

# DEPARTMENT OF CITY AND REGIONAL PLANNING (GRAD)

## Contact Information

### Department of City and Regional Planning

Visit Program Website (<http://www.planning.unc.edu>)

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The Department of City and Regional Planning (DCRP) at the University of North Carolina at Chapel Hill was established in 1946. It is consistently ranked among the top ten planning programs in the U.S. As one of the oldest programs in the country, it is widely respected globally. The original roots of the program were grounded in ideas about regionalism, broad-scale development planning, and the application of social science methods to practical problems of government. This was the first planning department in the country to be established with its principal university base in the social sciences, rather than in landscape design, architecture, or engineering. The department has retained and strengthened that social science legacy through its faculty's multidisciplinary research and teaching programs.

At the start of the program, planning was defined as 'the union of modern social science, design, and engineering. It utilizes social science techniques to analyze the adjustments between people and their physical environment, and adjustments among people in their efforts to meet human needs. Through the planning process, ways and means of meeting these needs are developed through social organization and the application of design and engineering techniques.'

Today, the department has broadened its scope to include urban, state, and community planning and to cover physical, social, economic, and natural environmental concerns. The implementation and management aspects of planning—carrying out public policy through programs, projects, budgeting and finance, regulatory controls, and other actions—are also emphasized.

Whether the objectives are improved physical, social, economic, or environmental conditions or more efficient and equitable policies and programs, planning is a way to effectively marshal resources to create more livable communities for all segments of the population. The professional planner combines an understanding of urban and regional theory grounded in a spatial context with a grasp of the planning and management methods necessary to guide decision-making toward desired goals. These skills have taken on added importance with the emergence of expanded state and local responsibilities and increased public-private development ventures.

Graduates of the program apply their professional knowledge in a variety of organizations and settings. To be an effective professional in these varying contexts requires a continuously updated knowledge base; therefore, the practitioner must be supported by active researchers. Thus, the overall mission of the department is twofold: to educate practitioners and researchers who will become tomorrow's leaders in planning and to expand the frontiers of knowledge about the effects of public and private actions on development processes through faculty research and service.

The state of North Carolina, the Research Triangle region, and the community of Chapel Hill are ideally suited to serve as the home base of a nationally ranked program in city and regional planning. The UNC–Chapel Hill campus is 30 miles west of Raleigh, the state capital, and the location of many agencies of state government. Through research projects, internships, and workshop courses, faculty and students interact with agencies such as Commerce, Community Development, Labor, Environment and Natural Resources, Transportation, and the North Carolina Housing Finance Agency.

The 5,600-acre Research Triangle Park (RTP), which boasts more than 40 large research facilities employing more than 30,000 people, is only 10 miles from campus. RTP, which symbolizes the style of high-tech economic development that emerged in many growing regions in the United States in the late 20th century, continues to be one of the primary engines driving the area's growth. Downtown Raleigh and Durham have faced a resurgence of economic and real estate development in the last two decades. Firms are now moving downtown to enjoy the cultural, food, and environmental amenities that these cities provide. The Raleigh/Durham metropolitan area, of which RTP and the cities of Chapel Hill, Durham, and Raleigh are part, has been identified as one of 30 metropolitan areas in the country that accounted for half of the new jobs in the nation. North Carolina, the nation's ninth most populous state, is growing by about 1.5 percent a year. The Research Triangle area is growing three times as fast. The future urbanization patterns of other areas are evident in the Research Triangle area.

## Facilities and Equipment

The Department of City and Regional Planning is housed in New East, which contains a computer laboratory, lecture and seminar rooms, and offices. Additional computer facilities and geographic information systems resources are available to students through the Odum Institute for Research in Social Science and throughout the campus in the UNC–Chapel Hill computing laboratories.

## Graduates of the Department

During the past 60 years, students have entered the department from all parts of the United States and the world. The educational backgrounds of alumni who now hold positions of responsibility in the profession cover a wide range of undergraduate fields. Among them are architecture, biology, botany, business, economics, engineering, forestry, geography, history, landscape architecture, philosophy, political science, public policy analysis, psychology, public administration, sociology, and urban studies.

Graduates hold positions as directors of planning in the planning departments of small and large cities and as directors of state and regional planning programs. Graduates work as associate and assistant planners in city, county, metropolitan, and regional planning agencies; in housing and urban development agencies; in various branches of the federal service; in community-based organizations and associations; in research organizations; and in private development firms and banks. Finally, graduates are also employed as private consultants; as planning

advisors to communities and developing areas; and as deans, chairs, and faculty members of educational institutions.

## The Planning Profession and Employment Opportunities

During the past 30 years the field of planning has expanded considerably. The planning function remains a central part of municipal, county, and state government. Planning agencies operate within the framework of metropolitan, regional, and national governmental programs. Planning expertise is now essential in nonprofit and community-based development organizations, consulting firms, advocacy groups, and other private organizations.

This period of increasing planning activity has broadened the scope of planning. In addition to design, research, and analysis, present-day planning functions include program management and implementation activities within public agencies and private organizations, as well as coordination between government and business. Planners are increasingly called upon to lead analysis teams, to mediate conflicts, to advise decision makers of project impacts, and to package development proposals.

Employment opportunities in planning are varied. In general, the work involves collection and processing of data; physical, environmental, and socioeconomic analysis; the preparation and evaluation of alternative proposals; and the formulation and implementation of programs for action.

As a consequence of the growth of planning activities throughout the world, adequately trained and qualified members of the profession are in demand in this country and abroad.

Equally important to the advancement of the field is the increasing need for advancing theory and knowledge in urban and regional development and for motivated teachers of planning. There has been a steadily increasing demand for teachers and researchers among universities and research organizations in the United States, Canada, and overseas.

Together with the faculty, hundreds of the department's 1,800 alumni in all parts of the country form an effective job referral and placement network for new and old graduates alike. Large numbers of our graduates in such key metropolitan centers as Boston, New York, the District of Columbia, Atlanta, Miami, Chicago, and on the West Coast provide invaluable assistance to students in their initial job searches and throughout their professional careers. Alumni keep in touch with the department and each other through the alumni listserv and through social media.

## Application and Admission

Applications for the fall semester must be received by the posted deadlines to be considered for fellowships offered by The Graduate School and to ensure first consideration for departmental fellowships, assistantships, and other financial aid. Applicants are notified of admission sometime in February. Financial aid decisions are made by mid-March, and the admissions process is fully completed by early May.

Forms and instructions for application are available online at the department's Web site (<http://planning.unc.edu/admissions/>) and at The Graduate School's Web site (<http://gradschool.unc.edu/admissions/>). Each applicant is required to pay a nonrefundable fee when submitting an application.

Applicants are advised to apply for admission as early as possible. Open-house weekend, hosted by the department each March, provides admitted applicants an opportunity to learn about the department and discuss their professional interests with faculty and enrolled students. For more admissions information, see the department's admissions Web site (<http://planning.unc.edu/admissions/>).

## Admission Requirements

All prospective students must hold a bachelor's degree from an accredited college or university. The educational backgrounds of applicants cover a variety of academic fields, work experiences, ethnic backgrounds, and geographic locations.

Applicants are required to take the Graduate Record Examination (GRE). The GRE should be taken as early as possible. It is administered in conveniently located centers throughout the United States and in many other countries. Appointments are scheduled on a first-come, first-served basis. Students should register early to get their preferred test date and to receive test preparation material in time to prepare for the test. Applicants may register by phone, mail, or fax. Information on the GRE is available from the admission offices of most colleges and universities, or by writing to Graduate Record Examinations, CN 6000, Princeton, NJ 08541-6000, or from the GRE Web site (<http://www.ets.org>). GRE scores are recognized as contributory, not determinative, evidence of the applicant's qualifications.

## Admission Decisions

The Graduate School makes admissions decisions on the basis of recommendations submitted by the department. In making admissions recommendations, a student/faculty committee reviews all applicants in terms of established department policy. The department considers all credentials submitted as part of the application. No single factor is regarded as qualifying or disqualifying. Factors considered in the review of all applications include the grades and academic transcript, GRE scores, references, strength of courses, undergraduate institution, professional work experience, and statement of interest. The statement of interest should demonstrate understanding of and commitment to the planning field. The student's overall academic record should be strong.

The department has a strong commitment to increasing diversity and providing opportunities for underrepresented minorities to enter the planning profession. We admit students from a variety of academic fields, work experiences, ethnic backgrounds, and geographic locations. Most successful applicants have planning-related work experience.

## Transfer Credit

Students desiring to transfer to UNC-Chapel Hill from another graduate planning program may do so if they meet the admission requirements. Courses submitted for transfer must be reviewed and approved by the UNC-Chapel Hill faculty. The maximum credit that may be transferred from another program is nine semester hours for the master's degree.

Similarly, students wishing to transfer non-planning graduate coursework taken elsewhere may do so up to a maximum of 10 semester credit hours, provided that the courses were not credited to another degree, that a grade of B or greater (or its equivalent) was received, and that the courses are judged by the department to be appropriate to the elective requirements of the student's program at UNC-Chapel Hill. Graduate courses taken as an undergraduate are not transferable.

## Students in Other Departments

Students taking degrees in other departments may be admitted to courses in city and regional planning, provided that they have the necessary prerequisite training and permission of the instructor. Courses are also open to undergraduate students. Priority is given to students minoring in urban studies and planning.

## Degrees Offered

The department offers two degrees: the master of city and regional planning (M.C.R.P.) and the doctor of philosophy (Ph.D.) in planning. The two-year master's degree program prepares students for the professional practice of planning. The Ph.D. program prepares students for careers in research and university teaching in planning. The two graduate degree programs are largely independent.

## The Professional Master's Degree Program

The program leading to the degree of master of city and regional planning prepares the candidate for professional planning practice. The curriculum covers social and institutional problems and provides students with training in planning, public policy research, and management skills.

Satisfactory completion of the degree requires completion of a minimum of 51 credit hours, including an area of specialization and a master's project in that area. The normal course load is 12 to 15 credit hours per semester. Thirty-nine of the required 51 credits must be taken in the Department of City and Regional Planning.

Coursework for the degree is divided into core requirements, area of specialization, and electives. Each student is assisted by a faculty advisor in designing an educational program. The advisor helps select courses appropriate for the student's educational interests and goals.

## General Course Requirements

All master's degree students are expected to meet certain general course requirements. These consist of courses covering planning theory, urban spatial theory, applied microeconomics, analytical methods, law, and a planning workshop. These basic course topics constitute a core of knowledge and skills necessary to completion of the master's degree program.

The planning theory requirement is met by completing PLAN 704. The analytical methods requirement is met by completing PLAN 720. PLAN 714 fulfills the urban spatial theory requirement. The economics requirement is met by completing PLAN 710. All students are required to take a law course. There are many ways to fulfill this requirement. The department offers PLAN 724 (Law for Planners) once a year. Students should consult their advisors and instructors in other programs (e.g., LAW and MBA) to ensure that they can enroll in specific courses. Students enroll in a planning workshop (PLAN 823) during their second year.

## Areas of Specialization

Each student develops an area of specialization in planning in consultation with faculty advisors. The area of specialization identifies the fields of professional practice in which the student expects to develop competence and begin a professional career.

Areas of specialization offered by the department reflect a combination of current practice, employment opportunities, available faculty resources, and longer-term societal needs. As these factors change,

specialization content is adjusted. Specialization offers different blends of technical knowledge, planning and management skills, philosophies about the role of the planner, and theories for understanding relevant problems and contexts.

The department offers four specializations associated with professional planning practice. Sustainable and equitable development are overarching concepts for these specializations. Each emphasizes equity, environmental quality, economic viability, and social participation, and grapples with the interconnections among these dimensions.

- Economic development focuses on planning for functional and sustainable regional economies and issues of income and jobs for central city areas.
- Housing and community development is concerned with the supply of affordable housing, the revitalization of urban neighborhoods, project development, and central city redevelopment.
- Land use and environmental planning addresses growth management at the urban and regional scales, environmental management, and policy analysis with emphasis on water resources.
- Transportation planning provides concepts and tools relevant to transportation policy and planning and in-depth knowledge of the reciprocal relationship between transportation decisions and land development.

It is also possible for master's students in city and regional planning to take additional courses in other University departments. These courses could be part of University-wide programs, such as graduate certificate programs in international development and in geographic information systems, or as part of a program in a given department such as the Department of Public Policy's minor. Taking a real estate or urban design track within the Department of City and Regional Planning is also an option.

Generally, specialization courses account for 15 credit hours. Thus, in the 51-credit-hour program, about two-thirds of the credits fulfill basic requirements or specialization requirements, while the rest are electives chosen by the student in consultation with faculty advisors.

## General Electives

Additional courses are required beyond the general required courses and courses in the area of specialization. General electives may be used to

1. complement and support the area of specialization,
2. specialize in another area of professional planning,
3. develop skills in a discipline (e.g., economics, design, management) or another professional program represented on campus (e.g., public administration, health administration, environmental engineering, or business), or
4. develop general competence for professional practice through courses selected both within the department and from the regular offerings of the University.

Up to 12 credits may be taken outside the department.

## Summary of Course Requirements

Requirement	Total Credits	# of Credits That Must Be Taken in DCRP	# of Credits That May Be Taken Outside of DCRP
Planning Theory	3	3	0
Urban Spatial Structure	3	3	0

Economic Theory	3	3	0
Planning Methods	3	3	0
Law	3	0	3
Problem-solving Workshop	3	3	0
Area of Specialization	15	12-15	0-3
Elective/ Supporting Courses	15	6-9	9-12
Masters Project	3	3	0

## Master's Project

The required master's project constitutes original work involving substantial independent research and analysis of a topic related to planning practice. The requirement may be met by a paper of standard format. The requirement can also be fulfilled with a product in some other form, such as a plan or audiovisual presentation. Ordinarily students submit an individually prepared paper. The student submits the paper topic and outline to the director of the student's focus area. The director approves the topic and assigns a faculty member to serve as major advisor for the project. The student may invite another faculty member to serve as a reader. Both must approve the final project. The project is completed during the final semester in residence and is filed by the department as part of the permanent record of the student's work.

## Dual-Degree Programs

### Program in Law and Planning

Under a dual-degree program sponsored by the School of Law and the Department of City and Regional Planning, students may pursue the J.D. and M.C.R.P. degrees together. Taken concurrently, the two degrees may be obtained in four years rather than the five years ordinarily required. The program seeks to develop professionals capable of dealing with both the legal and planning aspects of urban and regional development and policy. Coursework is designed to prepare students for a variety of professional roles in which knowledge of planning methodology and process, coupled with the analytical skills and professional expertise of the lawyer, are essential. Graduates join private law firms, consulting firms, and public legal and planning staffs.

To enter this program, students must apply separately to the School of Law and to the Department of City and Regional Planning, and must be accepted independently by both. Students entering the program spend their entire first year in either the planning department or the law school, and students must make this choice at the time of admission. The second year is normally spent full time in the program not selected in the first year. After the first two years, the student has an additional 43 semester credits to complete in the law school and 12 semester credits to complete in planning.

To request an admission packet for the law school, please contact

Admissions Office  
School of Law  
Campus Box 3380  
The University of North Carolina at Chapel Hill  
Chapel Hill, N.C. 27599-3380

## Program in Business and Planning

The Kenan–Flagler Business School and the Department of City and Regional Planning offer a dual-degree program leading to the M.B.A. and M.C.R.P. degrees, usually in three years. The program builds management and planning skills that enable graduates to pursue rewarding, flexible, and socially useful careers in the private, nonprofit, or public sectors. Graduates work in real estate and economic development consulting, financial institutions, and entrepreneurial firms. Increasingly, applicants to the business and planning program want to pursue career paths that combine planning and management and seek the flexibility to move between jobs in the public and private sectors.

To enter this program, students must apply separately to both the Department of City and Regional Planning and the Kenan–Flagler Business School, and must be accepted independently by both. Students entering the program spend their entire first year in either the planning department or the business school. The second year is spent full time in the other program. In the third year, students take courses in both business and planning. Sufficient electives can be taken in planning and business so that a curriculum can be tailored to each student's career objectives. Admission to the business school is based on demonstrated potential for responsible leadership, the quality of the student's academic transcripts, and the applicant's score on the Graduate Management Admission Test (GMAT), administered by the Educational Testing Service of Princeton, NJ.

To request an admission packet for the Kenan–Flagler Business School, please contact

Director of M.B.A. Admissions  
The Kenan–Flagler Business School (<http://www.kenan-flagler.unc.edu/>)  
Campus Box 3490, McColl Building  
The University of North Carolina at Chapel Hill  
Chapel Hill, N.C. 27599-3490

## Program in Public Administration and Planning

Planners often gravitate to management positions in local and state government that require knowledge of budgeting, personnel, and government administration and politics. City and county managers grapple with planning and development issues, which constitute a large portion of local government agendas. This dual-degree program prepares professionals who want the flexibility of moving between planning and management positions in government. The Department of City and Regional Planning and the Public Administration program in the School of Government collaborate to enable students to receive both the M.C.R.P. and the M.P.A. degrees in three years and a summer that includes a professional field experience in public administration.

The intent of the combined program is to ensure that students have two complete and complementary, but distinct, areas of training. The M.P.A. requirements ensure adequate training in public management. The M.C.R.P. requirements ensure adequate training in core planning knowledge and skills, and in an area of planning specialization.

Students must obtain admission to both the M.P.A. and M.C.R.P. programs independently. With prior approval from faculty advisors in both programs, students may then count certain courses toward both degrees. The combined program requires a total of 75 semester credit hours. Students are advised to gain approval from faculty advisors for their specific program of courses during the first semester of residence to ensure that they can meet all requirements of both programs within three years.

To request an admission packet for the Master of Public Administration program, please contact

Heather Duhart  
 Director of Student Services and Operations  
 Master of Public Administration Program (<http://www.mpa.unc.edu>)  
 School of Government  
 CB # 3330 Knapp–Sanders Building  
 The University of North Carolina at Chapel Hill  
 Chapel Hill, N.C. 27599-3330  
 Phone: (919) 843-1727  
 E-mail: [duhart@sog.unc.edu](mailto:duhart@sog.unc.edu)

## Program in Public Health and Planning

The intellectual, professional, and historical connections between public health and city planning have assumed new urgency in the 21st century, as the challenges of chronic illness, urban livability, and public safety have come to the fore. The built environment is increasingly seen as an important factor influencing physical activity, which in turn has positive impacts on health promotion and disease prevention. The growth and redevelopment of urban areas impact public health and safety in many ways. The dual degree program between the Department of City and Regional Planning and the Gillings School of Global Public Health (SPH) allows students to connect the public health and urban planning fields through professional training that will encourage greater intersections in professional practice.

To enter these programs, students must apply separately to the Department of City and Regional Planning and the departments in the Gillings School of Global Public Health and must be accepted independently by both. Students entering the program spend their entire first year either in SPH or the Department of City and Regional Planning. The second year is spent full time in the other program. In the third year, students take both public health and planning courses. Students should be able to complete both programs in three years (instead of four years). At the end of the program students are expected to complete master's projects or other capstone requirements for each department that demonstrate mastery of the two fields and an understanding of the interconnections between the fields.

For questions about the dual degree with public health, please contact

Meg Landfried  
 Department of Health Behavior (<http://www.sph.unc.edu/hbhe/>)  
 CB# 7440, Rosenau Hall  
 The University of North Carolina at Chapel Hill  
 Chapel Hill, N.C. 27599-7440  
 Phone: (919) 966-0057  
 E-mail: [landfried@unc.edu](mailto:landfried@unc.edu)

## Program in Landscape Architecture and Planning

The dual-degree program in landscape architecture and planning strengthens the design dimension of the planning curriculum, and creates a venue for working closely with the College of Design at North Carolina State University. The Department of Landscape Architecture offers two graduate program tracks leading to the master of landscape architecture (M.L.A.), both of which emphasize creative problem solving and a long-term commitment to responsible design. The curriculum provides the professional skills needed to deal with the human and natural forces that shape the land. The department is especially concerned with the protection, restoration, enhancement, and regeneration of the natural and cultural environments in urban, rural, and wilderness settings.

To enter this program, students apply to each department separately and must gain admission to both. The amount of time required for the M.L.A. will depend on whether the student is pursuing the First Professional Degree track (82 credits) or Advanced Studies track (42 credits). Usually students will be able to reduce the time needed to attain both the M.C.R.P. and the M.L.A. by about one year by taking coursework in each department that counts toward the other department's degree program.

To request an admission packet for the Department of Landscape Architecture, please contact

Pam Christie-Tabron  
 Department of Landscape Architecture  
 220 Brooks Hall, Box 7701  
 College of Design (<http://ncsudesign.org/content/>)  
 North Carolina State University  
 Raleigh, N.C. 27695-7701  
 Phone: (919) 515-8308  
 E-mail: [pamela\\_christie@ncsu.edu](mailto:pamela_christie@ncsu.edu)

## Research Programs in Urban and Regional Studies

Through the Center for Urban and Regional Studies, the Water Resources Research Institute, the Carolina Population Center, the Institute for the Environment, the Institute for Economic Development, the Highway Safety Research Center, and members of the faculty and graduate students in the Department of City and Regional Planning and in related departments collaborate on research in a range of subject areas concerning planning, human behavior, and the environment.

Established in 1953 and later expanded under a grant from the Ford Foundation, the program of the Center for Urban and Regional Studies is concerned with theoretical and empirical research in urban processes and area development. The center has a permanent staff for planning and administration of its program and for the development of an interdisciplinary research-oriented program of services to local and state governments in North Carolina and elsewhere. The department's faculty use the center to pursue research interests and collaborate with faculty members of other University departments on research projects.

In 1964 the Water Resources Research Institute was established to support research on all aspects of water resources, including the planning, programming, and analysis of urban and regional systems for development and control of quantity and quality of water and related land use. The institute serves as a focal point for faculty and student research and interdisciplinary seminars relating to water resources.

The Carolina Population Center (CPC), established in 1966, provides coordination of the interdisciplinary program in population research and training. The center provides population research services to faculty doing research in the social, behavioral, and health sciences in the United States and abroad. Departmental faculty and students are engaged in international research through the CPC.

The Institute for Economic Development was created in 1971 within the Extension Division of the University to sponsor the Basic Economic Development course. Now under the auspices of the Department of City and Regional Planning, the institute promises to strengthen the department's research and teaching mission and to enlarge its service capacity.

The Institute for the Environment is UNC–Chapel Hill's focal point for interdisciplinary environmental research, educational programs, and service activities for faculty, staff, and students. As such, the institute leverages the collective strength of UNC's environmental expertise to reach beyond campus to develop and implement innovative solutions to the world's environmental and energy challenges. Its mission is

- a. to strengthen environmental research capacity across UNC by supporting a multidisciplinary community of scholars that enhances collaboration, increases sharing of knowledge, and identifies solutions to the world's critical environmental problems.
- b. to work in partnership across UNC and external partners to coordinate and deliver 21st-century educational programs that provide students with the experience and skills to thrive in a growing global economy; and
- c. to put new environmental knowledge into action by engaging and serving communities, here in North Carolina and around the world.

The Highway Safety Research Center (HSRC) is dedicated to improving transportation safety, with a major emphasis on highway safety. The center conducts basic and applied research that increases knowledge and contributes to reducing death, injury, and related societal costs. HSRC works to translate developed knowledge into practical interventions that can be applied at local, state, national, and international levels. HSRC conducts research in the three major areas of the highway safety problem: the driver/occupant, the vehicle, and the roadway. HSRC produces guidebooks, brochures, how-to manuals, news releases, public service announcements, and newsletters to communicate highway safety information to research colleagues, safety advocates, government officials, and motorists.

In addition to these activities organized under an institute or center, faculty members are engaged in research projects administered by the department.

Several other facilities in the nearby Research Triangle Park enrich and support the department's teaching and research programs:

The Research Triangle Institute (RTI) is a not-for-profit corporation that conducts research under contract to departments of federal, state, and local governments; public service agencies; foundations; and industry clients ranging from local firms to national corporations. RTI was created as a separately operated affiliate of the three major universities that form the Research Triangle. Initial start-up funding for RTI was provided through a grant from the Research Triangle Foundation. The institute is organized into major groups whose areas of capability span social and economic systems and human resources, statistical sciences, survey research, chemistry and life sciences, energy, engineering, and environmental sciences.

The Environmental Research Center of the U.S. Environmental Protection Agency (EPA), the largest field installation of the EPA, was dedicated in December 1971. Today it is an international center of scientific expertise in environmental research.

The Triangle Universities Center for Advanced Studies, Incorporated (TUCASI) represents an additional effort in the Research Triangle to capitalize on the presence in a small radius of three major doctoral research institutions, their facilities, libraries, and auxiliary resources. TUCASI is a joint activity of the University of North Carolina at Chapel Hill, Duke University in Durham, and North Carolina State University in Raleigh. TUCASI is the parent body that sponsors development of

advanced study enterprises on its 120-acre campus within the Research Triangle Park. The center, chartered in 1975, is governed by a board of trustees, representing the constituent universities, the Research Triangle Foundation, and elected members.

The National Humanities Center (NHC) was the first resident activity on the TUCASI campus. The center opened in 1978 as an institute for advanced study in history, literature, philosophy, and other fields of the humanities. Each year, approximately 45 leading scholars from the United States and other nations come to the NHC to pursue individual research and engage in interdisciplinary seminars, lectures, and conferences. Their work results in books, articles, and other contributions to learning. Grants from major foundations, corporations, the National Endowment for the Humanities, the major universities in the Triangle, and individuals support the center's program funding and administrative costs.

The UNC Institute for Transportation Research and Education (ITRE) is part of North Carolina State University. Its responsibilities include facilitation of transportation-related programs throughout the 17 UNC system campuses. Included among ITRE's activities are workshops, short courses, research projects, and training programs for transportation professionals throughout North Carolina.

## The Doctoral Program

The doctoral program in planning provides training in research methods, planning theory, and areas of specialization that enable graduates to contribute to the development of substantive theory, knowledge, and scholarship in planning; to formulate and evaluate innovative public policy; and to administer research programs in domestic and international contexts. The program is small but highly selective and individualized. It is ideal for mature students from a variety of backgrounds.

The Ph.D. degree requires a minimum of 36 credits. A master's degree in planning is not required, although most doctoral students have previous graduate work or work experience in planning or a related field. Students must fulfill four semesters of residence. The department accepts graduate transfer credits but requires three Ph.D. seminars and an advanced planning theory course. The department does not require a foreign language. It strongly encourages both research and teaching experience during residency.

In practice, doctoral candidates who hold master's degrees in planning or a related field generally require four semesters of formal course work in residence before beginning the dissertation. Other candidates may require five or more semesters, depending on their preparation. Preparation of a dissertation proposal and subsequent research each take an additional year.

Each student develops an individualized course of study to reflect a specific area of interest and career aspirations. Areas of specialization and appropriate course work are determined jointly by the student, program advisor and the student's program committee. Programs are designed to meet the student's needs and build on prior academic training, for which substantial departmental or university faculty resources are available. Courses in the area of specialization must be mutually reinforcing and coherent; must prepare the student for expertise in some body of knowledge, methodology, or problem area; and must provide the student with the appropriate research methods, research design and knowledge base to do scholarly research. The comprehensive exams, taken at the end of coursework, require knowledge of planning

theory, research design, research methods and the student's specific area of specialization.

A student may take a formal minor in another discipline with the consultation and approval of the appropriate department and the student's program committee. The minor emphasizes the achievement of methodological and related skills necessary to extend the student's research capabilities within a chosen area of specialization. Supportive complementary relationships between the two program components must be demonstrated.

It is important that the Ph.D. Admissions Committee be able to identify an applicant's program interests from application materials submitted for review to The Graduate School and to the department. In addition to any supplemental material the applicant may wish to submit in support of the application, the statement called for in the department's supplemental application should describe the proposed area of concentration and specific program coursework and research interests, and provide information on relevant prior academic and professional training. The admissions process consists of two related phases. First, the Admissions Committee renders a judgment about the academic qualifications of the Ph.D. applicant. Second, if academic qualifications are met, the committee attempts to identify the applicant's program interests and the stage of development of those interests, and then considers the extent to which departmental and university resources may be marshaled in support of those stated interests. Thus, academic qualifications are necessary but are not the only basis for admission into the doctoral program. The applicant's interests must be clear and university resources must be supportive to ensure the development of a strong Ph.D. program.

Persons wishing to be considered for admission to the doctoral program and for fellowships and assistantships that may be available to doctoral candidates are advised to communicate with the department (potential advisor and Ph.D. program director) to discuss program requirements and interests prior to making formal application to admission. While the university's financial awards are made in the spring semester each year, the deadline for applications for certain fellowships available to Ph.D. candidates is in December of the year preceding the August in which the applicant plans to begin the doctoral program. Applicants benefit by a visit to the department.

## Professors

**Todd BenDor**, Land Use and Environmental Planning and Policy, Spatial Analysis

**Nichola Lowe**, Economic Development, Labor Markets, Institutions

**Emil E. Malizia**, Real Estate Development, Economic Development and Finance

**Noreen McDonald**, Transportation Planning

**Roberto G. Quercia**, Housing Finance, Housing Policy

**William M. Rohe**, Social Behavioral Aspects of Urban Development, Neighborhood Planning and Development

**Yan Song**, Geographic Information Systems, Urban Spatial Analysis, Land Use and Site Planning

**Dale Whittington** (joint appointment with the Gillings School of Global Public Health), Environmental Planning, Public Investment Theory, International Planning

## Associate Professors

**Nikhil Kaza**, Land Use and Environmental Planning and Policy, Energy and Environment, Planning Theory

**William Lester**, Economic Development, Urban Spatial Structure

**Mai Nguyen**, Housing and Community Development

**Meenu Tewari**, Microeconomics, International Planning

## Assistant Professors

**Miyuki Hino**, Land Use and Environmental Planning

**Noah Kittner**, Land Use and Environmental Planning

**Danielle Spurlock**, Land Use and Environmental Planning, Public Health, Social Justice, and Dispute Resolution

**Alainna Thomas**, Transportation Planning

**Andrew Whittemore**, Land Use and Urban Design

## Adjunct Professors

**Michele Berger**, Women's and Gender Studies

**Maryann P. Feldman**, Public Policy, Innovation, Entrepreneurship, and Economic Growth

**Jessie White**, School of Government

## Associated Faculty

**David J. Hartzell**, Real Estate Finance

**Judith W. Wegner**, Land Use and Local Government Law

## Professors Emeriti

**Richard N.L. Andrews**

**Raymond J. Burby**

**F. Stuart Chapin Jr.**

**David R. Godschalk**

**Edward J. Kaiser**

Please visit the department's Web site for a current listing (<http://planning.unc.edu/academics/>) of graduate and undergraduate courses offered.

## PLAN

### Advanced Undergraduate and Graduate-level Courses

**PLAN 420. Community Design and Green Architecture. 3 Credits.**

The impact of building on the environment and health will be examined by looking at the major areas of: land use planning, water resource use, energy, materials and indoor environment.

**Grading status:** Letter grade

**Same as:** ENEC 420.

**PLAN 428. Global Cities: Space, Power, and Identity in the Built Environment. 3 Credits.**

This course addresses questions of power, politics, and identity in the urban environment, with a focus on the emergence of key selected global cities and the processes that both created them historically and which are currently transforming them locally and globally.

**Repeat rules:** May be repeated for credit. 6 total credits. 2 total completions.

**Grading status:** Letter grade

**Same as:** GEOG 428.

**PLAN 491. Introduction to GIS. 3 Credits.**

Stresses the spatial analysis and modeling capabilities of organizing data within a geographic information system. (GISci)

**Requisites:** Prerequisite, GEOG 370; permission of the instructor for students lacking the prerequisite.

**Grading status:** Letter grade

**Same as:** GEOG 491.

**PLAN 526. Principles of Public Finance for Public Policy and Planning. 1.5 Credit.**

Provides the foundation of state and local government finance necessary to understand new developments in the provision of infrastructure for economic development.

**Grading status:** Letter grade.

**PLAN 547. Energy, Transportation, and Land Use. 3 Credits.**

This course explores the reciprocal connections between energy (production/conversion, distribution, and use), land use, environment, and transportation. Evaluation of federal, state, and local policies on energy conservation and alternative energy sources are emphasized. Students gain skills to analyze impacts, interdependencies, and uncertainties of various energy conservation measures and production technologies.

**Grading status:** Letter grade

**Same as:** ENEC 547.

**PLAN 550. Evolution of the American City. 3 Credits.**

Examines shaping the urban built environments of the United States from the colonial era to present day. Critically examines forces that shaped our cities, and studies the values, ideals, and motivations underlying efforts to plan and direct physical development of American cities.

**Gen Ed:** SS.

**Grading status:** Letter grade.

**PLAN 574. Political Economy of Poverty and Inequality. 3 Credits.**

Introduces students to the political economy of poverty alleviation programs. Uses comparative cases to explore what types of projects, tasks, and environments lead to effective and equitable outcomes, and why.

**Grading status:** Letter grade.

**PLAN 585. American Environmental Policy. 3 Credits.**

Intensive introduction to environmental management and policy, including environmental and health risks; policy institutions, processes, and instruments; policy analysis; and major elements of American environmental policy. Lectures and case studies. Three lecture hours per week.

**Gen Ed:** HS, NA.

**Grading status:** Letter grade

**Same as:** ENVR 585, ENEC 585, PLCY 585.

**PLAN 590. Special Topics Seminar. 1-9 Credits.**

Original research, fieldwork, readings, or discussion of selected planning issues under guidance of a member of the faculty.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics; 9 total credits. 3 total completions.

**Grading status:** Letter grade.

**PLAN 591. Applied Issues in Geographic Information Systems. 3 Credits.**

Applied issues in the use of geographic information systems in terrain analysis, medical geography, biophysical analysis, and population geography.

**Requisites:** Prerequisite, GEOG 370 or 491.

**Grading status:** Letter grade.

**PLAN 596. Independent Study. 1-9 Credits.**

This course permits full-time undergraduate students enrolled in the Department of City and Regional Planning who wish to pursue independent research or an independent project to do so under the direction of a member of the department faculty.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics; 9 total credits. 3 total completions.

**Grading status:** Letter grade.

**PLAN 636. Urban Transportation Planning. 3 Credits.**

Fundamental characteristics of the urban transportation system as a component of urban structure. Methodologies for the analysis of transportation problems, planning urban transportation, and the evaluation of plans.

**Grading status:** Letter grade.

**PLAN 637. Public Transportation. 3 Credits.**

Alternative public urban transportation systems including mass transit, innovative transit services, and paratransit, examined from economic, land use, social, technical, and policy perspectives.

**Grading status:** Letter grade.

**PLAN 638. Pedestrian and Bike Transportation. 3 Credits.**

This graduate-level course examines the importance of multimodal transportation planning and provides a comprehensive overview of best planning practices to support increased walking and bicycling.

**Grading status:** Letter grade.

**PLAN 639. Complete, Safe, Equitable Streets. 3 Credits.**

This course will interrogate the role of streets in communities paying particular attention to how streets contribute to mobility, accessibility, economic vibrancy, social cohesion, and safety from crime and traffic danger. We will consider how different people are affected by streets and transport policy.

**Grading status:** Letter grade.

**PLAN 641. Watershed Planning. 3 Credits.**

This course explores the functions of ecosystems, land development activities that impact such functions, and the land use management tools to create strategies for mitigating and restoring environmental damage. Course goals include understanding the ecological context of planning and how ecological principles may inform planning decisions. Prepares planners to engage effectively with biologists, natural resource managers, park managers, and other professionals from the natural sciences.

**Grading status:** Letter grade

**Same as:** ENEC 641.

**PLAN 651. Urban Form and the Design of Cities. 3 Credits.**

Lecture course on comparative urbanism and the global evolution of the city form. Examines values and ideals embedded in urban landscapes, seeking to understand how social, economic, and political forces have influenced the development of cities through history.

**Grading status:** Letter grade.

**PLAN 652. Site Planning and Urban Design. 3 Credits.**

This course examines site planning as a means of addressing concerns related to urban development including hydrology, vegetation, land use, urban form, access, regulation, and community priorities. Students conduct an analysis of a site and propose a plan for a hypothetical mixed-use development. Students learn the basics of the 3D modeling software, SketchUp.

**Grading status:** Letter grade.

**PLAN 662. Gender Issues in Planning and Development. 3 Credits.**

Permission of the instructor required for undergraduates. Examination of the environmental and health risks, policy institutions, processes, instruments, policy analysis, and major elements of American environmental policy. Lectures and case studies.

**Grading status:** Letter grade

**Same as:** WGST 662.



**PLAN 663. Diversity and Inequality in Cities. 3 Credits.**

Permission of instructor needed for undergraduates. Introduces students in planning to issues related to diversity and inequality. Different aspects of diversity (e.g., gender, class, race, ethnicity, sexuality, nationality/citizenship) will be explored. Examines the relationship between diversity and the unequal distribution of resources and life trajectories.

**Gen Ed:** SS.

**Grading status:** Letter grade.

**PLAN 672. Urban Data Analytics. 3 Credits.**

This is a survey course about different techniques used in assembling, managing, analyzing, and predicting using heterogeneous data sets in urban environments. These include point, polygon, raster, vector, text, image, and network data; data sets with high cadence and high spatial resolution; and data sets that are inherently messy and incomplete. The emphasis is on practical urban analytics.

**Grading status:** Letter grade.

**PLAN 673. Seminar on The Ethics and Politics of New Urban Analytics. 3 Credits.**

While there is no consistent definition of what smart cities are, urban spaces blanketed with ubiquitous and heterogeneous sensor networks that are constantly monitoring the vitality of the city are becoming common place. Such continuous surveillance raises deep political and ethical questions as well as questions about institutional reconfiguration. We will examine urban analytics platforms and interrogate them from a variety of lenses, including privacy, equity, and probity.

**Grading status:** Letter grade.

**PLAN 685. Water and Sanitation Planning and Policy in Less Developed Countries. 3 Credits.**

Permission of the instructor. Seminar on policy and planning approaches for providing improved community water and sanitation services in developed countries. Topics include the choice of appropriate technology and level of service, pricing, metering, and connection charges; cost recovery and targeting subsidies to the poor; water venting; community participation in the management and operation of water systems; and rent-seeking behavior in the provision of water supplies.

**Grading status:** Letter grade

**Same as:** ENVR 685.

**PLAN 686. Policy Instruments for Environmental Management. 3 Credits.**

Design of public policy instruments as incentives for sustainable management of environmental resources and ecosystems, and comparison of the effects and effectiveness of alternative policies.

**Requisites:** Prerequisite, ECON 410 or PLAN 710.

**Gen Ed:** SS.

**Grading status:** Letter grade

**Same as:** PLCY 686, ENEC 686, ENVR 686.

**PLAN 687. International Development and Social Change. 3 Credits.**

Permission of the instructor. Course explores effect of the global economy on national and community development, effect of environmental degradation processes on development, and strategies to guide social change.

**Grading status:** Letter grade.

**PLAN 691H. Honors Seminar in Urban and Regional Studies. 3 Credits.**

Permission of the instructor. An overview of the subject matter and methods of investigation for the study of cities and regions. Presentations of original papers prepared by students.

**Gen Ed:** EE- Mentored Research.

**Grading status:** Letter grade.

**Graduate-level Courses****PLAN 701. Research Methods. 1-6 Credits.**

Course combines material learned in other courses (theory/philosophy, methods, and their substantive area of interest). Familiarizes students with the skills necessary to conduct research and critically review and understand evaluation reports.

**Grading status:** Letter grade.

**PLAN 704. Theory of Planning I. 3 Credits.**

The logic of planning as a professional activity. Critical overview of current process theories leading students to develop a personal philosophy applicable to their work as planners.

**Grading status:** Letter grade.

**PLAN 710. Microeconomics for Planning and Public Policy Analysis. 3 Credits.**

Introduction to principles of demand and supply, elasticity, marginal utility opportunity cost, pricing, production decisions, and profit maximization, cost-benefit analysis, financial appraisal, role of government, and market instruments for environmental protection.

**Grading status:** Letter grade.

**PLAN 714. Urban Spatial Structure. 3 Credits.**

Theories and empirical evidence of the contemporary spatial development of metropolitan areas. Industrial, residential, and commercial location; neighborhood change; the role of technological change and public policies; and normative perspectives.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics.

**Grading status:** Letter grade.

**PLAN 720. Planning Methods. 3 Credits.**

Permission of the instructor for undergraduates. Accessing information from conventional and electronic sources, spatial data acquisition, analysis and mapping. Inferential statistics through multiple regression. Microcomputer laboratory.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics.

**Grading status:** Letter grade.

**PLAN 721. Advanced Planning Methods. 1.5 Credit.**

Permission of the instructor for undergraduates. More in-depth treatment of topics covered in PLAN 720. Particular emphasis on techniques of multiple regression analysis, forecasting, categorical data analysis, and spatial data analysis.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics.

**Grading status:** Letter grade.

**PLAN 722. Systems Thinking and Modeling for Planners. 1.5 Credit.**

This course will introduce systems thinking and system dynamics computer simulation modeling, a computer-aided approach to policy analysis and design. The goal of this course is to enhance knowledge and skills in understanding and analyzing the complex feedback dynamics in social, economic, and environmental problems.

**Grading status:** Letter grade.

**PLAN 724. Introduction to Law for Planners. 3 Credits.**

Governmental institutions, real property, constitutional law, land use law, and environmental law.

**Grading status:** Letter grade.

**PLAN 725. Development Dispute Resolution. 3 Credits.**

Contemporary methods of resolving development disputes through negotiation, bargaining, and mediation. Techniques and skills applicable to solving controversies over planning and implementation of public and private development projects.

**Grading status:** Letter grade.

**PLAN 730. Data Collection Methods. 3 Credits.**

Reviews alternative data collection techniques used in surveys, concentrating on the impact these techniques have on the quality of survey data. Topics covered include errors associated with nonresponse, interviewing, and data processing.

**Grading status:** Letter grade

**Same as:** SOCI 760, POLI 860.

**PLAN 731. Questionnaire Design. 3 Credits.**

Examines the stages of questionnaire design including developmental interviewing, question writing, question evaluation, pretesting, questionnaire ordering, and formatting. Reviews the literature on questionnaire construction. Provides hands-on experience in developing questionnaires.

**Grading status:** Letter grade

**Same as:** SOCI 761, POLI 861.

**PLAN 735. Community Revitalization Applied. 3 Credits.**

Students apply their skills in business, planning, or public administration to actual community revitalization projects in North Carolina communities. Projects require an understanding of community development methods, the real estate development process, and public-private partnerships. Students will manage client relationships and learn how their skills contribute to solving community challenges.

**Repeat rules:** May be repeated for credit. 3 total credits. 1 total completions.

**Grading status:** Letter grade

**Same as:** PUBA 735.

**PLAN 738. Transportation Policy and Planning. 3 Credits.**

Examination of active transportation planning and policy questions: land use relationships, modal comparisons, environmental quality, transportation demand management, paratransit planning, the transportation needs of special populations, and international comparisons.

**Requisites:** Prerequisite, PLAN 636; permission of the instructor for students lacking the prerequisite.

**Grading status:** Letter grade.

**PLAN 739. Transportation Planning Models. 3 Credits.**

Permission of the instructor for undergraduates. The transportation planning process; data collection, trip generation, modal choice, trip distribution and assignment. Social, economic, and environmental impacts of transportation. Innovative modeling techniques.

**Grading status:** Letter grade.

**PLAN 740. Land Use and Environmental Policy. 3 Credits.**

History, institutional setting, rationale of state and local land use, and environmental policies. Program and policy frameworks, political and market processes, resource utilization concepts, and contemporary development and resource management.

**Grading status:** Letter grade.

**PLAN 741. Land Use and Environmental Planning. 3 Credits.**

Methods of land use planmaking. Use of GIS and spreadsheets to analyze land suitability and spatial needs. Preparation of land classification plans, land use design plans, and development management programs.

**Grading status:** Letter grade.

**PLAN 744. Development and Environmental Management. 3 Credits.**

Coordination of public powers and private actions to implement development plans and conserve environmental resources. Regulatory, public investment, incentive, and policy instruments used in land use and environmental guidance systems.

**Grading status:** Letter grade.

**PLAN 745. Development Impact Assessment. 3 Credits.**

Methods for data management and predictive analysis of the environmental, transportation, and other infrastructure; fiscal and social impacts of land development projects. Impact mitigation measures are also examined.

**Grading status:** Letter grade.

**PLAN 747. Coastal Management Policy. 3 Credits.**

Analysis of national and state coastal management laws, policies, and programs. Private sector, interest group, government agency, and public roles in coastal resource allocation. Influence of science, values, and politics.

**Grading status:** Letter grade.

**PLAN 752. Project and Site Planning. 3 Credits.**

Techniques of site analysis, project programming, and arrangement of structures on the land. Workshop covering design and review of urban development projects within limitations of regulatory standards and market criteria.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics.

**Grading status:** Letter grade.

**PLAN 754. Natural Hazards Resilience Speaker Series. 1 Credit.**

Invited practitioners and scholars will discuss a range of pertinent topics, including research findings and experience in practice tied to disaster management and climate change adaptation. Speakers will include a range of officials, scholars, private sector representatives, media members, politicians, advocates, community leaders, and members of various professional associations.

**Grading status:** Letter grade.

**PLAN 755. Planning for Natural Hazards and Climate Change Adaptation. 3 Credits.**

Introduction to natural hazards risk management planning, including climate change-induced hazards. Areas of study include planning and its application to hazard mitigation and disaster recovery. Emphasis is placed on the connectivity between planning for natural hazards and disasters, climate change adaptation, sustainability, and disaster resilience.

**Grading status:** Letter grade.

**PLAN 756. Survey of Natural Hazards and Disasters. 3 Credits.**

Introductory level study of natural hazards and disasters, with an emphasis on the characteristics of natural hazards and how their effects on human settlements. Topics include meteorology, geology, hydrology, engineering and building performance, policy making, planning, and sociology, among other disciplines. Case study based.

**Grading status:** Letter grade.

**PLAN 757. Planning for Historical Preservation. 3 Credits.**

Concepts, processes, and policies for historic preservation; its role in the community planning and development process.

**Grading status:** Letter grade.

**PLAN 760. Real Estate Investment and Affordable Housing. 3 Credits.**

Fundamentals and techniques of real estate investment analysis, including cases and computer modeling; applications of the public interest in private investment decisions; tax and other public policies influencing real estate investments; and affordable housing.

**Grading status:** Letter grade.

**PLAN 761. Housing and Public Policy. 3 Credits.**

A theory-based course in housing and market dynamics; the justification for government intervention and the operations of the mortgage market and construction industry. Students develop skills for housing market and policy analysis.

**Grading status:** Letter grade.

**PLAN 762. Central City Revitalization. 3 Credits.**

Analyzes central cities over past twenty years and factors affecting their growth or decline. Analyzes how economic, social, physical conditions of central cities can be improved through large-scale urban-planning efforts.

**Grading status:** Letter grade.

**PLAN 763. Urban Neighborhood Revitalization. 3 Credits.**

Social, political, and economic theory of local communities. Models of neighborhood change. Neighborhood revitalization: theoretical aspects; federal, state, and local programs; role of nonprofit organizations; step-by-step process for revitalizing an area.

**Grading status:** Letter grade.

**PLAN 764. Community Development & Revitalization Techniques. 3 Credits.**

Community revitalization requires mastery of community development methods, the real estate development process, and public-private partnerships. Techniques include demographic trend analysis, stakeholder identification, government entitlement review, area and parcel analysis, market research, and pro forma financial analysis.

**Grading status:** Letter grade

**Same as:** PUBA 734.

**PLAN 765. Real Estate Development. 3 Credits.**

The dynamics of real property development from the developer's perspective covering market research, government relations, site planning, financing, investment analysis, construction and project management, and marketing.

**Grading status:** Letter grade.

**PLAN 766. Housing Law. 3 Credits.****PLAN 767. Diversity and Inequalities in Cities. 3 Credits.**

Introduces students in planning to issues related to diversity and inequality. Different aspects of diversity (e.g., gender, class, race, ethnicity, sexuality, nationality/citizenship) will be explored. Examines the relationship between diversity and the unequal distribution of resources and life trajectories.

**Grading status:** Letter grade.

**PLAN 769. Housing & Community Development Planning and Policy. 3 Credits.**

This graduate course will explore issues of housing and community development policy and planning issues at the national, state, and local level in the United States. It will provide an overview of the historic and contemporary housing planning and policy issues that have shaped communities and households.

**Grading status:** Letter grade.

**PLAN 770. Planning Equitable Economies. 3 Credits.**

Introduction to basic theories, concepts, and strategies employed to pursue local and regional economic development. Clarifies similarities and distinctions with related planning perspectives including community development, investigates the economic logic behind various development initiatives, and reviews basic principles for critically examining alternative policies and programs.

**Grading status:** Letter grade.

**PLAN 771. Development Planning Techniques. 3 Credits.**

Intermediate and advanced techniques for analyzing the development of local and regional economies. Social accounts, indicator construction, regional input-output models, economic and fiscal impact analysis, labor market analysis, and regional economic forecasting techniques.

**Grading status:** Letter grade.

**PLAN 773. Economic Development Seminar. 3 Credits.**

Fundamental concepts and theories applied to local economic development including growth, trade, product-cycle, flexible specialization, and entrepreneurship theories. Urban and regional economic development issues addressed in the North American, South American, European, or South Asian contexts.

**Grading status:** Letter grade.

**PLAN 774. Planning for Jobs. 3 Credits.**

This graduate seminar examines the policy and planning implications of changing labor market conditions and their impact on U.S. workers, especially the working poor.

**Grading status:** Letter grade.

**PLAN 776. Development Finance. 3 Credits.**

Community development financial institutions and loan funds for local asset building and wealth creation. Investment analysis to structure and finance local projects. Real estate and business development cases.

**Grading status:** Letter grade.

**PLAN 781. Water Resources Planning and Policy Analysis. 3 Credits.**

Water resources planning and management. Federal and state water resources policies. Analytical skills to identify environmental problems associated with urban water resources development.

**Grading status:** Letter grade

**Same as:** ENVR 781.

**PLAN 785. Public Investment Theory. 3 Credits.**

Basic theory, process, and techniques of public investment planning and decision making, involving synthesis of economic, political, and technologic aspects. Theory underlying benefit-cost analysis, adaptation to a descriptive and normative model for planning public projects and programs.

**Requisites:** Prerequisite, PLAN 710.

**Grading status:** Letter grade

**Same as:** ENVR 785.

**PLAN 786. Environmental Quality Management. 3 Credits.**

Planning and analysis of regional environmental system with a focus on management of mass flows that affect the quality of the regional environment.

**Grading status:** Letter grade

**Same as:** ENVR 786.

**PLAN 787. Applied Environmental Finance: How to Pay for Environmental Services. 3 Credits.**

How can governments, communities, organizations, and businesses fund environmental services? This applied course reviews the diverse tools and strategies that environmental service providers use to pay for programs. The course will focus on environmental services related to: drinking Water, wastewater, storm-water, watershed protection, energy efficiency, renewable energy, sustainability, and wetlands.

**Grading status:** Letter grade

**Same as:** PUBA 787, ENVR 787.

**PLAN 788. Advanced Economic Analysis for Public Policy I. 3 Credits.**

This course introduces microeconomic theory using multivariate calculus and constrained optimization. Topics covered include consumer theory, producer theory, market equilibrium, taxes, and market power. Applied public policy examples are incorporated.

**Grading status:** Letter grade

**Same as:** PLCY 788.

**PLAN 789. Advanced Economic Analysis for Public Policy II. 3 Credits.**

This course provides further applications of economic theory to public policy including risk and uncertainty, information economics, general equilibrium and welfare policy, externalities, public goods and taxation, and game theory.

**Requisites:** Prerequisite, PLCY 788.

**Grading status:** Letter grade

**Same as:** PLCY 789.

**PLAN 793. Planning Seminar. 1-15 Credits.**

Original research, fieldwork, readings, or discussion of selected planning issues under guidance of a member of the faculty.

**Repeat rules:** May be repeated for credit. 15 total credits. 15 total completions.

**Grading status:** Letter grade.

**PLAN 800. Research Design. 3 Credits.**

This course provides an introduction to research design methods for planning and applied policy research. The design of a research endeavor is arguably the most important part of the investigation, together with what data is collected, how it is collected, and how the data are analyzed.

**Grading status:** Letter grade.

**PLAN 801. Design of Policy-Oriented Research. 3 Credits.**

Logic of designing research for the analysis of planning problems and the formulation of public policies. Elements of research design, case study, survey research, quasi-experimental designs, and the social experiment are covered.

**Grading status:** Letter grade

**Same as:** PLCY 801.

**PLAN 802. Advanced Seminar in Research Design: Data, Methods, and Evaluation. 3 Credits.**

Three main objectives: to deepen students' understanding of important issues and topics in the design of empirical research, to further develop students' ability to critically evaluate research designs and policy-related products, and to aid in developing a research paper, dissertation, or other product.

**Grading status:** Letter grade

**Same as:** PLCY 802.

**PLAN 805. Theory of Planning II. 3 Credits.**

Construction of methodologies for evaluating various theories of planning and intensive analysis of the North American planning theory literature. Doctoral-level introduction to the area.

**Grading status:** Letter grade.

**PLAN 823. Planning Workshop. 3 Credits.**

Problem-solving, client-based courses designed to give students experience in applying planning theory and methods to actual problem situations in economic development, housing and community development, real estate, environmental planning, and land use and transportation.

**Repeat rules:** May be repeated for credit.

**Grading status:** Letter grade.

**PLAN 890. Special Topics in Planning and Urbanism. 1-3 Credits.**

Reading, lectures, and discussions to provide opportunities to develop new concepts and courses in various city and regional planning topics.

**Repeat rules:** May be repeated for credit.

**Grading status:** Letter grade.

**PLAN 891. Special Topics in Planning and Urbanism. 3 Credits.**

Reading, lectures, and discussions to provide opportunities to develop new concepts and courses in various city and regional planning topics.

**Grading status:** Letter grade.

**PLAN 896. Independent Study. 1-15 Credits.**

This course permits full-time graduate students enrolled in the Department of City and Regional Planning who wish to pursue independent research or an independent project to do so under the direction of a member of the department faculty.

**Repeat rules:** May be repeated for credit; may be repeated in the same term for different topics.

**Grading status:** Letter grade.

**PLAN 911. Ph.D. Research Seminar. 1-15 Credits.**

Original research, fieldwork, readings, or discussion of selected planning issues under guidance of a member of the faculty.

**Repeat rules:** May be repeated for credit.

**Grading status:** Letter grade.

**PLAN 992. Master's (Non-Thesis). 3 Credits.**

The master's project is original work, involving a substantial degree of independent research and/or analysis. May be a research paper, critical essay, development and evaluation of a program, project, or plan.

**Repeat rules:** May be repeated for credit.

**PLAN 994. Doctoral Research and Dissertation. 3 Credits.**