CITY AND REGIONAL PLANNING (CPLN)

CPLN 300 The Making of Modern Paris
Paris, Ville-Lumière, has long been renowned for its urbanity, architecture, and city design. This class will trace the people, ideas, and projects that contributed to this reputation, through an exploration of the city’s built environment as expressed in literature and urban planning projects of the 19th and 20th centuries. Literary readings, including texts by Hugo, Baudelaire, Zola, and Breton, will be studied in conjunction with historical writings and projects ranging from works by Napoleon III and Haussmann to Mitterrand and Sarkozy. The course includes a field trip to France’s capital city during Penn’s Spring Break. Co-taught by Professors Eugenie Birch (Department of City and Regional Planning) and Andrea Goulet (Department of Romance Languages). Student travel expenses will be subsidized by the Mellon Foundation-sponsored Humanities + Urbanism + Design Project.

Taught by: Birch
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 500 Introduction to City Planning: Past, Present and Future
Orientation to the profession, tracing the evolution of city and regional planning from its late nineteenth century roots to its twentieth century expression. Field trips included.

Taught by: Vitiello or Ammon
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 501 Quantitative Planning Analysis Methods
Introduction of methods in analyzing demographic conditions, land use and housing trends, employment and business changes, community and neighborhood development. Focus on using spreadsheet models and data analysis for local and neighborhood planning.

Taught by: Guerra
Two terms. student may enter either term.
Activity: Lecture
1 Course Unit

CPLN 502 Urban Redevelopment and Infrastructure Finance
Introduces students to the economic principles and vocabularies that city and regional planners rely on (those of welfare and public sector economics, land economics, and the economics of housing and neighborhoods), and familiarizes them with local government taxation, budgeting and borrowing practice.

Taught by: Angelides
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 503 Modeling Geographical Objects
This course offers a broad and practical introduction to the acquisition, storage, retrieval, maintenance, use, and presentation of digital cartographic data with vector-oriented (i.e. drawing-based) geographic information systems (GIS) for a variety of environmental science, planning, and management applications. Previous experience in GIS is not required.

Taught by: Tomlin or Hillier
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 504 Site Planning
This course introduces students to the practice of site planning. Skills and methods examined in the course include observation of the physical and community environment, physical and environmental site inventorying and analysis; analysis of alternative site programming and uses; site design processes and strategy; and the creation of site plans and development standards. Methods of community participation and collaboration with other disciplines will be explored. The spring version of this course differs from the fall version in its orientation toward urban designers and/or those with prior design backgrounds and skills.

Taught by: Page
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 505 Planning by Numbers
This class emphasizes the theory, practice, and use of statistics as applied to planning and policy problems and data. Starting with a review of basic descriptive statistics and measures of association, this course will introduce students to the regression techniques, including multiple regression analysis and logistical and probabilistic models for categorical data; data mining techniques, measures of spatial autocorrelation, and time-series modeling; and causal inference techniques, including structural equation modeling(SEM). A basic familiarity with descriptive and inferential statistics at the upper-division undergraduate level is expected at the beginning of the class. This course uses the popular, free, and open source statistical software R. Meets methods breadth requirement.

Taught by: Ryerson
Course usually offered in spring term
Activity: Lecture
1 Course Unit
CPLN 506 Negotiation and Conflict Resolution
This course is designed to introduce graduate students to the theory and practice of negotiation, conflict resolution and community engagement. We will start by looking at basic approaches to interpersonal negotiation and then move to considering contemporary approaches to understanding and addressing public disputes using negotiation, facilitation and public involvement. Design professionals - architects, construction managers, planners and others - face a variety of kinds of problems and challenges in their work. Some problems and challenges, whether simple or complex, are amenable to technical solutions based solely on the expertise of planners, managers, architects and others. There are, however, other problems and challenges that require adaptive work, primarily because technical expertise alone is insufficient to address the problems or challenges being faced. In this course, we’ll focus on perspectives and methods for working through those later sorts of problems and challenges. Meets methods breadth requirement. Taught by: Sokoloff
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 507 Urban Design Research Methods
This seminar focuses on professional and research techniques in the practice of urban design. Seminar topics in the first half will examine research methods associated with measuring, analyzing and guiding design in urban contexts, including: environmental behavior & psychology, cognition, mapping, morphology, design regulation and policy. The second half of the course includes professional techniques in: communication, self-representation, design roles, processes, and ethics. Taught by: AI
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 508 Urban Research Methods
This new course will introduce students to the practice of conducting original social, policy, and planning research in an urban context, and through a series of applied exercises, cover the following topics: research conceptualization and design, logic models, survey and ethnographic research, urban policy analysis and evaluation. Activity: Lecture
1 Course Unit

CPLN 509 Law of Planning and Urban Development
The central focus will be on selected aspects of the field of the law of planning and development, a field that embraces a range of legal doctrines that are particularly relevant to cities and suburbs. We will study the principles that govern the regulation of land use and management of urban growth (through land use controls and other techniques for regulating new development) and, to a limited extent, environmental planning laws. Taught by: Keene
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 510 Urban and Planning Theory
Exploration of the representational tasks related to planning cities and regions. Review of the construction, management and reconciliation of contesting images. Taught by: Landis
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 520 Introduction to Community and Economic Development
Introduction to the theories and practices of urban economic and community development with a focus on improving opportunity and quality of life in low-income communities. Provides foundation for advanced courses in real estate and economic development finance, housing policy, downtown and neighborhood revitalization, workforce development and metropolitan regional development. Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 528 Research Seminar 21st Century Urbanism
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 530 Introduction to Land Use Planning
Exploration of the methods and tools for managing land use and shaping the built environment. Presents how to create a successful Comprehensive Plan, Zoning Ordinance, Subdivision Regulations, Capital Improvements Program, and design guidelines. Also, presents functional area, regional, and state-level plans. Taught by: Daniels
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 531 Introduction to Environmental Planning & Policy
Overview of federal programs for protecting air quality, water quality, and endangered species along with managing climate change, solid waste, toxics, energy, transportation, and remediating brownfields in an overall sustainability framework. State-level, local government, and NGO efforts to protect the environment are also explored as are green infrastructure and green cities. Taught by: Daniels
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 535 Topics in Energy Policy
This research seminar focuses on changing energy policy topics that provide students with a deep examination of an aspect of energy technology, markets, or regulation and an opportunity for research on an emerging issue related to the topic. The seminar meets weekly to discuss the relevant literature and workshop student research projects. Taught by: Staff.
Activity: Seminar
1 Course Unit

CPLN 540 Introduction to Property Development
This course is designed to acquaint students with the fundamental skills and techniques of real estate property development. It is designed as a first course for anyone interested in how to be a developer, and as a foundation for further courses in urban development and real estate. Course usually offered in fall term
Activity: Lecture
1 Course Unit
CPLN 550 Introduction to Transportation Planning
Survey of the technological and design aspects of urban transportation systems and land use patterns. Covers facilities operations, congestion, environmental concerns and policy debates revolving around mobility issues at the federal, state, and metropolitan levels.
Taught by: Guerra
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 560 Introduction to Graphics for Urban Design
This course introduces students to visual literacy and the use of a variety of software packages. Through a series of assignments and in class discussions participants develop a visual vocabulary and skills to function in and between AutoCAD, Adobe Creative Suite, and 3D modeling software.
Taught by: Fogelson
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 571 Sensing the City
This course will teach students how to design, implement, and utilize environmental and built environment sensor and web-based data acquisition systems; how to use those systems to build and populate analytical databases; and how to analyze the resulting data to identify spatial and temporal patterns.
Taught by: Lassiter
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 573 Sinking/Floating: Phenomenologies of Coastal Urban Resilience
(a special course sponsored by the Mellon Foundation funded Humanities, Urbanism and Design) The premise of this interdisciplinary seminar is that the combination of design and environmental humanities will allow us to develop a complex sense of the interplay of infrastructure and affect in the lived and built environment of coastal cities already contending with sea level rise. Ranging temporally (from Mesopotamia to the dystopian futures of climate fiction) and geographically (from Venice and Rotterdam, from New York and New Orleans, to Jakarta and Dhaka, for example), the seminar explores an array of exemplary historical and present-day sites of delta urbanism as portrayed through views coming from the literary and design communities. We will engage directly with notable experts of design and water management (some of whom will be invited to the seminar) as well as works of literature, philosophy, history, and film.
Taught by: Eugenie Birch and Simon Richter
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 590 Spatial Analysis for Urban and Environmental Planning
This course builds on prior knowledge of GIS and basic statistics to help students to develop GIS and spatial analysis applications for use in urban and environmental planning and management. Each weekly session will focus on a particular analytical approach (e.g., buffering, geo-processing, map algebra, network analysis) as applied to a particular urban or environmental planning tasks (e.g., identification of development opportunities, prioritizing conservation lands, urban growth modeling, housing price modeling). The format of the class includes weekly lectures/in-class demos; and weekly homework assignments. The course will make extensive use of ArcGIS and associate Extensions, especially Spatial Analyst, Network Analyst, and Business Analyst. One-year student versions of ArcGIS and ArcGIS extensions will be available free of charge at the City Planning Office. ArcGIS runs best on Windows machines; those with Macs will need to install a Windows emulator.
Taught by: Steif
Course usually offered in fall term
Prerequisite: MUSA 501 or CPLN 503 or equivalent
Activity: Lecture
1 Course Unit

CPLN 600 Planning Workshop
Application of planning skills (including community inventorying and reconnaissance, goal articulation; alternatives creation and analysis, and plan development and implementation) to community plan creation. Students work in groups of seven to eight students each. Juried presentation required.
Taught by: Landis
Course usually offered in spring term
Activity: Studio
2 Course Units

CPLN 620 Techniques of Urban Economic Development
This course is about how planners act to catalyze and support economic well-being in cities and regions. Students in the course examine the effectiveness of alternative strategies and approaches to economic development and practice a variety of specific economic development policy and finance techniques. The semester is divided into three modules. In part one, students build knowledge about how theories of growth, specialization, agglomeration and innovation inform (and fail to inform) economic development strategies. In part two, they develop a working understanding of economic development finance, completing exercises on tax increment finance, tax-credit financed development and “double bottom line” lending and equity investment. In part three, they review best practices in the formulation and negotiation of location incentives and subsidies, examine “growth with equity” policies, and explore the technical and political details of economic impact analysis.
Course usually offered in spring term
Activity: Lecture
1 Course Unit
CPLN 621 Metropolitan Food System
This course introduces students to the planning and development of metropolitan food systems. Major topics include regional planning and policy; sustainable agriculture; food access and distribution; and markets. The class includes a mix of lectures, discussion, and field trips; and students will work on real-world projects in Philadelphia. Ultimately, the course aims to develop students' broad knowledge of food systems planning in the global North and South, with an emphasis on community and economic development strategies for sustainable food systems and food security.
Taught by: Vitiello
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 622 Community Development and Public Health
This course will focus on the intersection of city planning and public health by looking closely at the role of the built environment in health. We will cover such topics as food access, physical activity, walkability, bike-ability, air quality, water quality, community engagement, outdoor media and health communication. We will learn how to conduct Health Impact Assessments (HIA) - screening, scoping, assessments, recommendations, reporting, and monitoring - and to use various environmental audit tools to measure the built environment. Our final projects will involve working with local government and nonprofit agencies to conduct applied health research projects.
Taught by: Hillier
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 624 Race, Poverty and Place
In recent years, long-disinvested cities have become the site of renewed investment, population growth, and economic development in a phenomenon often described as gentrification. Nonetheless, socioeconomic inequality between races, ethnicities, genders, and places within the larger metropolitan area continue to persist, suggesting that a rising tide does not raise all boats. Planners must grapple with these issues of inequality and inequity, particularly the implementation of plans and policies that may in theory provide benefits to all, but in practice continue to accumulate benefits for a select few. This course examines the construction of race, the making of a place, and the persistence of poverty in racialized places in the city. This course will engage in a critical discussion of the aforementioned themes, such that the normative notions of race, capitalism, urbanism, gender, power, and space are upended to privilege more marginalized perspectives of these processes.
Taught by: Drake-Rodriguez
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 625 Politics of Housing & Community Development
This course offers an exploration of how legislative action, government policy making, and citizen advocacy influence plans for the investment of public capital in distressed urban neighborhoods. Course topics this semester will include an evaluation of the results of City of Philadelphia development policies under the administration of former Mayor Michael A. Nutter, as well as consideration of plans being undertaken by the administration of Mayor James F. Kenney, who took office in January. The course will also include an assessment of a large-scale property acquisition and development strategy being implemented by the Philadelphia Housing Authority in North Philadelphia and a review of recent and current reinvestment proposals for Camden’s waterfront and downtown-area neighborhoods.
Taught by: Kromer
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 627 Social Impact in Practice
The course will be an opportunity for students across PennDesign (and other schools) to meaningfully engage with community partners and practitioners working in Philadelphia and the surrounding region, and to grapple with the complex issues necessary for understanding community perspective, thereby influencing the approach when planning and designing as professionals. The course intends to reverse common perceptions and practices of community engagement ("beyond the theater of engagement") and discuss how to productively and sensitively work with communities of all types, on projects of all scales, to work towards common goals and high aspirations. The organization of the course, will be a combination of readings and discussions, guest lecturers, and tours in the immediate community. The primary assignments will be reflection pieces, case studies, a collaborative group project, and a implementation project proposal. The group project(s) would partner students with a current, ongoing, or new community project that is funded and actionable. Students will work together, with the partner, and with community members to complete a project (could be built, a printed deliverable, evaluation, or other). The final assignment would ask students to brainstorm and present a potential "Phase II" implementation project, thinking through the mechanics of funding partnerships, academic research, etc, that could carry forward the work.
Taught by: Donofrio, Julie / Gould, David
Course usually offered in fall term
Activity: Seminar
1 Course Unit

CPLN 630 Innovations in Growth Management
The US population is expected to grow by more than 85 million from now to 2050. This course evaluates the tools and techniques for managing growth in America, especially to control sprawl in metropolitan regions. The course analyzes the form and functions of the central cities, suburbs, edge cities, ex-urbs, and megaregions. Federal, state, and local programs that influence metro change are evaluated. Regional planning approaches are analyzed in case studies.
Course usually offered in spring term
Prerequisite: CPLN 530 or CPLN 531
Activity: Lecture
1 Course Unit
CPLN 631 Planning for Land Conservation
Land preservation is one of the most powerful, yet least understood planning tools for managing growth and protecting the environment. This course provides an introduction to the tools and methods for preserving private lands by government agencies and private non-profit organizations (e.g., land trusts). Topics include purchase and donation of development rights (also known as conservation easements), transfer of development rights, land acquisition, limited development, and the preservation of urban greenways, trails, and parks. Preservation examples analyzed: open space and scenic areas, farmland, forestland, battlefields, and natural areas.
Taught by: Daniels
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 632 Modeling Geographic Space
The major objective of this course is to explore the nature and use of image-based (as opposed to drawing-based) geographic information systems (GIS) for the analysis and synthesis of spatial patterns and processes. This course is open to all. Previous experience in GIS is not required.
Taught by: Tomlin
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 635 Water Policy
Aging infrastructure, urbanization, climate change, and limited public funds are contributing to urban water management crises in cities around the globe. This course examines the systems and policies that comprise urban water. We begin with the infrastructures that underlie drinking water, wastewater, and stormwater services. Then, we review innovative management technologies and strategies, focusing on case studies of infrastructure shifts in Philadelphia and Melbourne. Finally, we undertake a global investigation of water management challenges and opportunities.
Taught by: Lassiter
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 634 Progressive Development
Using a lecture/guest lecture/case study approach, this course will teach students how to plan, develop, and finance a variety of progressive real estate development forms including affordable housing; infill, mixed-use and brownfield development transit-oriented development; green and LEED-certified office and housing development; historic preservation projects; public-private partnerships; and suburban retrofit and master-planned community development. In each case, we will consider site acquisition, entitlement, market and marketing conditions, financing options, ownership and deal structures, ongoing operation and asset management issues; and connections to the community. Sessions will include lectures as well as case study presentations by guest developers and students.
Taught by: Landis
Course usually offered in spring term
Prerequisite: CPLN 540 or REAL 821
Activity: Lecture
1 Course Unit

CPLN 642 Downtown Development
The course will provide an overview of the changing role of downtowns and commercial centers, how and why they have evolved, diversified and been redeveloped and who are the various public and private actors that are helping them reposition themselves in a new regional and global context. There will be a strong focus on implementation, on how things get done, on the role of business improvement districts, not-for-profit development corporations and local government in the United States, Canada and a few international cities.
Taught by: Levy
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 643 Design and Development
This newly reconstituted course will introduce designers and planners to practical methods of design and development for major real estate product types. Topics will include product archetypes, site selection and obtaining entitlements, basic site planning, programming, and conceptual and basic design principles. Project types will include, among others; infill and suburban office parks, all retail forms, campus and institutional projects. Two-person teams of developers and architects will present and discuss actual development projects.
Taught by: Sehnert
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 644 Housing Policy
The government intervenes in housing markets in different ways and for different reasons. This course is designed to explore why the federal and local government in the U.S. intervene in housing markets and what forms these interventions take. Specifically, students will learn about: the mechanisms that drive both the supply and demand for housing; how U.S. housing policy has changed over time; factors that affect the production, distribution, and location of housing; the social and economic impact of housing on households and neighborhoods; the equity implications of housing policies. This course will place particular emphasis on low-income rental housing. By the end of this class students will have a firm understanding of U.S. housing policy and be able to engage in a meaningful debate about future challenges and opportunities in the U.S. housing market and the implications of different policy interventions. Ultimately, this course will provide students the conceptual tools necessary to evaluate, formulate, and implement housing policy.
Taught by: Reina
Course usually offered in fall term
Activity: Seminar
1 Course Unit

CPLN 650 Transportation Planning Methods
This course introduces students to the development and uses of the 4-step urban transportation model (trip generation-trip distribution-mode choice-traffic assignment) for community and metropolitan mobility planning. Using the VISUM transportation desktop planning package, students will learn how to build and test their own models, apply them to real projects, and critique the results.
Taught by: Ryerson
Course usually offered in spring term
Also Offered As: ESE 548
Prerequisites: CPLN 505 or other planning statistics course.
Activity: Lecture
1 Course Unit
CPLN 652 Topics in Infrastructure
Course examines current trends and topics pertaining to the nation’s infrastructure.
Course usually offered in fall term
Activity: Seminar
1 Course Unit

CPLN 653 Global Challenges in International Development
An investigation of how international organizations, national, subnational government and non-governmental groups are responding to recent global agreements addressing major economic, social and environmental issues, this course will focus on the Sendai Framework, Addis Ababa Action Agenda, 2030 Framework for Sustainable Development, Paris Agreement and New Urban Agenda. It will cover selected topics related to poverty reduction, health, food security, disaster risk reduction, climate change, and urbanization. Course objectives: 1. to provide a sophisticated understanding of the fundamental assumptions, definitions, current state, and proposed paths toward a global sustainable development to students of city and regional planning; 2. to outline the role of city and regional planners as members of multi-disciplinary teams in participating in these agreements at the global, national, regional and local levels; 3. to highlight innovations in the models, tools and approaches to the field.
Requirements: team project, midterm examination and final paper.
Taught by: Eugenie Birch
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 655 Multimodal Transport
The purpose of this course is to explore contemporary multimodal transportation systems, policy, planning, and practice through a series of comparative international case studies. Topics include innovative parking management in San Francisco, congestion charging in London, Metro investments in Mexico City, informal transportation in Indonesia, Bus Rapid Transit in Bogota, and bicycle infrastructure investments in Copenhagen. The course will also include one or more site visits to innovative multimodal transportation projects in the Philadelphia or New York City regions. By analyzing contemporary planning challenges and best practices, students will develop a better understanding of how the transportation system works and how to design and employ specific multimodal interventions and policies effectively.
Taught by: Guerra
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 660 Fundamentals of Urban Design
This course is a requirement for students enrolled in Certificate in Urban Design and for Master of City Planning students enrolled in the Urban Design concentration. How should urban designers give shape to the city? What urban design methods could they apply? This course helps students acquire the principles that can inform urban design practice. It has three major pedagogical objectives. First, it helps students understand the contemporary city through a series urban design tools. Second, it covers both historical and modern urban design principles. Finally, it includes all the scales in which urban designers operate, ranging from the fundamentals of social interaction in public space, to the sustainability of the region.* This course is open to other interested PennDesign students if there is space and with permission of the instructor.
Taught by: Al
Course usually offered in spring term
Activity: Studio
2 Course Units

CPLN 662 Design and the City
"The rumor of a great city goes out beyond its borders to all the latitudes of the known earth.” Metropolis and her Children, the Federal Writers; Project Guide, 1938. Great cities are both real and legendary. They have economies and cultures, identity and brand, pattern and chaos, inclusion and exclusion. They are made by men (and women) who either reap the benefits of their labors or are excluded from them. They are dynamic, or they are dead. Constant change is essential to the city. This seminar will explore the ways in which design - including architecture, urban design, and landscape design - is a constructive force in the creation of cities. What are the various scales of the operation of design? What are its elements? With whom do urban designers collaborate? How does design make *place”? How is the city experienced? How does it cultivate identity, inclusion and equity? Each class will be a wide-ranging discussion about a series of open questions regarding the city and design. Each student will be expected to bring examples, quotes, readings, and news clips to support his/her answers. In alternating weeks, we will introduce a design problem to be addressed by teams of two or three students.
Course usually offered in fall term
Activity: Seminar
1 Course Unit

CPLN 670 Geospatial Software Design
The purpose of this course is to equip students with a selected set of advanced tools and techniques for the development and customization of geospatial data-processing capabilities. It is open to any student with experience equivalent to that of an entry-level class on GIS.
Taught by: Tomlin
Course usually offered in fall term
Activity: Seminar
1 Course Unit
CPLN 671 Big Urban Data Analysis
This course, co-listed with MUSA 501, will introduce graduate planning students to the use of large, spatially-explicit datasets for addressing urban planning and management problems. Among the topics to be included: (1) Real-time data acquisition using web-based and sensing technologies; (2) Data cleaning and organization using the R programming language; (3) Data visualization and exploratory analysis in R; (4) Predictive and causal modeling techniques using large datasets in R; (5) Use of statistical data reduction and machine learning techniques with big data; (6) Derivation and use spatial autocorrelation and other spatial patterning metrics in urban planning applications of big data; (6) Heuristic visualization of analytical and modeling results.
Taught by: Brusilovskiy
Course usually offered in fall term
Activity: Lecture
1 Course Unit

CPLN 673 Contemporary Urbanism
This course will expose students to a wide array of case studies in Planning, Urban Design, and Landscape Architecture. They include: notions of sustainable development, the interplay between open space and built form, the rehabilitation of existing areas as historic districts, commercial corridors, and the improvement of squatter settlements. Also, it will focus on city expansions and new towns, housing, mixed-use developments, and areas of new centrality. The program will address as well territorial planning, the improvement of open space systems, and site specific interventions of parks, plazas, streetscape and gardens. Cases will provide the proper ground for analysis and interpretation of issues related to the design and implementation of “good” landscape and urban form. Class discussions will be complemented with short design exercises. We will also enjoy the presence of outstanding visiting lecturers, who will share with us cutting-edge information, derived from their professional practice and research. Registration limited to students in the MLA 602 level; students in the Certificate in Urban Design program and a limited number of MLA students needing to fulfill the Theory III requirement; other PennDesign graduate students must seek permission of the instructor.
Taught by: Gouverneur
Course usually offered in spring term
Activity: Lecture
1 Course Unit

CPLN 675 Land Use and Environmental Modeling
Planners at every scale and of every type are increasingly using spatial data and models to analyze existing patterns, identify and parameterize key trends and urban processes, visualize alternative futures, and evaluate development impacts. This course will introduce students to various GIS-based land use and environmental planning models, including, among others: TR55 for analyzing parcel-level stormwater runoff; BASINS for analyzing watershed-level stream volumes, runoff, and water quality; HAZUS for analyzing the potential damage impacts of floods, earthquakes, and hurricanes; UPlan and CUF/CURBA for developing detailed urban growth projections; CommunityViz for analyzing, simulating, and visualizing the impacts of proposed development projects; and other packages as available. A basic familiarity with ArcGIS is required.
Taught by: Landis
Course usually offered in spring term
Prerequisites: Some knowledge of GIS and statistics.
Activity: Laboratory
1 Course Unit

CPLN 676 The Immigrant City
Immigration is among the most important phenomena shaping neighborhoods, cities, and regions. Understanding migration is fundamental to understanding urbanization, community development, and urban society today. This course examines the development of immigrant communities in United States cities and suburbs. Class readings, discussions, and visits to a variety of Philadelphia immigrant neighborhoods explore themes including labor markets, commerce, housing, civil society, racial and ethnic relations, integration, and the public sphere. We study the diverse dynamics and impacts of immigration through foundational readings and close observation of various newcomer and receiving communities. The first part of the course surveys migration and community formation among a broad range of ethnic groups in different sorts of city and suburban neighborhoods, mainly through history, sociology, and geography. The second part focuses on public policy and community and economic development practices related to migration at the local, regional, national, and trans-national scales.
Taught by: Vitiello
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 680 Advanced Topics in GIS
The primary objective of this course is to equip students with a selected set of sophisticated and specialized tools for the practical use of geographic information systems in a variety of application settings. Participants will have the opportunity to focus on particular topics in each of four major areas including: data acquisition - e.g. remote sensing, LiDAR imagery, global positioning systems, mobile GIS, applied geocoding, geodatabases, ArcSketch, and/or CAD interaction; communication - e.g. web mapping, animation, and/or professional cartographic techniques; problem solving - e.g. cartographic pattern recognition, geospatial allocation, agent-based modeling, geostatistics, network analysis, and/or spatio-temporal simulation; and tool building - e.g. Python scripting, GoogleMap mashups, and/or open source GIS. The course is conducted in a seminar format with weekly sessions devoted to lectures, demonstrations, and discussions conducted by the instructor, students, and invited guests. Offered in the spring annually.
Taught by: Tomlin
Course usually offered in fall term
Activity: Seminar
1 Course Unit
**CPLN 685 Environmental Readings**

In this seminar, we will explore this green thread and analyze its influence on how we shape our environments through design and planning. The course has three parts. Throughout, the influence of literature on design and planning theory will be explored. The first part will focus on three most important theorists in environmental planning and landscape architecture: Frederick Law Olmstead Sr., Charles Eliot and Ian McHarg. The second part of the course will critically explore current theories in environmental planning and landscape architecture. The topics include: frameworks for cultural landscape studies, the future of the vernacular, ecological design and planning, sustainable and regenerative design, the languages of landscapes, and evolving views of landscape aesthetics and ethics. In the third part of the course, students will build on the readings to develop their own theory for ecological planning or, alternatively, landscape architecture. While literacy and critical inquiry are addressed throughout the course, critical thinking is especially important for this final section.

Taught by: Steiner
Course usually offered in fall term
Activity: Seminar
1 Course Unit

**CPLN 690 Java and Javascript Programming for Planning Applications**

This course will introduce city planning, MUSA and design graduate students to Java and Javascript. Students will learn the logic and syntax of the Java programming language for use in simple web applications (Weeks 1 to 7); as well as how to program database and map-oriented web and desktop applications using Javascript (Weeks 8 to 14). The "hands-on" uses of Java and Javascript in urban planning applications will be emphasized. Students will hone their programming and applications development skills through a series of bi-weekly assignments.

Taught by: Faculty
Course usually offered in fall term
Activity: Laboratory
1 Course Unit

**CPLN 691 Data Wrangling and Visualization**

The purpose of this course is to familiarize students with the "pipeline" approach to data science. This involves the process of gathering data; sorting the data; analyzing the data and visualizing the data such that non-technical managers can make use of it for decision making. The first part of the course teaches students how to gather data by way of scraping, APIs, Google Big Query, Twitter and other unstructured sources. The second part of this course, teaches students how to store and retrieve these data in a database. The third part of the class teaches some more esoteric machine driven analytics. The fourth and final component of the class is data visualization both in static and dynamic (web-based) form. The students will be expected to replicate this pipeline on a dataset of their own choosing for their final project.

Course usually offered in spring term
Prerequisites: Prerequisites include a working knowledge of R and ArcGIS.
Activity: Seminar
1 Course Unit

**CPLN 692 Java Script Programming for Planners and Designers**

This course will introduce City Planning, MUSA and design graduate students to Javascript. Students will learn the logic and syntax of the Java programming language for use in a simple web application (weeks 1 to 7); as well as how to program database and map-oriented web and desktop applications using Javascript (weeks 8 to 14). The "hands-on" uses of Javascript in urban planning applications will be emphasized. Students will hone their programming and applications development skills through a series of bi-weekly assignments.

Taught by: Faculty
Course usually offered in fall term
Activity: Lecture
1 Course Unit
CPLN 720 Community and Economic Development Practicum
This practicum involves a weekly mixture of lecture and seminar course-time with applied problem solving for real-world clients. It will be a second-year course focused on organizational development, business planning, and other strategic planning techniques that complement the physical planning focus on PennPlanning Workshop and Studio. Required of students in the CED concentration.
Taught by: Servon
One-term course offered either term
Activity: Lecture
1 Course Unit

CPLN 730 Sustainable Cities
Sustainability as a concept has been around for almost thirty years, but only recently has become a major factor in planning practice. This seminar course will explore the following sustainability topics and practices: (i) Goals and organization of urban sustainability initiatives; (ii) Transportation, water and air quality, solid waste reduction; (iii) Climate change and energy efficiency initiatives; and (iv) Green building policies. We will thoroughly examine case studies drawn from sustainability planning initiatives from major American cities, with selected international comparisons.
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 750 Advance Transportation Seminar, Air Transportation Systems Planning
Air transportation is a fascinating multi-disciplinary area of transportation bringing together business, planning, engineering, and policy. In this course, we explore the air transportation system from multiple perspectives through a series of lessons and case studies. Topics will include airport and intercity multimodal environmental planning, network design and reliability, air traffic management and recovery from irregular operations, airline operations, economics, and fuel, air transportation sustainability, and land use issues related to air transportation systems. This course will introduce concepts in economics and behavioral modeling, operations research, statistics, environmental planning, and human factors that are used in aviation and are applicable to other transportation systems. The course will emphasize learning through lessons, guest lecturers, case studies of airport development, and an individual group and research project.
Taught by: Ryerson
Course usually offered in spring term
Also Offered As: ESE 550
Prerequisite: CPLN 550 or equivalent
Activity: Seminar
1 Course Unit

CPLN 760 Public Realm Studio
This intensive foundation studio focuses on the physical planning and design skills necessary in shaping the public realm. Students will undertake a series of targeted exercises that introduce them to project conceptualization, context analysis, programming, site planning, technical issues, and detailed design of public space in cities. Focusing on issues pertinent to local municipalities, students will work collaboratively and individually over the semester on design elements that cover a range of scales. Intellectual objectives within the studio include: the links between theory and practice, the development of principles to guide design, understanding associations between design and stakeholder-user interests, and exploring larger issues of sustainability and participation in design practice. Emphasis on the pragmatics of problem solving and implementation will be balanced with essential skills in visioning, critical thinking and design leadership.
Taught by: Al
Course usually offered in fall term
Activity: Studio
2 Course Units
CPLN 790 Smart Cities Seminar
Course Description: the purpose of this course is to have students to work with city and non-profit clients on analytical projects that convert client data into actionable intelligence. Groups of 3-4 students will work with the client to understand the business process, wrangle data, develop spatial and spatial analytics and serve these outputs to non-technical decision makers through the medium of data visualization. Students will be mentored by MUSA Faculty and advised by someone from the partnering agency. Prerequisites: students must have a working knowledge of R and experience building both spatial and statistical models including machine-learning models. In order to be eligible for this course, students must have taken the following courses - 1) MUSA-507/ CPLN-590 and either CPLN-505 or MUSA-500. Students must have taken or be enrolled concurrently in MUSA-601 or MUSA-800. Students without these specific prerequisites are asked to contact the instructor. Admission into the course: for spring 2018, there are initially 16 open seats with the possibility of another 4 opening up. To be admitted into the course, students are asked to pick one of the practicum projects and write no more than 300 words about why the use case is of interest, how they might go about solving the problem, and its usefulness to city Please also discuss which data-drive skills are your sharpest. The essay should be turned into the City Planning Office in Meyerson Hall. Projects (subject to change): Louisville, Kentucky-Traffic Flows and Smart Signal Modeling: students will work have access to high-resolution traffic data from Waze and historical traffic signal information from the City. The goal is understand the traffic pattern that might result from a given traffic signal configuration. Can discover a configuration that is amenable to mode choice like walking or biking? Minneapolis, Minnesota-Code Enforcement: Minneapolis has a problem where too many construction projects are happening illegally. Unpermitted construction work may result in unsafe living conditions and worse. This project is to help the city predict where illegal work may be happening and how inspectors can better enforce existing permit regulations. Philadelphia, PA-Equitable Bike Share Planning: one of the policy goals of Philadelphia’s bike share system is to expand into neighborhoods where bike share demand may not be profitable but where the subsidies might induce more sustainable mode choice in the future. Working with the Bicycle Coalition of Greater Philadelphia, the goal of this project is for students to build and algorithm, which can predict bike share demand for any location Citywide,
Taught by: Ken Steif
Course usually offered in spring term
Activity: Seminar
1 Course Unit

CPLN 791 CPLN Summer Institute: Spreadsheet Review
Excel for Planners: use of Excel to develop simple planning indicators (e.g., location quotients), simple planning models (e.g., fiscal impact models), and database operations. Course enrollment is by permit only. Please contact Roslynne Carter (CPLN Dept.) at at roslynne@design.upenn.edu.
Taught by: Faculty
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 792 CPLN Summer Institute: Statistics
Basic Statistics for Planners: review of descriptive and basic inferential statistics, including z-scores, confidence intervals, t-tests, and chi-squared. Course enrollment is by permit only. Please contact Roslynne Carter (CPLN Dept.) at at roslynne@design.upenn.edu.
Taught by: Faculty
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 793 CPLN Summer Institute: Computer Methods Computer Graphics
Introduction to Presentation and Report Graphics for Planners: including one day each on Photoshop, Illustrator, Sketchup, and InDesign Course enrollment is by permit only. Please contact Roslynne Carter (CPLN Dept.) at at roslynne@design.upenn.edu.
Taught by: Faculty
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 794 CPLN Summer Institute: Microeconomics Review
Micro-econ Review: review of principles of supply and demand, elasticities, equilibrium prices and quantities. Course enrollment is by permit only. Please contact Roslynne Carter (CPLN Dept.) at at roslynne@design.upenn.edu.
Taught by: Faculty
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 795 Cpnl Summer Institute: Introduction To Gis
The summer GIS Bootcamp prepares students for the intermediate GIS classes that begin in the fall semester. It begins with a discussion of GIS in planning and the social sciences and then moves on to topics related to spatial data, geocoding, projection, vector and raster-based geoprocessing, 3D visualization and more. Each class includes a brief lecture and a walk through involving actual planning related data. Course enrollment is by permit only. Please contact Roslynne Carter (CPLN Dept.) at at roslynne@design.upenn.edu.
Taught by: Faculty
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 797 CPLN Summer Institute: Writing Lab
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 798 CPLN Summer Institute: Success Stratgies
Course usually offered summer term only
Activity: Lecture
0 Course Units

CPLN 799 CPLN Summer Institute: Introduction to the R Statistical System
This one-week short course will introduce students to the basics of the R statistical programming language, including importing and setting up data, using the R interface to conduct descriptive data analysis, and basic model-building procedures. Course usually offered summer term only
Activity: Lecture
0 Course Units
**CPLN 800 Doctoral Seminar**
Open to PhD students, this scholar-oriented seminar explores how academic researchers from different disciplines define researchable questions, craft research designs, and contribute to knowledge through an examination of important and/or recently published books and monographs with an urban focus. Required of all first- and second-year CPLN doctoral students and those doctoral students enrolled in the Urban Studies Graduate Certificate Program, enrollment is limited to 15 students. Other doctoral students may enroll on a space available basis. Course requirements include completion of a major research paper on a topic selected in consultation with the instructor.

Taught by: Birch
One-term course offered either term
Activity: Seminar
1 Course Unit

**CPLN 995 Dissertation**
One-term course offered either term
Activity: Dissertation
1 Course Unit

**CPLN 999 Independent Study and Research**
One-term course offered either term
Activity: Independent Study
1 Course Unit
Notes: Ph.D. candidates. Independent study and research under faculty supervision.