

# CITY AND REGIONAL PLANNING (CPLN)

## **CPLN 5000 Introduction to City Planning: History, Theory and Practice**

This course introduces students to the history, theories, and contemporary practice of city and regional planning. Readings, lectures, class discussion, and walking tours focus on: - The evolution of planning ideas, strategies, institutions, and powers, and of planning's influence on cities and regions around the world; - The structure and dynamics of urban change; - The ways planners and social and environmental scientists have understood, theorized, and responded to social, economic, political, and environmental conditions and change over time; and - The development of the planning profession and its relationships with allied fields, examining various types of planning, urban development, and design.

Fall

1 Course Unit

## **CPLN 5010 Quantitative Planning Analysis Methods**

Introduction of methods in analyzing demographic conditions, population and housing trends, employment and business changes, community and neighborhood development. Focus on using spreadsheet models, data analysis, and basic statistical analysis for local and neighborhood planning.

Fall or Spring

1 Course Unit

## **CPLN 5020 Urban Economics and Public Finance**

This core course first covers the basic concepts of urban economics: central place theory, gravity models, agglomeration economies, bid rent curves, and regional settlement patterns. The course takes the theory and applies it to metropolitan outcomes: central business districts, edge cities, edgeless cities, the favored suburban quarter, and megaregions. And the impact of the COVID-19 pandemic. The second half of the course connects the community facilities section and the future land use map of the comprehensive plan with a city's capital improvements program to focus on how to pay for public infrastructure. Financing techniques include: bonds, pay-as-you-go, user fees, tax increment financing, impact fees, adequate public facilities ordinances, sales taxes, property taxes, and land value taxation. Cost-benefit analysis and other infrastructure finance practices are discussed. Applications of public finance include: (a) Financing affordable housing projects; (b) Financing economic development and redevelopment projects; (c) Financing transportation projects; (d) Structuring public-private partnership deals; (e) Financing environmental and green infrastructure projects; and (f) Issues in school finance.

Spring

1 Course Unit

## **CPLN 5030 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.

Fall

Also Offered As: MUSA 5030

1 Course Unit

## **CPLN 5040 Site Planning**

This course introduces students to the practice of site planning. Skills and methods examined in the course include observation of the physical environment; site analysis; development 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. There are two sections of this class- one for urban designers and/or those with prior design backgrounds and skills, one for those who do not. Note: Non-designers should enroll in CPLN 504-002 section

Spring

1 Course Unit

## **CPLN 5050 Planning by Numbers**

This course will use planning and policy data and applications to introduce you to a variety of useful techniques of inferential statistics and unstructured data learning techniques. Each of the techniques will be introduced and developed through the use of commonly available planning and urban policy data in order to address a planning problem or question. Applications and examples may include: (i) analyzing population, economic, and settlement patterns across MSAs; (ii) understanding the determinants of housing and real estate prices; (iii) understanding infrastructure investment needs in the US; (iv) identifying the characteristics that explain travel behavior and mode choice; and (v) explaining land use change. Class sessions will involve a mixture of lecture and in-class statistical modeling. Students will make extensive use of R, a free, open source statistical programming language. This course is especially appropriate for students whose future professional and academic work will involve the design and testing of planning and policy analysis models using quantitative data.

Spring

Mutually Exclusive: MUSA 5000

1 Course Unit

## **CPLN 5060 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.

Spring

1 Course Unit

**CPLN 5080 Urban Research Methods**

This course is designed for graduate students completing original urban research. For students in Penn's Master of City Planning (MCP) program, it is the first class in a two-semester sequence in which students research and write their thesis. In the fall semester, this course takes students from the point of scoping and refining research questions through producing an in-depth literature review, research design, and initial fieldwork. In the spring, students completing an MCP thesis will complete the research and writing of the thesis. This fall class involves regular readings, orientation to research design, and a variety of methods exercises that students will help lead (for the methods they are employing in their own research). Students outside of the MCP program are welcome to take this class as long as they have a substantial urban research project to pursue. \* To take this course, each student must submit a research proposal – either for an MCP thesis or a similarly substantial, original research project – and receive permission from the instructors of the MCP thesis classes (fall and spring). The Department of City and Regional Planning will hold a proposal-writing workshop later this spring for students who express interest in pursuing an MCP thesis.

1 Course Unit

**CPLN 5090 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.

Spring

1 Course Unit

**CPLN 5200 Introduction to Housing, Community and Economic Development**

Introduction to the theories, institutions, and practices of housing, community and economic development with a focus on improving opportunity and building wealth in disadvantaged communities. Provides foundation for advanced courses in housing policy, downtown and neighborhood revitalization, real estate and economic development finance, and local and international community development.

Spring

1 Course Unit

**CPLN 5280 Research Seminar 21st Century Urbanism**

A seminar run in conjunction with the Institute for Urban Research at Penn, students will learn about the range of cutting-edge topics in urbanism that Penn faculty are working on and work closely with a faculty member on current research. Students will learn about new topics and methods in interdisciplinary urban research, and get first hand experience collecting urban data under the close supervision of an experienced researcher. Students and faculty jointly will present their findings for discussion. This course is a good introduction for how to frame and conduct an urban research project. For more information, visit <https://pennur.upenn.edu/instruction/uurc>

Spring

1 Course Unit

**CPLN 5300 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.

Fall

1 Course Unit

**CPLN 5310 Sustainability and Environmental Planning**

This course will identify and evaluate the application of planning tools and strategies to enhance sustainability and environmental conditions, and to promote the wise use of natural resources. Students will understand the causes and effects of air, water, and land pollution, and how to evaluate and implement responses to pollution through regulations, financial incentives, infrastructure, and design techniques. Emphasis is on planning to create sustainable communities. The course provides an 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.

Fall

1 Course Unit

**CPLN 5350 Topics in Energy Policy**

This seminar will explore a collection of ideas influencing energy policy development in the U.S. and around the world. Our platform for this exploration will be seven recent books to be discussed during the semester. These books each contribute important insights to seven ideas that influence energy policy: Narrative, Transition, Measurement, Systems, Subsidiarity, Disruption, Attachment. Books for 2018 will be chosen over the summer; the 2017 books are listed here as examples: Policy Paradox (2011) by Stone, Climate Shock (2015) by Wagner and Weitzman, Power Density (2015) by Smil, Connectography (2016) by Khanna, Climate of Hope (2017) by Bloomberg and Pope, Utility of the Future (2016) by MIT Energy Initiative, Retreat from a Rising Sea (2016) by Pilkey, Pilkey-Jarvis, Pilkey.

Spring

Also Offered As: ENMG 5030

1 Course Unit

**CPLN 5400 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.

Fall

1 Course Unit

**CPLN 5500 Introduction to Transportation Planning**

This course provides an overview and introduction to urban transportation planning and policy. Although the focus is on US transportation, the course also puts an emphasis on transportation issues in the fast-growing cities of the developing world. The course is organized around: (1) histories and theories of transportation and travel behavior; (2) transportation policy and project evaluation; (3) transportation demand modeling; and (4) multimodal transportation planning and policy. Particular attention is given to interactions between transportation and land use systems.

Fall

1 Course Unit

**CPLN 5510 Transport Justice**

This course will explore the concept of transport justice and how this idea can inform changes to public transit infrastructure. The first half of the course will set theoretical foundations through close reading and discussion of spatial and social justice theories, emphasizing questions of transportation and mobility. The second half of the course will feature a project-based application of these theories. Students will develop analyses to inform a planning at the intersection of Broad/Germantown/Erie in North Philadelphia. Students will be encouraged to explore multiple analytic approaches including: interviews and qualitative data collection; GIS and spatial analysis; quantitative analysis and predictive modeling, and more. The course will culminate in written and oral presentations given to partners from SEPTA, OTIS, and other planning agencies in Philadelphia.

Fall

1 Course Unit

**CPLN 5600 Introduction to Graphics for Urban Design**

The purpose of this class is to give urban design students basic visual skills and proficiency, including the ability to: 1. Understand and critique drawings and drawing types 2. Work in: Adobe Illustrator, Photoshop, and InDesign, and McNeel Rhino3D. 3. Understand workflow between software packages This is an introductory skills class that operates on three levels: software proficiency, design proficiency, and critical visual analysis. The class requires regular weekly effort and completion of assignments as skills are cumulative. Students with a design background are discouraged from taking this class.

Spring

1 Course Unit

**CPLN 5710 Sensing the City**

This course will teach you to design and build sensing installations that engage with real-time urban environmental stimuli. Using the Arduino microcontroller as a prototyping platform, you will write code and wire circuits, learn to select and implement available sensors, and generate raw environmental data. You will populate databases and interpret data streams, and then create responsive urban interventions. Following the model of hackerspaces around the globe, we will collaboratively pose problems and find solutions, teaching and learning from one another. No background in coding or electronics is required, but a desire to learn is absolutely necessary. Also, this course is hands-on. You are a maker! Be prepared to build, design, and create.

Fall

1 Course Unit

**CPLN 5720 Modern Architectural Theory Seminar**

A survey of architectural theory from the mid-eighteenth century to the present. The discussion of original writings will be emphasized. Open to undergraduate and graduate students.

Not Offered Every Year

Also Offered As: ARTH 5710

1 Course Unit

**CPLN 5770 Topics in International Development**

Course examines current trends and topics pertaining to international development. See MCP website for current offerings: Graduate City and Regional Planning, Weitzman School (upenn.edu)

Fall

1 Course Unit

**CPLN 5771 Topics in International Development**

Course examines current trends and topics pertaining to international development.

1 Course Unit

**CPLN 5800 The Penn Experience: Racism, Reconciliation, and Engagement**

This new non-credit asynchronous course, consisting of six Modules, aims to establish common basic language and concepts for incoming graduate and professional students to facilitate subsequent difficult conversations about race, racism and difference in the classroom and beyond. Using video interviews, presentations, short readings and podcasts, the course highlights the significance of Penn and Philadelphia's history of racism and other forms of oppression, Penn's evolving relationship to West Philadelphia, and Penn's efforts toward greater engagement and inclusion. Modules also focus on implicit bias, intercultural communication gender identity and disparities in healthcare. A final module was designed primarily to address the antiracist work that must be done to dismantle white supremacy. All incoming SP2 master's students are expected to spend 20 or more hours reviewing the six modules and completing short assessments prior to starting the fall semester. Other graduate and professional schools will assign modules to be completed based on their schools requirements.

0 Course Units

**CPLN 5820 Place, Taste and Neighborhood Change: Frameworks for Integrating Aesthetics, Equity and Creativity**

Places provide a sense of identity and orientation to the world for its users in ways that go beyond the traditional practice areas that urbanists are trained to understand (i.e. housing, economic development, transportation). The popularization of artistic, cultural, and "creative interventions" in redevelopment has added to that complexity in hybrid ways require new tools, languages, and frameworks to meaningfully participate in the development process. By taking a humanistic and scientific views of the longstanding arts-based community development field now known as "creative placemaking", the class will help learners formulate critical, evaluative answers pressing, emergent questions for urban practitioners. In particular, learners will explore the various state-sponsored meanings of creative placemaking, artistic excellence, and artistic merit. During the course we will interrogate, compare, and articulate the power dynamics embedded in those definitions with new, alternate, and stakeholder-centric definitions. The course aims to invite conversation, reflection, and sharing of best practices alongside community-based leaders with the promise that learners will be able to apply equity-based frameworks to these debates. Learners will emerge from this guided journey with a sharpened ability to identify, generate, and extend authentic, inclusive arts-based neighborhood change.

Spring

1 Course Unit

**CPLN 5830 Coloring Climates: Race, Stories, Environments**

Why is the Green New Deal not talked about as a "Black Agenda"? Why are Black people not employed in 90% of the leadership positions in environmental organizations? Do Black folks resist environmentalism as a "white" issue? Why are cannabis farmers, once arrested by cities for growing hemp, now being priced out of the regulated industry in legalized states? These questions may also be asked for people of color broadly. Since the "Manifest Destiny" days of John Muir, white spatial imaginaries have shaped how environmentalism is branded; planning has been in lock-step. These persistent myths motivate the basis of historical reflection and contemporary re-constitution of what it means to be "green" while Black in place. This seminar that proposes to "Blacklight" urban space: bare visible the oft-hidden Black Geographies in urban and environmental history on the margins. By drawing on texts in critical ecology, we will elucidate how primarily Black people imagine attachment to rural, pastoral, and urban spaces. This decentering of the colonial history of environmentalism is especially urgent in environmental and land use planning. Readings will include popular literature from Camille T. Dungy's *Black Nature: Four Centuries of African American Nature Poetry*, *The Green Collar Economy* by Van Jones, *The Good Food Revolution* by Will Allen; sociology from Dorceta Taylor's *The Rise of the American Conservation Movement: Power, Privilege, and Environmental Protection*, , Ron Finley's "Ganstga Gardening" videos, environmental planning from Mabel O. Wilson's "Black & Green" in *Begin with the Past: Building the National Museum of African American History & Culture*, and Richard Westmacott's *African-American Gardens and Yards in the Rural South*, *Majora Carter's Sustainable South Bronx: A Model For Environmental Justice*; memoirs by *The Cooking Gene* by chef Michael Twitty, *Unbowed* by Wangari Maathai. Articles will also include voices from BIPOC geographers, psychologists, and planners with relevant views. While being primed with these histories, students will identify a mode of environmental action and land use engagement for a "Blacklight" case study in either their hometown or current place of residence. Students will contribute to a Wikipedia page on eco-poetics or ecoliteracy to build public consciousness around Black, indigenous, and people of color (BIPOC) sensibilities in these places.

1 Course Unit

**CPLN 5910 Introduction to Smart Cities**

This course reviews the infrastructure, data, algorithms, and implementation of emerging digital technologies in cities. We ask: what makes a city smart? We discuss challenges and opportunities, critically evaluating what technology has and has not been able to offer cities. We contrast utopian visions of technology with the possible buggy and brittle realities. Finally, we consider projects that could be implemented in Philadelphia to make the city smarter. What are the qualities of a good smart city project?

Fall or Spring

1 Course Unit

**CPLN 5920 Public Policy Analytics**

This course teaches advanced spatial analysis and an introduction to data science/machine learning in the urban planning and public policy realm. The class focuses on real-world spatial analysis applications and, in combination with introductory machine learning, provides students a modern framework for efficiently allocate limited resources across space. Unlike its private sector counterpart, data science in the public or non-profit sector isn't strictly about optimization - it requires understanding of public goods, governance, and issues of equity. We explore use cases in transportation, housing, public health, land use, criminal justice, and other domains. We will learn novel approaches for understanding and avoiding risks of "algorithmic bias" against communities/people of color as well as communities of different income levels. The format of the class includes weekly lectures/in-class demos and labs. There are seven required assignments, including two projects. Prerequisites include either CPLN503, the summer GIS course or prior experience with GIS in a formal setting. The class is conducted entirely in R. Having experience in R and the 'tidyverse' is helpful but not strictly required.

Fall

Also Offered As: MUSA 5080

1 Course Unit

**CPLN 6000 Studio I**

Planning Workshop builds on the background knowledge and skills learned in the fall semester to produce team-based neighborhood/corridor plans. Workshop is where you learn to make plans—a skill that is foundational to being an urban planner, which is why we are all here! This course walks through each step of the typical plan-making process, each step building on the previous. This generally includes:

- o Assembling and summarizing existing conditions
- o Analyzing and understanding community identity
- o Identifying issues and opportunities
- o Developing plan goals
- o Creating alternatives or strategic directions for development
- o Devising plan recommendations
- o Setting a course for plan implementation

In addition to completing the steps of the plan, this course also helps students learn skills for working in groups, graphic design and presentation, verbal presentation, project and workflow management, understanding community dynamics, and overall professionalism. These are skills that every planner needs, and will rely on heavily in their professions, so Workshop is also helpful in preparing each student for work readiness, regardless of concentration.

Spring

0-2 Course Units

**CPLN 6200 Techniques of Urban Economic Development**

This course is an introduction to the theory and practice of economic development planning. We will explore theories of economic growth and development as well as explore pressing questions regarding income and wealth inequality and labor markets. Economic development practice in the US is the result of decades of work from local and state governments and hybrid entities (community development institutions, hospitals, redevelopment authorities, commerce departments) attempting to make their respective places more "sticky" with respect to economic activity. While economic development may seem secondary, or worse, actively harmful in addressing some of the many pressing problems facing planners today, this course is designed to highlight why economic development remains central to questions about how regions can and should grow. The economic organization of our regions is a central actor in debates concerning global warming, displacement through gentrification or decline and social inequality.

Spring

1 Course Unit

**CPLN 6210 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.

Spring, even numbered years only

1 Course Unit

**CPLN 6220 Healthy People/Healthy Places**

In Healthy People/Healthy Places we will explore the role of space and place in the social construction of health. Pulling from the urban planning, geography and public health literatures, we will explore the role of the built environment in shaping individual and community health. We will explore questions behind why, and how, some groups of people die, or are injured, at greater rates than others and the role that planning and broader spatial policy play in these outcomes.

1 Course Unit

**CPLN 6230 The Carceral State**

This course examines the period of mass incarceration that began in the US in the 1970s, its impact on communities and its connection to economic development. We'll look specifically at policies that fostered mass incarceration, the financialization of the criminal justice system, the militarization of policing, and grassroots organizing movements that challenge the carceral state. We will examine the ways in which policies and practices have had disparate impacts on people of color and women, and we will also pay attention to space and place, endeavoring to understand differences at the local, county and state levels. Students will read books and articles from a range of disciplines including sociology, law, political science, and planning. We will also read poetry and memoir, and study places that have instituted policies and practices that go against the grain. This is a heavy reading course that relies on student engagement and discussion. We will also take a couple of field trips to local reentry organizations, and students will be required to do courtroom observations.

Spring, even numbered years only

1 Course Unit

**CPLN 6240 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.

Spring

1 Course Unit

**CPLN 6270 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.

Fall

1 Course Unit

**CPLN 6280 Migration and Development**

International migration is one of the most important phenomena driving urban, community, economic, and human development. This course focuses on the ways that migrants and community, government, and private institutions work to influence development around the world. We explore a range of large- and small-scale economic development, human and community development. After a brief introduction to histories and theories of migration and development, our major themes include: 1) the work of institutions, governments, and private sector firms in sending and receiving nations that influence migration and development; 2) diaspora-led transnational development, including remittances, hometown and country associations, and transnational advocacy and community organizing; and 3) local revitalization, labor and housing markets, workforce and enterprise development in migrant-receiving settings. Readings are drawn from a variety of social sciences, planning and development studies, including from academia and practice. Guests from local and transnational development organizations will visit the class. Assignments include short papers on the readings and a research paper or project designed by each student in consultation with the instructor. Ultimately, the course aims to help students develop: 1) a broad knowledge of migration and development in geographic and institutional settings around the world; 2) an in-depth understanding of community and economic development practices in migrant sending and receiving communities; and 3) familiarity with social science approaches to evaluating the dynamics and impacts of migration and development.

Spring, even numbered years only

Also Offered As: SOCI 6280

1 Course Unit

**CPLN 6290 Housing, Community & Economic Development Topics Class**

Elective classes for the Housing, Community and Economic Development concentration.

Not Offered Every Year

1 Course Unit

**CPLN 6300 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.

Spring

Prerequisite: CPLN 5300 OR CPLN 5310

1 Course Unit

**CPLN 6310 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.

Spring

1 Course Unit

**CPLN 6320 Modeling Geographic Space**

This course explores the nature and use of raster-oriented geographic information systems (GIS) for the analysis and synthesis of spatial patterns and processes. Students will learn about the principles of raster data, image processing, and spatial analysis using ArcGIS Pro. By the end of the course, students will have a strong understanding of how to work with raster data and will have the skills and knowledge to apply these techniques to their own research or professional projects.

Also Offered As: LARP 7410

1 Course Unit

**CPLN 6330 Topics in Land Use & Environmental Planning**

Various topics in Land Use & Environmental Planning will be examined

Fall

1 Course Unit

**CPLN 6340 Climate Change: PIng for Mitigation and Adaptation**

This course will present the science of climate change, the impacts of climate change, and the opportunities and obstacles for avoiding climate disasters. We will identify and evaluate the application of planning tools and strategies to achieve the mitigation of climate change and adaptations to climate change. Students will understand the causes and effects of climate change and how to implement and evaluate mitigation and adaptation responses through regulations, financial incentives, infrastructure investment, design techniques, and technology. Emphasis is on climate action planning to create resilient communities.

Not Offered Every Year

1 Course Unit

**CPLN 6350 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.

Spring

1 Course Unit

**CPLN 6410 Progressive Development**

This course will examine approaches to real estate development as a policy tool, and specifically a tool to achieve traditional progressive policy objectives linked to social welfare and environmental sustainability – reducing poverty, improving health and education outcomes, lowering greenhouse gas emissions etc. The course will focus on the practice of this work, examining financial, regulatory, and land use tools that are regularly utilized to achieve policy objectives via real estate development.

The course will utilize Philadelphia as a primary case study, drawing on the work of guest speakers working as practitioners in the field to illustrate how these tools are implemented. The goal will be to give students a working knowledge of the field. Prerequisite: CPLN 5400: Introduction to Property Development

Spring

Prerequisite: CPLN 5400 OR REAL 8210

1 Course Unit

**CPLN 6420 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.

Fall

1 Course Unit

**CPLN 6430 Design and Development**

This course provides an overview of the real estate development business looked at in relationship to urban design, city planning, and architectural design. It provides exposure to the many real-world considerations of private sector development as well as an introduction to the language of real estate. The class focuses on various commercial building types and product offerings with examples of how planning, architectural and other design professions fit into creation of real estate value and the development process. This will cover the practical considerations and typical trade-offs of commercial business practices and real estate investment parameters and how these influence the ways developers and designers work. Industry sectors may include housing (single, multifamily and affordable), office, retail, hospitality, and industrial, with project types ranging from greenfield, adaptive reuse, downtown development, mixed-use projects, and planned communities. Through exercises, lectures and case studies, we'll address what drives the decisions designers and non-designers make in the development process, and provide insight to help designers understand what makes developers tick. Visiting lecturers (typically architects and developers) will provide real-world examples. Weekly written exercises, case studies and presentation assignments stress critical thinking, evaluating projects by how well they do their job and analyzing how that job is defined.

Spring

Also Offered As: ARCH 7620

1 Course Unit

**CPLN 6440 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.

Fall

1 Course Unit

**CPLN 6500 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. Prerequisite: CPLN 5050 or other planning statistics course.

Spring

Also Offered As: ESE 5480

Prerequisite: CPLN 5050

1 Course Unit

**CPLN 6520 Topics in Infrastructure**

Course examines current trends and topics pertaining to the nation's infrastructure.

Fall

1 Course Unit

**CPLN 6540 The Practice of Trans.Plng:Crafting Policies & Bldg. Infrastructure**

As the first woman and planner to serve as Secretary of the Pennsylvania Department of Transportation (PennDOT), Leslie Richards has over 20 years of leadership experience working on the planning and delivery of transportation projects, including overseeing one of the largest and most innovative transportation agencies in the U.S. She is recognized for her ability to find common ground among bi-partisan boards, as well as her commitment to engage local communities before the implementation of transportation projects to incorporate quality of life issues in all decisions. Her experience gives her a unique perspective on understanding operational, financial and stakeholder issues of transportation planning. In this seminar-style course, Leslie Richards will explore the planning, development and delivery of multimodal projects and policies at the state and regional level, including national influences and an awareness of the many actors and processes involved. Topics to be discussed include: funding and implementation processes through the levels of government (municipal, county, region, state, national); challenges and opportunities working with different sectors, politics, and contexts; current issues and emerging technologies (e.g. Pennsylvania's policies and advocacy related to Automated Vehicles); and best practices for individuals pursuing careers in planning or public administration. Presentations and lectures will be supplemented by guest presentations from transportation leaders, policymakers, and planning consultants offering local, regional, and state perspectives. Students will have the opportunity to learn directly from leaders in the field and develop the skills and knowledge to work effectively with federal, state, and local entities.

1 Course Unit

**CPLN 6550 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.

Spring

1 Course Unit

**CPLN 6600 Fundamentals of Urban Design**

CPLN6600 is a two-course unit studio. It is intended as the first comprehensive exposure to the principles and processes of urban design for MCP students, and it is a required course for students in Urban Design concentration. This studio uses an incremental approach to explore contemporary practice of urban design. The semester consists of three sections: a site survey, an individual design project, and a group design project. The projects are organized around several themes associated with different scales and different dimensions of urban design: 1) street/block; 2) open space; 3) mobility and walkability; 4) urban form and ecology. This cross-scale method draws on essential theories of urbanism to investigate the interrelation between built environment and community development, and to address the issues of environmental and social sustainability of a postindustrial metropolis.

Spring

Also Offered As: LARP 6600

2 Course Units

**CPLN 6620 Topics in Urban Design & Development**

Topics in Urban Design & Development will be examined  
Fall, odd numbered years only  
1 Course Unit

**CPLN 6650 Case Studies and Urban Design Explorations**

Participants in this course will become familiarized with a diversity of iconic urban references from all continents, while acquiring skills that will facilitate planning and design processes, appreciating the value of interdisciplinary, multi-scalar initiatives, and the transformative contributions of city planning and urban design/placemaking. It is a dynamic class in which each session is centered on a particular topic (see list below), combining class discussions on case studies presented by the instructor, guest lecturers, and teams of students. Interdisciplinary groups also are asked to deliver short planning/design exercises - without the pressure of the studios-, allowing to rapidly identify existing site conditions, design opportunities, delivering their proposals with compelling narratives, strategic moves, graphics, models, and verbal communication. Course topics include: From territory to site-specific; On the public realm; The rehabilitation of historic districts; Mobility/ infrastructure and public space; The self-constructed city; Community and urban design; Contending forces of nature; Ecological urbanism; New town planning; Urban art. The class also organizes walking tours in Philadelphia. A final exhibit of the work delivered by the students will be held in Meyerson's Lower Gallery.  
1 Course Unit

**CPLN 6710 Statistical and Data Mining Methods for Urban Data Analysis**

This hands-on course will cover a wide range of methods frequently used for analyzing urban and spatial data. These methods are drawn from a variety of fields, including traditional statistics, spatial econometrics, and machine learning, and include 1) regression analysis (OLS, ridge/lasso, logistic, multinomial logit); 2) measures of spatial autocorrelation; 3) spatial regression (spatial lag, spatial error, geographically weighted regression); 4) point pattern analysis; 5) an introduction to clustering methods (k-means, hierarchical clustering, DBSCAN); and 6) big data and GIS. Students will learn the assumptions and limitations of each method, and assignments will focus on the implementation, presentation and interpretation of the analyses. Students will use R and GeoDa in this course.  
Fall

Also Offered As: MUSA 5000  
Mutually Exclusive: CPLN 5050  
1 Course Unit

**CPLN 6720 Geospatial Data Science in Python**

This course will provide students with the knowledge and tools to turn data into meaningful insights, with a focus on real-world case studies in the urban planning and public policy realm. Focusing on the latest Python software tools, the course will outline the "pipeline" approach to data science. It will teach students the tools to gather, visualize, and analyze datasets, providing the skills to effectively explore large datasets and transform results into understandable and compelling narratives. The course is organized into five main sections: Exploratory Data Science; Introduction to Geospatial Data Science; Data Ingestion & Big Data; Geospatial Machine Learning; Data Visualization & Storytelling.  
Fall

Also Offered As: MUSA 5500  
1 Course Unit

**CPLN 6741 Curricular Practical Training: Academic Year**

This course provides international Master of City Planning students the opportunity for practical training in architecture in the United States (CPT). The course develops critical thinking about the organization, operation, and ethics of professional practice in city planning. This course will allow international MCP students to work in an internship in the United States during the academic year without shortening their limited OPT time. The course is offered for .20 course units. The employment must relate to the major and the experience must be part of the program of study. Course enrollment is by permit only.  
0.2 Course Units

**CPLN 6750 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. In the first half of the course, students will gain experience using various GIS-based environmental planning models, including McHargian Overlay; landscape fragmentation (FRAGSTATS), ArcHydro, Air pollution monitoring, flood inundation prediction, among others. The second half of the course focuses on land-use applications including gentrification simulation and urban growth modeling. A basic familiarity with ArcGIS is required.  
Spring  
1 Course Unit

**CPLN 6800 Capstone Project/Advanced Topics in GIS**

This course offers students an opportunity to work closely with faculty, staff, local practitioners, and each other on a capstone project that involves the development of a GIS and/or urban data management application.  
Spring  
Also Offered As: LARP 7450  
1 Course Unit

**CPLN 6830 Material Histories and Ethnographic Methods**

What does it mean for students in the spatial disciplines (outside of anthropology, sociology, and history) to engage human subjects as primary sources of evidence? How can students in design, planning, and preservation both learn from the social sciences and transform classic ethnographic and historical methods to address the unique contexts of buildings, landscapes, and cities? This class focuses on how to conduct built environment research that views human subjects as repositories of knowledge and critical sources of primary evidence. We will explore research on the history of the built environment (dependent on maps, plats, documentation of sites) and human centered research as we design—collectively—best practices and spatially oriented interview and observation techniques. We will address multiple scales (sidewalks, commercial store fronts, post offices, neighborhoods) as we problematize human experience, perception, and knowledge of the built world.  
Fall  
Also Offered As: HSPV 6500  
1 Course Unit



**CPLN 6850 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.

Fall

Also Offered As: ARCH 6850, LARP 6850

1 Course Unit

**CPLN 6870 Topics in Historic Preservation**

This seminar concentrates on a selected topic in the social and cultural history of the built environment. Past themes have included photography and the American city and the relationship between cities and sound. For our current offering, please visit: <https://www.design.upenn.edu/historic-preservation/courses>

Spring

Also Offered As: HSPV 6380

1 Course Unit

**CPLN 6920 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 JavaScript programming language for use in simple web applications, as well as how to program data and map-oriented web applications using Javascript. The "hands-on" uses of JavaScript in urban planning applications will be emphasized. Students will hone their skills through a series of complete application projects.

Fall

Also Offered As: MUSA 6110

1 Course Unit

**CPLN 7010 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Spring

2 Course Units

**CPLN 7020 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Spring

2 Course Units

**CPLN 7030 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Fall

2 Course Units

**CPLN 7040 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Spring

2 Course Units

**CPLN 7050 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Fall

2 Course Units

**CPLN 7060 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

2 Course Units

**CPLN 7070 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Spring

1 Course Unit

**CPLN 7080 Planning Studio**

Intensive study of a selected planning topic. Teams of students work with clients to develop alternative scenarios and produce plan and implementation strategies. Multiple presentations required.

Spring

2 Course Units

**CPLN 7090 Planning Studio**

Second year planning studio

Fall

2 Course Units

**CPLN 7200 Housing, Community and Economic Development Practicum**

The Housing, Community & Economic Development Practicum course is the capstone for the CED concentration. Using the skills and knowledge they have acquired in previous HCED coursework, students work in small groups on projects for local clients. These clients may include community-based organizations, public agencies, or other nonprofits

Fall or Spring

1 Course Unit

**CPLN 7300 Sustainable Cities**

This reading and writing-intensive discussion seminar reviews and debates what it means to develop sustainably, primarily focusing on cities in the United States. We examine the theory behind the sustainable cities movement from healthy cities, to green cities, to smart growth, to just cities, low-carbon cities, and resilient cities. We critically evaluate examples of sustainability planning. We discuss regulation, incentives, technological advances, and social norms. Finally, we evaluate contemporary urban sustainability plans. The class meetings leave room for students to raise and debate their own ideas of sustainability—in past semesters, students have driven conversation everywhere from cricket-based foods, to battery technology, to building community trust. By the end of the course, you will have a more nuanced and comprehensive view on how to create sustainable cities and you be able to articulate those ideas clearly through writing.

Spring

1 Course Unit

**CPLN 7500 Advance Transportation Seminar**

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.

Spring

Also Offered As: ESE 5500

Prerequisite: CPLN 5500

1 Course Unit

**CPLN 7600 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.

Fall

2 Course Units

**CPLN 7730 Preservation and Development of Urban Heritage in the Americas**

This advanced topic seminar will focus on the challenges confronted by the conservation and urban planning professions in turning the urban heritage into a social and economic development resource for cities in developing countries. The preservation of the urban heritage is moving to a new paradigm of intervention responding to: a growing interest in communities for preserving their intangible and tangible urban heritage; rising development pressures on historic neighborhoods; the generalization of adaptive rehabilitation as a conservation strategy; and recent international agreements calling for expanding the role of the urban heritage in the social and economic development of the communities. This is a problem that is in the cutting edge of the research and practice of heritage conservation and urban planning and has conservation, planning and design implications making it ideally suited to a multi-discipline seminar approach. The course will combine seminar and field study methodologies in ways that they support each other. The knowledge acquired through the seminar work will be put to use in a field study exercise whose objective is to allow the students to work on topics of their interest and pursue research or urban development and heritage conservation interventions related to the semester's specific studio site. For the current site offering, please visit: <https://www.design.upenn.edu/historic-preservation/courses>

Spring, odd numbered years only

Also Offered As: HSPV 7030

1 Course Unit

**CPLN 7900 MUSA/Smart Cities Practicum**

The purpose of this course is for students to work with city and non-profit clients on data science that convert government data into actionable public policy intelligence. Groups of 2-3 students will work with the client to understand the business process, wrangle data, develop spatial and aspatial 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. Prerequisites include MUSA-5080/CPLN-5920 and either CPLN-5050 or MUSA-5000. Students without these specific prerequisites are asked to contact the instructor. Interested students are asked to contact the instructor to learn about specific projects and how to apply for the course.

Spring

Also Offered As: MUSA 8010

Prerequisite: (CPLN 5050 OR MUSA 5000) AND (MUSA 5080 OR CPLN 5920)

1 Course Unit

**CPLN 7910 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 Roslynn Carter (CPLN Dept.) at [roslynn@design.upenn.edu](mailto:roslynn@design.upenn.edu).

Summer Term

0 Course Units

**CPLN 7920 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 [roslynne@design.upenn.edu](mailto:roslynne@design.upenn.edu).

Summer Term

0 Course Units

**CPLN 7930 CPLN Summer Institute: Urban Design**

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 [roslynne@design.upenn.edu](mailto:roslynne@design.upenn.edu).

Summer Term

0 Course Units

**CPLN 7940 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 [roslynne@design.upenn.edu](mailto:roslynne@design.upenn.edu).

Summer Term

0 Course Units

**CPLN 7950 Cpln Summer. 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 [roslynne@design.upenn.edu](mailto:roslynne@design.upenn.edu).

Summer Term

0 Course Units

**CPLN 7970 CPLN Summer Institute: Writing Lab**

Summer Term

0 Course Units

**CPLN 7980 CPLN Summer Institute: Success Strategies**

Summer Term

0 Course Units

**CPLN 7990 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.

Summer Term

0 Course Units

**CPLN 8000 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.

Spring

1 Course Unit

**CPLN 8200 Readings in Urban Planning & History**

Reading and discussion course on selected topics in urban and planning history, with an emphasis on the United States, 1820-2000. We will sample both canonical and more recent scholarship. Interested doctoral students from across the university are particularly welcome. Masters students interested in an intensive reading course are also welcome. All students will read at least one book per week, and the final written assignment can be tailored to individual student interests and needs.

Spring, odd numbered years only

Also Offered As: HSPV 8200

1 Course Unit

**CPLN 9950 Dissertation**

Dissertation course.

Fall or Spring

0 Course Units

**CPLN 9990 Independent Study and Research**

Independent Study supervised by a faculty member.

Fall or Spring

0-1 Course Unit