

Course Specification – Urban Planning Department

Common courses for the two tracks: Urban Design Track and Urban Planning Track:

PL 413 Land Use Planning (2-2)

The course focuses on the role and importance of studying land uses in urban planning, classifying and numbering uses in terms of types, sizes, proportions, distribution and relationships, and how the planner benefits from land use studies, with a review of the factors of change in uses and its impact on the economic, social and environmental aspects, and the role of economic and social forces and interest. In general, the pattern of distribution and identification of types of land uses, with an explanation of models for estimating future areas for different uses and estimating future population and economic growth. The areas are distributed according to the requirements and systems that govern the plan based on environmental, urban, economic and social studies.

PL 414 Infrastructure Planning (2-2)

The course focuses on a number of major topics related to planning and financing infrastructure facilities, in addition to studying the main systems of these infrastructures, and the relationship between growth issues and demand for its services and the related management aspects. Infrastructure systems (public utilities) include a wide range of services and equipment such as water services of all kinds, sewage, rainwater drainage, waste disposal facilities, electric power, communications and their various systems, and other related public services. The course also deals with the functions of these systems, the role of the planner in the process of providing its services, and issues of financing these systems. A review of some experiences in other countries of the world in this field will be important to build the theoretical side of the student in addition to trying to clarify the impact of the quality of infrastructure services on the environmental and urban environment, and the role of controls and systems in that, and it can be considered that discussing the effective contribution of users to these services is important. Extremely trying to identify ways to develop and improve this vital sector.

PL 415 Execution Plans (3-3)

The course deals with theories and applications that enable the student to deal with land topography and contour lines in residential plans and others, using relevant computer technologies. The course includes the following aspects: preparing a general detailed plan for a residential neighbourhood with clarification of plot numbers, areas and dimensions, residential block numbers, setbacks, sidewalks and parking lots, preparing transverse sectors for street gradations, leveling and paving the ground, excavation work, calculating the quantities of plots and backfilling, studies of surface water drainage for streets, and making a longitudinal sector for a street showing how to deal with the topography of the land, the levels of streets and sidewalks, and the horizontal and vertical balance of the curves.

PL 416 Geographic Information Systems 1 (2-3)

This course focuses on teaching the student the foundations and principles of geographic information systems (GIS) and the processes necessary to enter and arrange information in preparation for various applications on it. The course focuses on

mapping operations, converting maps from cadastral to digital, classifying and linking information with each other, and other database formation processes for the system. The course also explains the concepts and theories of geographic information systems and their contribution to urban planning processes. It focuses on the student's familiarity with technical means and computer applications in building urban databases and basic analysis of data through dealing with the geographic information systems program. The course also provides the student with the possibility of applying these systems in exercises to clarify the issue of benefiting from these programs.

PL 417 Research Methods (2-2)

The course covers the concepts and basics of scientific research in four main parts. First: Preparing the research plan and identifying the information necessary to prepare the research. Second: Training the student to collect qualitative and statistical information from secondary sources, in addition to collecting information from primary sources, methods of designing questionnaires, choosing a study sample, and conducting interviews. Third: Processing and coordinating data in tables and graphs, describing, analyzing and modeling this data in planning. Fourth: Identify the methods and stages of writing technical reports and urban research. The course covers various methods, including investigation data analysis, population modeling and multiple regression analysis, focusing on building a framework of ideas and possessing practical skills for analyzing planning information.

PL 433 Planning Theories (2-2)

In this course, the student is introduced to the areas of urban planning and its various specializations, the planning theories that accompanied the development of planning practice, intellectual currents and their connection to the design and architectural arts, the relationship to making and making planning decisions, the role of the planner as a mediator in society for planning information, and the importance of communication and mediation between the various groups involved in the planning process. The course also seeks to introduce the student to the planning movements, and addresses the planner's role in society and its contribution opportunities in advancing urban development at its various national, regional and local levels, and the connection of those roles with job opportunities for graduates of the department.

PL 434 Urban Renewal (2-2)

The course deals with the concepts of urban renewal and their types such as removal, reconstruction, restoration, conservation, and rehabilitation. It also deals with the economic theory of redevelopment as well as the historic, political, social, cultural, administrative and technical aspects. In addition, the course discusses the various phases of renewal methods applied in different countries including the methods of surveying and analysis and the relationship with the size of projects and the role of governmental institutions, investors, property owners, municipalities, local people, and the representatives of different concerned parties in the process of urban renewal.

PL 435 Introduction to Urban Transportation (2-2)

The course introduces the student to the areas and development of urban transportation and its role in local, regional and national planning. The course is also interested in studying the road and street network in the city with an explanation of its functions, specifications and gradations, and calculating the capacity of roads and intersections and controlling movement and speed. Through the course, the student will learn about the characteristics of daily transportation, such as the distribution of daily trips according to purpose, means of transportation, and number of passengers. The course is also

concerned with transportation services such as planning and designing vehicle parking lots according to standards, public transportation and other means of transportation such as taxis, trucks, and school transportation and their relationship to city planning, the pattern of pedestrian movement in the city and means of increasing it, and traffic accidents and their relationship to the design of the road network. Through the course, the student also learns about the characteristics of the current transportation situation in the city of Riyadh.

PL 436 Geographic Information Systems (GIS) 2 (3-4)

The course focuses on explaining the basic concepts of spatial analysis work in the GIS environment and theories of spatial and descriptive databases, with an explanation of how to prepare a project to build a spatial analysis of a study area by explaining the spatial analysis tools available in the ArcGIS 9.2 program. Attention is paid to the practical aspect and direct application of these methodologies by choosing a study area in which processes are carried out on how to prepare the methodological structure for spatial analysis and build spatial and descriptive data in its digital form through processors and data entry and conversion processes into digital form. All this will be done inside computer labs and using GIS software and databases. The students will be trained to use the ArcGIS program as well as the Excel program to process the data. The students will present a digital and informational atlas on the analysis of urban studies using the program they were trained on, and perform some spatial analyses.

PL 473 Environmental Impact of Projects (2-2)

The course focuses on studying all the direct and indirect impacts expected from the development and construction of urban projects on the surrounding environment, taking into account that the main problem currently facing humanity is how to preserve the environment, to ensure safe living for humans and for it to remain valid and sustainable for the lives of future generations, through studying and identifying the positive impacts. And the negative impact of the projects on the urban structure.

PL 474 Community Planning (2-2)

The course explains the methods of planning and developing urban neighbourhoods and societies. It deals with the evolution of local residential neighbourhood types and explains the factors that have led to their emergence and expansion. It then discusses the opportunities and challenges that face these urban societies together with the process of residential neighbourhood planning. The reasons behind the rise and decline of these neighbourhoods are also dealt with and some illustrative examples from all over the world are also given. It also discusses how to attain equilibrium between residential settings and social needs and nature and human activities. Strategies for urban social development are also focused upon. Urban regeneration and revitalization and public participation in the planning process are among such strategies.

PL 475 Administering and Practicing Planning Profession (2-2)

This course covers many topics, including familiarity with the rules and laws of urban practice, professional ethics, the types of contracts that will be practiced, and the application of plans. As well as getting acquainted with the procedures and rules in nature when practicing the profession for planners in the governmental and private sectors in the Kingdom, whether through theoretical study or field visits to private planning agencies such as consulting or governmental offices that have important planning projects.

Urban Design Track Courses:

PL 410 Urban Design Project 1 (4-8)

This course is considered the first studio and introduction to studying urban design science practically. First, the main types of urban spaces suitable for daily use are identified through the presentation and application of the various theories and foundations of urban design, defined on the scale of street or square space. Through this, the student learns about the basic methods and skills in the process of analysing spaces, and how to perform visual analysis and functional analysis of different spaces. In the end, the student arrives at creating a design project for a suitable space that meets the required needs and achieves the maximum level of efficiency for its users. This course requires field visits and scientific trips depending on the type and location of the project.

PL 411 Computer Urban Presentation (2-3)

The course covers 3D modelling techniques for creating urban environments. It is not only limited to how to create models and animations, but also studies three-dimensional shapes and simulates reality virtually within the framework of urban design. The course gives the student the ability to digitally visualize, which enables him to study spatial relationships and urban blocks, in addition to the general output of his project. It also gives the ability to advanced use of computer programs and knowledge of specialized programs in modeling and directing, which will demonstrate his personal talents and creativity. The course also relies on the use of programs such as AutoCAD, 3D Studio, Photoshop, and any other new programs, through theoretical lectures and practical and applied exercises in the college's computer laboratories.

PL 412 Theories and Principles of Urban Design (2-2)

The course deals with teaching important topics related to the following: the types of design that affect the image and form of the city (single element design, project design, network design, built environment design), and the city and the raw materials of which it is composed (raw materials, city appearance, space, movement, Time), the foundations and standards of public taste and visual perception, design factors such as strength of character, clarity of composition, continuity, cohesion, balance, appropriateness and expression, and elements of city design such as the city floor, streets, open spaces, bodies of water, distinctive signs, barriers, enclosed spaces, street furniture, plants and outdoor lighting. The course also focuses on the importance of studying each of the roads, paths, neighbourhoods, areas, borders, meeting or gathering points, nodes, and landmarks in forming an integrated mental image. The course also addresses the principles and methods of analysing the man-made elements of the site to be designed in integration with the various natural and environmental elements of the site with the aim of obtaining a positive, beautiful and attractive visual effect.

PL 430 Urban Design Project 2 (4-8)

This course aims, through studying the urban centre, to conduct an analytical study of the urban centre and restore it to its basic function while developing it from the urban, social, economic and environmental aspects. The project deals with methods of field studies to evaluate the current situation of the urban centre, the problems of deterioration occurring in it, and the direct and indirect causes of the emergence of these problems. It also deals with ways to determine the future function of the urban environment and devise methods to restore its original users or attract new users whose needs match

the capabilities and function of the environment. All of this is done within a general vision based on the idea of urban and regional planning. The project also shows ways to intervene in regulating this environment administratively and legislatively to ensure that it does not deteriorate again. This course requires field visits and scientific trips depending on the type and location of the project.

PL 431 Urban Design Methods and Techniques (2-2)

This course explains the path of development of an urban design project, starting with developing the program and ending with the subject of project management. This course covers the various stages of an urban design project and explains the objectives and requirements of each stage. It also addresses the methods and techniques appropriate for each of those stages. The basic topics in this course address the following: urban design models, urban surveys, analysis methods, developing and evaluating alternatives, methods and means of presentation, and project management.

432 PL Site Design and Landscape (2-2)

The course explains to the student the steps that precede the site design process, such as identifying user needs, relationship tables, spatial graphics, and various design alternative ideas until reaching the final design concept. This is done by building an integrated program for the intended project design, using different methods to deal with spaces and built elements, creating illustrative sketches, and exploring various presentation and output methods. The focus is on achieving integration between the natural, social, and aesthetic aspects of the site.

PI 470 Urban Design Project-3 (4-8)

This course focuses on teaching the student all the planning and design stages related to planning and designing a city centre, as it is a necessary developmental requirement for the heart of the city and the convergence area of its commercial and administrative services. This is done through the study of a central area of an existing or new city, where analytical studies are conducted to highlight problems and propose solutions, taking into consideration the uniqueness of the central area. The study also includes the development of all considerations, standards, strategic decisions, and design decisions, as well as the analysis of various factors and influences. Subsequently, planning and design ideas are developed to ensure the consideration of social and economic factors. Additionally, the course takes into account the Information and Communication Technology revolution and its reshaping of the maps and land uses of the city centre areas. This course requires field visits and scientific trips depending on the type and location of the project.

PI 471 Spatial and Visual Analysis (2-2)

The course includes an introduction to the methods of surveying and visually monitoring all elements of urban formation within the city. It aims to identify the pros and cons that govern the process of urban visual analysis. Through this course, students conduct both theoretical and field studies on various models of urban fabric. They analyse pathways, spaces, spatial patterns, and the visual and sensory characteristics of urban space configurations.

PL 472 Urban Design: Street and Square (2-2)

This course explains the various aspects of streets, squares, and squares as essential elements and components of urban design. In addition to being tools and means of urban formation and vessels for transporting movement and connecting the city, these elements play an important role on the economic, social, cultural and aesthetic levels. The course focuses mainly

on the following: introducing the different types of streets, squares, and squares and methods of classifying them, the historical development of streets, squares, and squares, the factors influencing the course of this development, the different functions, roles, and dimensions of streets, squares, and squares, and the foundations of designing streets, squares, and squares.

PL 490 Graduation Project (4-8)

In this last stage of the graduation project, the student is introduced to how to set goals and strategies to solve the problem, how to translate the results of the analysis into needs, and to develop a program of design requirements in both its quantitative and qualitative parts in terms of land uses, uses, and distribution over the urban space. Then the alternatives are developed, evaluated, and compared between them in preparation for choosing the optimal alternative. After that, the student is trained to develop a plan to translate the alternative into a work program that can solve the planning problem and develop detailed and comprehensive solutions (in terms of uses, defining building blocks, defining the urban pattern, spaces, and the movement system, ..) The elements of the chosen alternative, including a time plan for implementing the alternative and the stages of its completion. This course requires field visits and scientific trips depending on the type and location of the project.

PL 491 Cities Centres (2-2)

The course focuses on explaining the basic theories related to the planning and development of city centres in the commercial and administrative city centre, and to identify the main problems that affect the development and planning of the city centre, especially Saudi cities, through training in survey methods and quantitative and qualitative analysis. Training is also given on ways to redevelop and plan the city centre in general, and Arab and Saudi cities in particular.

Urban Planning Track Courses:

PL 420 Urban Planning Project 1 (3-6)

The project focuses on studying mixed uses, introducing the student and training him on basic skills and planning methodology in its various stages by collecting various field and documentary information (natural and urban), analysing it, and drawing appropriate conclusions and solutions through an evaluation process of alternatives proposed by the student in the final stage of the project. The process ends with a detailed plan for the area that takes into consideration all the design elements of previously acquired urban composition and formation. This course requires field visits and scientific trips depending on the type and location of the project.

PL 421 Urbanization and Housing (3-3)

The course explains the phenomenon of Urbanization, which is one of the most important features of social change that characterizes the twentieth century, and is almost a recurring feature at the present time in all countries and societies of the world, although its impact is more significant and more obvious in developing societies than in industrialized countries. The course is divided into four main parts. The first part discusses the historical conditions that paved the way for the emergence

of urban society and monitors its main pillars. It also clarifies its relationship with the social systems prevailing in traditional society. The second part deals with the classic theoretical trends, such as the historical, organizational, psychological, value, cultural and economic development trends in the development of urban societies. The third part addresses the definition of urban society using the demographic concept, the social definition, and the comprehensive definition. The elements of urbanization and the role of urban hegemony in the geographical distribution of the population are reviewed through the study of migration in its comprehensive concept. The fourth part deals with population issues and the reflection of their effects and interactions on the development process with its economic, social and human dimensions, such as: high population growth rates, the emergence of housing problems with its social and economic dimensions, and the emergence of slums such as pockets of urban poverty.

PL 440 Urban Planning Project 2 (3-6)

The course focuses on the study of the city centre through the practical application of concepts and theoretical and applied foundations related to city centres and their requirements related to planning, design, development, renovation and revitalization, and the study and analysis of all data and aspects related to city centres. The course also focuses on teaching the student all the planning and design stages of planning, designing, and developing an existing or new city centre through conducting initial studies and analyses, and then developing ideas and preparing detailed options for the project, taking into account the standards, decisions, planning and design strategies, and the various factors and influences related to the principles and foundations of studies of city centres. This course requires field visits and scientific trips depending on the type and location of the project.

PL 441 Regional Planning (3-3)

In this course, the student is given a brief introduction to regional planning and its importance in raising the efficiency of the national economy and improving the living conditions of urban and rural residents alike. The student is introduced to the region and methods of defining its borders. The course also focuses on introducing the student to the status of the region in the administrative and spatial structure at the national level, the administrative and spatial divisions that make up the region, and the economic, social and spatial relations between them. An introduction is also given to the process of economic growth and its impact on the growth of differences between regions in terms of income and urban development, and the most important regional problems and their manifestations. The course also deals with some planning theories related to regional development and methods of addressing its problems, with an explanation of some models in planning and regional development and their applications in some developed and developing countries of the world. Regional planning in the Kingdom is presented and its status in relation to global theories and trends.

PL 442 Urban strategic planning (3-3)

The course explains the theoretical and conceptual framework of urban strategic planning, and focuses on the contents and types of urban strategic plans. The course provides the student with the skills and methods for preparing urban strategic plans. The course covers the following topics: the framework, objectives, duration, and types of urban strategic planning (determining the urban form, places of work and trade, determining the transportation system, determining the type and distribution of housing), urban policies and the role of the urban planner and others, levels of public participation in the city planning process, the paradox between planning ability, community desire and market power, the impact of urban,

environmental, social and economic planning on the urban strategy of the city, review of the content, steps and stages of preparing the structural and strategic plans for the city of Riyadh and some Saudi and international cities .

PL 480 Urban Planning Project-3 (3-6)

This project focuses on the process of preparing structural plans, assimilating their elements, and understanding their role in controlling and directing the future urban development of the city. The student collects the necessary information and understands the factors, influences, and determinants of the city's growth. The regional national determinants and their impact on urban development are studied, then natural and topographical studies are conducted, demographic, social, urban, economic, and environmental information is collected, and movement, transportation, and urban design studies are conducted. Then, all of this data and information is analysed and scenarios for development are developed. The city, then formulate development alternatives to compare and weight among these alternatives, so that the best alternative is adopted and is developed and prepared as a structural plan for the city under study. This course requires field visits and scientific trips depending on the type and location of the project.

PL 481 Land Use Planning and Transportation (3-3)

The course explains the theoretical and conceptual framework for land use and transportation planning. It focuses on the relationship, skills and methods of land use and transportation planning to achieve urban efficiency, environmental sustainability and social justice. The course covers the following topics: transportation planning, pedestrians, public transportation, and roads, the role of land uses and transportation in preparing strategic plans, studying traditional methods in transportation planning, represented by the design aspect, urban form, and the use of mathematical models (modelling), modern and global considerations when planning transportation, represented by "sustainability.", societal needs, policies and legislation.

PL 482 Urban Economics (3-3)

The student is introduced to the most important concepts of microeconomics related to urban areas, and the definition of urban economy by explaining the theories related to the emergence and growth of cities, the locations of economic activities, land uses and the economic base. The course discusses many topics of economic dimension in the city, such as the role of the public sector and the private sector in providing economic goods, types of goods and services, and spatial interaction theories such as the intermediate location rule and the law of gravity. These economic concepts are applied in particular to the current conditions of the local environment and through the economic strategies of Saudi cities.

PL 495 Graduation Project (3-6)

In this final stage of the graduation project, the student is introduced to how to set goals and strategies to solve urban problems and how to translate the results of the analysis into needs in terms of land uses, uses, and distribution. Then the alternatives are developed, evaluated and compared in preparation for choosing the best alternative. The student then develops a plan to translate the alternative into an action program capable of solving the planning problem and prepares detailed and comprehensive studies of the elements of the chosen alternative, including a time plan for implementing the alternative and the stages of its completion. It also develops detailed solutions for the various parts of the project, according to the existing paths. This course requires field visits and scientific trips depending on the type and location of the project.

PL 496 Planning and Participation (2-2)

The course aims to introduce students to the importance of participating in the planning process and to explain the changes that have recently occurred in the methods applied to practice. Students will have sufficient knowledge regarding the role of users to improve urban planning outcomes at all levels. Students will be familiar with a wide range of issues relating to the urban impacts of planning in all its forms.

Elective Courses

PL 437 Cities Technology (2-2)

This course focuses on teaching the student the role and impact of technology on society and the built environment. The student learns about the impact of the use of new technologies on human relations and the social fabric and about the role that planners should play in the field of information and communications technology to build better societies. Modern means of measuring and modelling urban structure and visualizing the future urban environment are also learned. The course contributes to knowing and studying the transformations that led to the emergence of societies based on information and the knowledge economy. The concept of e-government, exchange of spatial information and public participation in urban areas are also addressed.

PL 476 Urban Management (2-2)

This course covers the administrative and planning structure in the Kingdom, the role of the various government sectors in planning management, the national, regional and local planning management systems, the management of private sector projects, the foundations and systems for managing the stages of regional and local structural plans and their national frameworks. The course focuses on clarifying the administrative and functional structures in the Saudi secretariats and municipalities, global cities, the priority setting system, the composition of planning department budgets, the role of district councils in making local and regional planning decisions, and their relationship to other levels. The course also includes an explanation of the theories and models of managing global planning systems and their applications, the legal and Islamic aspects of planning management, and samples of issues from national and international urban administrations. The course also explains planning management systems at various levels (national - regional - local). Finally, it explains the aspects of financing planning activities at different levels.

PL 492 Sustainable Urban Development (2-2)

The course deals with topics related to all aspects of urban development at its three main levels, from the national to the regional to the local, through its reflections on regional, structural and local strategies, plans and plans, within the framework and guidance of environmental, social and economic sustainability standards, in a way that serves the current population and future generations. The Kingdom's experience in urban development over the past two decades is also reviewed, as well as benefiting from previous local and international experiences.

PL 497 Sustainable Urban Form (2-2)

The course focuses on the elements of sustainability in the built environment. It will highlight some factors that influence sustainability including sustainable transport, density, land uses, and diversity. It also deals with patterns of sustainable urban development as the new containment and compact cities.

Plan 498 Real Estate Development (2-2)

In this course, the student is introduced to real estate development and investment in this field and its importance in the process of urban and economic development of the city. Learn about the means and techniques related to real estate development, including the stages of real estate development, real estate financing studies, economic feasibility studies, real estate marketing, real estate valuation, and real estate property management.