports containing their investigation findings to the Board of Ethics within two months. An additional period of investigation may be granted upon the Board's consent.
  - c. Information and documents required by the sub-committee, experts and consultants are provided through the Board of Ethics. If deemed necessary, the Board may propose to the Rector's Office that experts and consultants are invited to the meeting.

### CHAPTER III ETHICAL MISCONDUCT AND ETHICAL NEGLIGENCE

#### **Actions Involving Ethical Misconduct or Ethical Negligence**

11. Ethical principles for scientific research form the basis for the evaluation of the applications for actions including "ethical violation" or "ethical negligence". Additionally, the classification of the actions including "ethical misconduct" or "ethical negligence" in terms of publication ethics takes place in accordance with the following definitions:

(1) **Plagiarism**

- a. Piracy: Obtaining someone else's printed or electronic version of work or applications of art and presenting them under one's own name without giving appropriate credit;
- b. Presenting others' research findings or ideas and applications simply by using different words or expressions or by changing part of it without giving credit;
- c. Submitting or presenting part of someone else's printed or electronic version of work as your own, without giving any reference as required by academic publication rules;
- d. Presenting someone else's ideas, findings and artistic applications as one's own, without making any appropriate attributions in a manner that would leave no room for suspicion and that is parallel with the original source or the artistic applications;
- e. Failing to present others' ideas, findings and artistic applications in a manner that would show that they are citations;
- f. Failing to provide information regarding the source of the quote or providing partial information regarding the source..

- (2) **Fabrication:** Claiming either to have carried out research which has not been carried out and/or claiming to have obtained results based on research which has not been carried out.

(3) **Falsification:**

- a. Making deliberate or intentional alterations on the methods or findings of research and applications;

- b. Presenting research and applications in a different way that would violate the integrity of the research and applications;
  - c. Making a false claim of using a research material and/or tool that have not been involved in the research;
  - d. Presenting the research process in a different way than the original, leading to changes in the research process and qualities of the process;
  - e. Deliberately altering research data and records;
  - f. Violating the By-law for Ideas and Work of Art.
- (4) **Duplication:** Publishing (or submitting for publication) the same article or its translated version in more than one journal without attributing to the previous versions. However, in case of situations such as the publication content being related with multiple areas of expertise or the publication being beneficial if it is published in a different language, the duplication would be acceptable within the framework of certain rules and regulations. In situations as such, consent of both publisher should be obtained and bibliographic information about the first publication should be provided in the second publication.
- (5) **Salami Slicing:** Publishing the findings of the research in least publishable units within multiple articles although it is possible to publish them in a single article without damaging the unity and the integrity of the research.
- (6) **Failure to Acknowledge the Supporters/Contributors:** Failure to clearly acknowledge the support of any individuals, institutions or establishments in the research.
- (7) **Ghost Authorship, Fabricating or Falsifying the Author**
- a. Addition of the names of the person/s who do not have any active contributions to the research and/or publication into the list of authors due to their title or position;
  - b. Addition of the names of person/s who have not contributed to the research significantly or actively into the list of authors; or the addition of a new author (authors) by giving credit for contributions that would not conform with authorship;
  - c. Omission of the names of the co-researchers or authors who have significantly contributed to the research and/or article;
  - d. Changing the order of the authors without any reasons or in an appropriate way;
  - e. Translating books, articles etc. written in a foreign language and publishing them as one's own work..

**Conditions for Ethical Misconduct or Ethical Negligence**

12. For an event to be considered as “ethical misconduct” or “ethical negligence”, the following conditions should take place:
- (1) Ethical Misconduct is an act taking place as a result of deliberate and intentional behavior or serious negligence.

- (2) Ethical Negligence is an act taking place due to non-intentional behavior such as carelessness..
- (3) The claim should be credible and supported by sufficient evidence.

**CHAPTER IV  
APPEALS AGAINST THE DECISIONS OF THE BOARD OF ETHICS**

<b>Appeals against the Decisions of the Board of Ethics</b>	<b>Etik larına İtiraz</b>	<b>13.</b>	Appeals against the decisions of the Board of Ethics or relevant applications may be submitted to the Rector’s Office. Such appeals can be made within 20 working days after the parties have been notified of the decision or the application. The Rector’s Office may send the appeals found to be appropriate or containing new evidence back to the Board of Ethics for further investigation. After the re-evaluation of the case, the decision taken by the Board of Ethics is final.
---	---------------------------	------------	---

**CHAPTER V  
FINAL PROVISIONS**

<b>Executive Power</b>	<b>15.</b>	These regulations are executed by the Rector of Eastern Mediterranean University.
<b>Coming into Force</b>	<b>14.</b>	These regulations are put into force following the date of their approval by the Eastern Mediterranean University Board of Trustees.