

(It will be applied from 2016-2017 Fall)

**İZMİR INSTITUTE OF TECHNOLOGY
GRADUATE SCHOOL OF ENGINEERING AND SCIENCES
DEPARTMENT OF CITY AND REGIONAL PLANNING
CURRICULUM OF THE M.S. PROGRAM IN CITY PLANNING**

FALL SEMESTER

		<u>Credit</u>
CP 509	Planning Theory	(3-0) 3
CP 591	Research Seminar*	(0-3) NC
	Elective Course	(3-0) 3
	Elective Course	(3-0) 3
CP 8XX	Special Studies	(8-0) NC

SPRING SEMESTER

		<u>Credit</u>
CP 502	Studio Options in City Planning	(2-6) 5
CP 708	Urban Theory	(3-0) 3
	Elective Course	(3-0) 3
	Elective Course	(3-0) 3
CP 500	M.S. Thesis	(0-1) NC
CP 8XX	Special Studies	(8-0) NC

Total credit (min.):23

Number of courses with credit (min.): 7

* All M.S. students must register Seminar course until the beginning of their 4th semester.

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<u>ELECTIVES</u>		<u>Credit</u>
CP 505	Planning Research Studio	(4-4) 6
CP 521	Economic Structure Of Cities	(3-0) 3
CP 522	Regional Economic Growth and Development	(3-0) 3
CP 523	Economic And Financial Analysis Of Infrastructural Systems	(3-0) 3
CP 525	Decision Making Approaches in Urban Planning	(2-2) 3
CP 527	Static Optimization & Decision Analysis	(4-0) 4
CP 535	Public Transportation Systems Operations	(2-2) 3
CP 543	Culture, Identity and Planning	(3-0) 3
CP 552	Housing And Land Policy	(3-0) 3
CP 554	Postmodern Urbanism and Planning	(3-0) 3
CP 555	Environmental Ethics	(3-0) 3
CP 561	Remote Sensing and Image Processing	(2-2) 3
CP 562	Advanced Urban Geographic Information Systems	(4-2) 5
CP 564	Water Resources	(3-0) 3
CP 571	GIS and Remote Sensing Based Disaster Management Studies	(3-0) 3
CP 590	Special Topics in City Planning	(3-0) 3
CP 532	Quantitative Research Methods and Design	(2-2) 3
CP 534	Qualitative Research Design and Methods	(3-0) 3
CP 548	Space Syntax Theory and Applications	(2-2) 3

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COURSE DESCRIPTION :

Credit

CP 500 M. S. THESIS (0-1)NC

CP 502 STUDIO OPTIONS IN CITY PLANNING (2-6) 5

Projects pertaining to land use, transportation, public facilities and services, infrastructure systems, social concerns; accomplished through individual or small group activity under guidance of instructor.

CP 505 PLANNING RESEARCH STUDIO (4-4) 6

The course is composed of five main parts. In the first part it provides the context and foundations of urbanisation and the city. The second part of the course intends to develop an understanding of the economic, social and political processes that shape cities and emphasises the complex interrelationship between these processes and spatial developments. After this comprehension of the social, economic and political aspects of cities and urban change it makes the case for planning focusing on the different types of planning and on planning in practice. The course integrates a series of lectures, seminars in-class group work and intense field study. These are complemented by weekly assignments and presentations about the relevant topic. Students are expected to work in groups and also individually.

CP 509 PLANNING THEORY (3-0) 3

The genesis and structure of urban planning thought and methods. Economic, political and social factors influencing to the development of planning theories and formation of urban structures.

CP 591 RESEARCH SEMINAR (0-3)NC

The course is composed of two main parts. In the first part, by taking a departure from different theories, perspectives, approaches and conceptions, the course focuses on quantitative, qualitative and pluralistic methodological stances in social and urban studies. In the second part, exemplary applied studies are conducted on research design and methods relevant to contemporary urban-social issues. The ethical problems, which appear during the research practice and report and presentation preparing are examined by drawing on concrete examples.

CP 521 ECONOMIC STRUCTURE OF CITIES (3-0) 3

Introduction of microeconomics concept analysis. Supply and demand analysis, theories of the individual behavior, competition and monopoly, welfare economics. Economical concept of cost and benefit. Consumers and producer's surplus, shadow prices and evaluation of non-market cost and benefits. Pricing policies and investment rule. Case studies in development, developing and underdeveloped countries.

CP 522 REGIONAL ECONOMIC GROWTH AND DEVELOPMENT (3-0) 3

This course is designed to familiarize the students with fundamentals of regional economic growth theories as well as with the related empirical studies. To do so, we adopt a historical perspective and review the growth theories in the first half of the lecture. Then, empirical studies which try to test the validity of theories and which focus on different country cases are discussed. Starting from export and trade base theories, we proceed respectively with Neo-Classical Growth model, Endogenous growth, New Economic Geography models and Cumulative Causation Theories. Finally, in the last 2-3 weeks of the course, we discuss several empirical studies.

(It will be applied from 2016-2017 Fall)

CP 523 ECONOMIC AND FINANCIAL ANALYSIS OF (3-0) 3
INFRASTRUCTURAL SYSTEMS

Demand and supply. Market structure of infrastructure systems. Investment costs, operational costs, optimization models. Efficiency concept; efficiency in investment, efficiency in operation. Financing techniques, engineering and construction management of projects. Project appraisal and benefit-cost analyses.

CP 525 DECISION MAKING APPROACHES IN URBAN (2-2) 3
PLANNING

This course is primarily designed to provide students with a systematic approach on the decision making approaches in urban planning. At the same time, the course contains detailed studies on strategic planning and strategic choice approach.

CP 527 STATIC OPTIMIZATION & DECISION ANALYSIS (4-0) 4

Linear Programming, Mixed Integer Programming, Constrained and Unconstrained, Mathematical Optimizations, Shortest Path Algorithms, Queuing Models, Decision Analysis.

CP 532 QUANTITATIVE RESEARCH METHODS AND DESIGN (2-2) 3

This course is designed to familiarize students with fundamental concepts of quantitative tools and numerical analyses which are widely adopted in planning and urban studies research. The course intends to provide students and opportunity to conceptualize, define, design and implement planning and urban studies-relevant research and analysis; covering both theory and application with emphasis on the latter. For this purpose, it attempts to provide theoretical background and applications of a broad range of quantitative methods including, respectively, sampling techniques and questionnaires, uni- and multivariate ANOVA (Analysis of Variance), Estimation of non-parametric Empirical Distribution Functions; Kernel Density; Principle Component and Factor Analyses; Hierarchical and Partition Cluster Analysis, Correspondence and Partition Cluster Analysis, Correspondence and Discriminant Analyses. In addition to the theoretical courses, students will be required to attend the lab sessions during which applications of these methods will be held. The software packages like SPSS, STATA and spreadsheets will mostly be used.

CP 534 QUALITATIVE RESEARCH DESIGN AND METHODS (3-0) 3

This course examines the characteristics and different approaches to qualitative research design and methods used in social sciences in general and planning and urban design in particular. By taking a departure from the principle that the choice of methodology is directly linked to more comprehensive theoretical and conceptual issues, it provides students of a critical understanding of the links between philosophical commitments and practical research orientations in the social sciences. The course focuses primarily on hermeneutics (understanding and interpretation), phenomenology, ethnography, naturalistic inquiry, discourse analysis, semiotics and case study and corresponding techniques used in field works like participant-observation, survey research, life history and narratives, interviewing, comparative analysis and the use of documentary / primary sources. The techniques considered also include the quantification of primary qualitative data through the use of computer programs.

CP 535 PUBLIC TRANSPORTATION SYSTEMS OPERATIONS (2-2) 3

Operator types of urban public transportation systems. The modes; surface (land), underground and water. Guided (Right of Way) systems and flexible (tired systems) systems. Their system and operational characteristics. Principles of Route Determination. Demand configuration; Passenger demand, Fleet size determination, Tariff designation. Signalization, control of the systems, Navigation and Vehicle Tracking. Operations Research in the design of the system. Calculation of the revenues and costs. The subsidizing policy, price optimization and the issues of pricing. Technology determination. Efficiency in the quality servicing equity principles. The place of efficient servicing in urban planning. Other try and error (experimental) approaches in the system design.

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CP 543 CULTURE, IDENTITY AND PLANNING (3-0) 3

The content of this course is setting out the relations between planning, urbanism, history and culture. The contrast between the progressive vision with culturalist vision in the formative phase of urban development thought- the two fundamental positions according to the two perspectives (past and future.) On the one hand progressive vision looked to the future, exercising as an agent of modernization which based on human individual and the universal reason, capable of resolving the problematic relation of man with the world through science and technology. On the other, culturalist planning looked to the past. It assumed the forms of nostalgia, and its critical base was the urban community and the assertion of the values of the historic city over modern banality. These two models were represented as recurrent, in the different phase of development of town planning. On the other, the addition of the third model, present “cultural turn” can be interpreted as a reissue of this historic recurrence.

Cultural activities are of growing significance to urban and regional economies. The term “cultural economy” defines this intersection across a broad spectrum of creative endeavors. Urban policy and city planning as key sectors for interconnected initiatives in economic development, urban regeneration, place-making, urban design, and social planning. The “cultural turn” in city planning looms as an important dimension to be factored into considerations of future urban change. The overall aim of the course is to offer a broad, heuristic reading of an evolving, strengthening, sometimes problematic interplay between culture, identity and planning. The course employs a generalised framework of a succession of historical cultural planning paradigms and reconstructed identities.

CP 548 SPACE SYNTAX THEORY AND APPLICATIONS (2-2) 3

Explore and discuss Space Syntax theory and method. Implementing certain techniques of Space Syntax analysis in urban areas and overlapping analytical techniques with observations on the site.

CP 552 HOUSING AND LAND POLICY (3-0) 3

How government housing and land policy is formed; political, social, economic, physical, technological, ideological components. Alternative explanation of policy formation. Emphasis on history of housing and land policy in Turkey and comparisons with other countries.

CP 554 POSTMODERN URBANISM AND PLANNING (3-0) 3

Changes occurred by the late 1980s in urban areas have, in fact, created great deal of arguments in the literature thought the creation of a new theoretical debate over the new spatial order of urban areas. The aim of this course is to look at the factors that influenced the creation of new spatiality in urban areas. For this purpose, the political-economic transformation; modernism and division of labor; postmodernism and the urban form, architecture and urban design; postmodernism and planning position; the ambiguity of planners; the power of space as social order; postmodern urban spaces are the topics that will be discussed in this course.

CP 555 ENVIRONMENTAL ETHICS (3-0) 3

This course provides a comprehensive coverage of issues related with environmental ethics including alternative ethical frameworks for environmental planning (utilitarian biocentric and ecocentric ethics) Responsibilities to future generations duties to the natural world and animals as well as distributive equity and environmental justice. The applications of these to environmental ethics will be discussed.

CP 561 REMOTE SENSING AND IMAGE PROCESSING (2-2) 3

This course is primarily designed to provide students with a systematic approach on the remote sensing and image processing. At the same time, the course contains detailed studies about the remote sensing and image processing for analysis of urban and rural planning studies. (Nature of images and remotely sensed data, satellite systems, image analysis and processing, etc.)

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CP 562 ADVANCED GEOGRAPHIC INFORMATION SYSTEM (3-2) 5

This is an advanced course on GIS Geographic Information Systems (GIS) in Urban Physical Planning. Many of the exercises and examples will be based on planning issues, but the concepts can be applied to many other disciplines such as government, economics, natural resources etc. Some of the issues to be covered include; fundamentals of spatial analysis; overview of GIS technology and applications; designing a GIS project; gathering and analyzing data ; and creating thematic maps.

CP 564 WATER RESOURCES (3-0) 3

Water supply and introduction to techniques of quantitative hydrology. Groundwater and surface water sources. Design of water treatment plants. Pressure conduits, and open channels. Design of water pipelines, reservoirs, and distribution systems. Construction, operation and management of municipal water supply systems.

CP 571 GIS AND REMOTE SENSING BASED DISASTER MANAGEMENT STUDIES (3-0) 3

This course is composed of three themes: Hazard Mapping, Risk and Vulnerability Analysis and Evacuation Analysis. To understand these areas: it will be reviewed a range of spatial analytical techniques and their implementation in state of the art GIS software. An important aspect of the course is to gain hands-on experience in applying these techniques using GIS and spatial analytical software to address some research question. The main goal of the class is for you to become familiar with the essential methodological and practical issues that are involved in carrying out sophisticated spatial analyses using GIS and other spatial type software to help you make policy decisions.

This course will be a combination of a lecture and lab course. The course consists of two parts: lecture / discussion and a lab. The lecture/discussion period will cover methodology, theory, concepts and application of statistical and spatial analysis and GIS as well as periodic articles to be discussed. The lab period of the course will introduce students to a variety of tools to analyze data spatially, including GIS or Geographic Information Systems, Spatial Statistics, Exploratory Spatial Data Analysis (ESDA). Students are encouraged to spend time outside of the normal lab period getting to know the software tools. Remember, this course is not intended to be cookbook type course to teach students how to press buttons on the GIS, but rather focus on the reason why someone would use spatial methods.

CP 590 SPECIAL TOPICS IN CITY PLANNING (3-0) 3

Group study of special topics in (A) Transportation planning; (B) Environmental issues in planning; (C) Urban policies and spatial development; (D) Regional planning; (E) Conservation planning; (F) Planning theory, directed by the instructor (s).

CP 708 URBAN THEORY (3-0) 3

This course is designed both as a lecture and a seminar for the doctorate students in urban planning. It aims to provide students with a large variety of urban theories. Here, these theories are taken as the explanatory and critical approaches to how the city “evolves” and “works” at various urban scales. The theories discussed at this course range from economic, ecological, and political economy approaches to post-colonial, culturalist, and feminist approaches to urban space. Despite the differences in their emphasis, these theories commonly explain how socio-spatial structures and processes develop to form and shape the city within respect to interlocking systems of economy, politics and culture at local, national and global scales. While discussing these urban theories comparatively and in a chronological order, this course also describes the historical conditions in which each theory evolved.

CP 8XX SPECIAL STUDIES (8-0) NC

Graduate students supervised by the same faculty member study advanced topics under the guidance of their advisor.