

UPL Urban Planning

UPL 501 Fundamentals of Urban Planning (3-0-3). (Cross-listed as ARC 571). Introduces the discipline of urban planning. Surveys the history of the field as well as its links with other fields of environmental studies, such as architecture, urban design, geography, engineering and others. Overviews what planners do and the tools they use in their practice.

UPL 541 Planning Theory and Methods (3-0-3). Explores the theoretical foundations of planning and its associated methods. Examines the basic theoretical framework that fosters good planning practice. Reviews the classical theoretical paradigms of planning, examines the major roles played by practicing planners, and looks at the application of theory in dealing with such issues as community development, environmental protection, economic policies, political and administrative structure, and social equity.

UPL 547 Research Methods and Analysis (3-0-3). Introduces the quantitative and qualitative methods and techniques used in urban planning research and practice. Analytic approaches include research design, multivariate regression, survey research, case study research, evaluation and graphic data presentation. Emphasizes methods in the context of planning and urban policy research. Prerequisite/concurrent: UPL 501.

UPL 548 Environmental Planning (3-0-3). (Cross-listed as ARC 578). Provides a comprehensive overview of the field of environmental planning and how it relates to efforts intended to manage, organize and protect environmental resources. Reviews the political and administrative context of environmental planning. Addresses principles of sustainability, ethics and the law in relation to land, air, water and other natural resources. Prerequisite: UPL 501.

UPL 550 Urban Economics and Analysis (3-0-3). Examines the economics of cities and urban problems. Undertakes economic analysis of the location and growth of urban and regional areas with emphasis on public policy issues. Discusses land-use patterns, measurement and change in regional economic activity, and urban problems such as transportation, housing, poverty and crime. Places special attention on local fiscal behavior, overlapping jurisdictions and the provision of local public goods, and intergovernmental fiscal relations. Prerequisite: UPL 501.

UPL 556 Advance Planning Tools: GIS Applications (4-0-3). Introduces the Geographic Information Systems (GIS) concepts, capabilities and applications. Focuses on developing the skills required to use GIS tools to analyze geographic data. Discusses issues of data input, data models, spatial analysis and data output. By the end of the course, students will gain a good understanding of GIS development, capabilities, and potentials for socioeconomic and urban planning studies. Prerequisite: UPL 501.

UPL 565 Land Use Planning Principles and Practice (3-0-3). Examines various theoretical and practice-based approaches to land use planning. Gives an overview of the various social, economic, political and legal influences on land use and the planning process and application appropriate to balance such influences. Prerequisite/concurrent: UPL 501.

UPL 572 Urban Transportation Systems Planning Techniques (3-0-3). Covers data collection, trip generation, trip distribution, factors underlying the choice of mode, traffic assignment, modeling and evaluation techniques, use of planning software packages, development and evaluation of alternatives. Prerequisite/concurrent: UPL 501.

UPL 574 Urban Transportation Systems Analysis (3-0-3). Explores the use of quantitative techniques for modeling urban transportation systems' performance. Covers the application of graph theory and network analysis to transportation problems, and analytical approaches to formulate network equilibrium assignment problems and solution algorithms. Introduces dynamic traffic assignment. Prerequisite: UPL 572.

UPL 582 Theory and Principles of Urban Design (3-0-3). (Cross-listed as ARC 573). Examines major concepts, principles and theories of urban design. Reviews the historic development of urban design as a professional field and surveys current urban design issues, trends and practices in both the Western and non-Western/Islamic contexts. Prerequisite/concurrent: UPL 501.

UPL 584 Urbanism and Urban Form Analysis (3-0-3). Examines urban form elements, patterns and evolution. Focuses on the forces that have shaped cities in history and analyzes contemporary trends that impact urban formation and regeneration. Explores methods of urban morphological analysis as related to urban design. Places special attention on the study of cities of the Middle East and Islamic societies. Prerequisite: UPL 501.

UPL 594 Special Topics in Urban Planning (2 to 4 credits). Explores a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Prerequisite: topic specific.

UPL 597 Urban Planning Internship (0-0-0). Consists of eight weeks (320 hours) of approved internship. At the end of the internship, the student must submit a report of the internship work experience. Course is offered on a Pass/Fail basis. Prerequisite: UPL 501. Registration fees apply.

UPL 667 Urban Planning Lab (12-0-6). Covers the application of substantive skills in urban planning. Focuses on comprehensive planning exercises for an urban area in the UAE/Gulf region, involving fieldwork and hands-on analysis and application. Emphasizes the methods and tools of preparing plans. Addresses development of baseline data; analysis of existing conditions; identification of strategic planning and development issues; forecasting of future conditions; review of development goals, objectives and policies; development and synthesis of alternative plans;

evaluation of alternatives; and development of implementation strategies and programs that support policymaking. Prerequisites: UPL 501 and UPL 556.

UPL 676 Transportation Systems Operations and Control (3-0-3). Studies the operation and control of transportation systems with emphasis on traffic characteristics, capacity analysis, traffic improvements, signalization, signs and marking, channelization, intersection capacity, and principles and techniques used to improve the efficiency and safety of transportation systems. Prerequisite: UPL 572.

UPL 686 Space, Society and the Public Realm (3-0-3). Explores the nature of urban space and its role in the social being. Focuses on the potentials of space as a tool in shaping the public realm and nurturing citizenship. Examines critical issues of globalization and the transforming role of space in the post-industrial, informational city. Prerequisite: UPL 582.

UPL 694 Special Topics in Urban Planning (2 to 4 credits). Explores a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Prerequisite: topic specific.

UPL 696 Independent Study in Urban Planning (1 to 4 credits). Requires a theoretical or practical project initiated by an individual student and conducted under faculty supervision beyond what is offered in existing courses. Cannot be repeated more than once. Prerequisite: permission of program director.

UPL 698 Final Project (6 credits). Requires students to choose an applied research topic often in conjunction with a real planning problem and/or client. Students will produce a high-quality project report guided by an advisor and a minimum of two readers. The final project serves as a capstone course requiring students to draw on the basic knowledge, skills and techniques learned from their coursework. Graded as Pass/Fail. Prerequisite: permission of program director.

UPL 699 Master's Thesis (6 credits). Requires independent, significant original research conceived and developed by the student and guided by an advisor and a minimum of two readers. Students will demonstrate scholarly capabilities and expertise based on the theoretical knowledge and methodological skills they have developed in their previous coursework. The thesis experience serves as a capstone course for students who intend to pursue careers in research, teaching and/or scholarship. Graded as Pass/Fail. Prerequisite: permission of program director.