COMMUNITY AND REGIONAL PLANNING (CRP)

Courses primarily for undergraduates:

CRP 2010: The North American Metropolis
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Examination of the evolution of American urban centers from the colonial era to the present. Considers the demographic changes and social movements underway in urban America and explores how an understanding of the history of cities provides us with knowledge that we can use to improve our cities today. (Typically Offered: Fall, Spring)

CRP 2110: Digital Design Methods for Landscape Architecture
(Cross-listed with LA 2110).
Credits: 3. Contact Hours: Lecture 3.
Foundational knowledge and basic skills in 2D, 3D, and 4D computer applications used for design development and communication, with emphasis on 3D modeling and workflow interoperability. (Typically Offered: Spring)

CRP 2510: Fundamentals of Geographic Information Systems
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Fundamentals of the concepts, models, functions and operations of Geographic Information Systems (GIS). Principals of spatial problems, spatial questions and hypotheses and their solutions based on spatial data, GIS tools and techniques. Integration of concepts and applications through lectures and facilitated labs. Applications from a variety of areas including design; physical, social, and human science; engineering; agriculture; business and medicine, landscape architecture, architecture, urban planning, geology, forestry, biology, and ecology. (Typically Offered: Fall)

CRP 2910: World Cities and Globalization
Credits: 3. Contact Hours: Lecture 3.
World cities and globalization in developed and developing countries. Topics include globalization, world cities and regions, uneven economic development, the international division of labor, multinational corporations, international environmentalism, tourism, popular culture and place-based identity. Meets International Perspectives Requirement. (Typically Offered: Fall, Spring)

CRP 2930: Environmental Planning
(Cross-listed with ENVS 2930).
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Comprehensive overview of the field of environmental relationships and the efforts being made to organize, control, and coordinate environmental, aesthetic, and cultural characteristics of land, air, and water. (Typically Offered: Fall, Spring)

CRP 3010: Urban Analytical Methods
Credits: 4. Contact Hours: Lecture 3, Studio 2.
Prereq: STAT 1010
An introduction to the methods and analytical techniques used by planners to study community change. Course includes identification of key sources of planning information and data. Students learn to use quantitative methods for analysis of population, land use, economic and transportation data. Students learn to apply basic analytic methods to community problems and learn the art of effective written, graphic, and oral presentation of data. (Typically Offered: Spring)

CRP 3020: Plan Analysis and the Development Process
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 3010
Course introduces how to read and understand different types of plans, including land use plans, comprehensive plans, transportation plans, parks and recreation plans, housing plans, neighborhood plans, downtown plans, climate action plans. Students will learn plan analysis, staff report writing, presentations to the public and elected officials, and the development proposal process.

CRP 3200: Urban Geography
Credits: 3. Contact Hours: Lecture 3.
An introduction to urban geography. Study of urban centers, including people and infrastructure. Investigation of the origin and evolution of urban areas and the processes that shape urban change. Topics include urban form, and the social, economic, political, cultural, and institutional factors that shape cities. (Typically Offered: Fall, Spring)

CRP 3250: Introduction to Housing
Credits: 3. Contact Hours: Lecture 3.
Introduction to issues related to the topic of housing in the United States. Particular focus on the social and spatial segmentation of housing in the U.S. and the role of policy in housing production and regulation. Meets U.S. Cultures and Communities Requirement. (Typically Offered: Spring)

CRP 3300: Practicum
Credits: 1-3. Repeatable, maximum of 6 credits.
Prereq: Major in CRP
Structured work experience under close supervision of a professional planner. Practical planning experience; relationships between theory and practice, professional responsibilities, and the scope of various planning roles. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

CRP 3310: Professional Practice Seminar
Credits: 2. Contact Hours: Lecture 2.
Prereq: CRP 3010 *and Junior classification*
Preparation for working as a planning professional; development of resume and portfolio; discussion of professional ethics and expectations of employers and clients; presentations from planning professionals, and discussion of the range of career choices within the planning profession. (Typically Offered: Fall)

CRP 3510: Geospatial Analysis and Visualization
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Prereq: CRP 2510
Intermediate GIS course for students who are interested in learning advanced functions and operations of Geographic Information Systems. Principles of spatial problem types and solutions, geographical concepts and tools and techniques will be shared during lecture and several ESRI ArcGIS Pro software components will be used in a facilitated lab setting. Emphasis will be on regional planning and transportation studies, as well as environmental, social and sustainable practices and related applications. Latest GIS applications will be integrated in the coursework to allow visualizing city plans and projects in one place for collaboration among stakeholders. (Typically Offered: Fall, Spring)

CRP 3760: Rural, Urban and Regional Economics
(Cross-listed with ECON 3760).
Credits: 3. Contact Hours: Lecture 3.
Prereq: ECON 1010
Firm location with respect to regional resources, transport, scale economies, externalities, and policies. Measures of local comparative advantage and specialization. Spatial markets. Population location considering jobs, wages, commuting, and local amenities. Business, residential, and farm land use and value. Migration. Other topics may include market failure, regulation, the product cycle, theories of rural and urban development, developmental policy, firm recruiting, local public goods and public finance, schools, poverty, segregation, and crime.

CRP 3830: Theory of the Planning Process
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
The nature of planning and its relation to social and economic planning; levels of planning, place of planning in decision making; steps in the planning process, uses and limitation of knowledge in planning, relation of facts and values. (Typically Offered: Fall)

CRP 3910: Field Travel
Credits: 1-2. Repeatable.
Prereq: Major in CRP
Observation of professional practice and community or regional problems and issues. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring)

CRP 4100: Professional Work Experience
Credits: Required. Repeatable.
Prereq: Instructor Permission for Course
Approved professional work experience. (Typically Offered: Fall, Spring, Summer)

CRP 4160: Urban Design and Practice
(Dual-listed with CRP 5160).
Credits: 6.
Prereq: CRP 3010
Principles of urban design and their application to residential and commercial development in studio projects. (Typically Offered: Spring)

CRP 4170: Urban Revitalization
(Dual-listed with CRP 5170).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
Planning methods available to further revitalization and preservation efforts, with particular attention to housing and neighborhoods. Relationship between neighborhood change and urban development process; public policy implications. (Typically Offered: Spring)

CRP 4210: Financing Historic Preservation Projects
Credits: 3. Contact Hours: Lecture 3.
Investigation of the financial tools and incentives used to promote the rehabilitation and redevelopment of historic buildings and neighborhoods in cities and towns. Study of broader economic and social impacts on communities. Examinations of completed preservation projects around the United States. (Typically Offered: Fall)

CRP 4290: Planning in Developing Countries
(Dual-listed with CRP 5290).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
Introduction to issues in planning and governance in developing countries. Problems and strategies may include population movement and change, economic globalization, rural development, urban growth, sustainable development, and housing. (Typically Offered: Fall, Spring)

CRP 4320: Community Planning Studio
Credits: 4-6.
*Prereq: (*CRP 2010*,* CRP 3010*, and* CRP 3830*) or Permission of Instructor*
Integration of planning methods and theory in dealing with a community planning problem. Analysis of problem and formulation of strategies for implementation. Preparation of a community planning report. (Typically Offered: Fall, Spring)

CRP 4350: Planning in Small Towns
(Dual-listed with CRP 5350).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
Contemporary planning problems in small towns and the design of viable strategies to enhance their social and economic position in today's society. (Typically Offered: Fall)

CRP 4360: Community Economic Development
(Dual-listed with CRP 5360).
Credits: 3. Contact Hours: Lecture 3.
The nature and process of economic development in the context of community development. Recent changes and trends and their implications for local and regional development. Selected case studies and applications. Contemporary community economic development issues. Offered odd-numbered years. (Typically Offered: Fall)

CRP 4370: Public Participation in Planning
Credits: 3. Contact Hours: Lecture 3.
Rationale and need for public participation in community planning and development. Techniques used to garner participation, and the ability to integrate techniques into a broader participatory process. Techniques covered will include public hearings, public meetings, social action construct, advisory committees, scenario building, social media and asset mapping. Students will also work with a community to demonstrate skills learned. (Typically Offered: Spring)

CRP 4420: Site Development
(Dual-listed with CRP 5420).
Credits: 3. Contact Hours: Lecture 3.
Introduction to site development including site review. Studio project integrating concept, finance, selection, analysis, and design. (Typically Offered: Spring)

CRP 4450: Transportation Policy and Planning
(Dual-listed with CRP 5450).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
Comprehensive overview of key policy issues related to transportation planning and investment in the United States and abroad. Policy issues explored include safety, environmental impact, sustainable communities, and economic development. Policy analysis and planning are studied in conjunction with each policy issue explored. Issues of concern to state, metropolitan, and local governments. (Typically Offered: Fall)

CRP 4490: Geodesign: Planning for Sustainable Futures
(Dual-listed with CRP 5490).
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 2510
Geodesign combines design creativity with scientific thinking based on spatial data. Special focus on sustainable development of future neighborhoods, communities, cities and/or countries. Students learn the geodesign process and implement a set of techniques and technologies that enable project conceptualization, data collection and visualization, spatial analysis, design creation, impact evaluation and stakeholder participation. Final project involves developing cases for analysis using GIS software.

CRP 4510: Introduction to Geographic Information Systems
Credits: 3.
Introduction to geographic information systems, including discussions of GIS hardware, software, data structures, data acquisition, data conversion, data presentation, analytical techniques, and implementation procedures. Laboratory emphasizes practical applications and uses of GIS. (Typically Offered: Fall, Spring, Summer)

CRP 4520: Geographic Data Management and Planning Analysis
(Dual-listed with CRP 5520).
Credits: 3.
Prereq: CRP 3510
Extensive coverage of geo-relational database concept and design, GIS database creation and maintenance, geographic data manipulation and analysis. GIS output generation and geographic data presentation. Laboratory emphasizes practical applications and uses of GIS. (Typically Offered: Fall, Spring)

CRP 4540: Fundamentals of Remote Sensing and Spatial Analysis
(Dual-listed with CRP 5540/ LA 5540). (Cross-listed with LA 4540).
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 3510 *or* AGRON 2700 *or* NREM 3450 *or* GEOL 4520 *or LA 3020 or* CRP 5510 *or* GEOL 5520
Introduction to image processing techniques needed for analysis of optical remote sensing imagery, including filtering, enhancement, and classification. Analysis of elevation surfaces, hydrology, distance, overlays and visual programming with Model Builder. Practical applications in a variety of topics to understand how to analyze imagery. (Typically Offered: Spring)

CRP 4550: Smart and Sustainable Cities
(Dual-listed with CRP 5550).
Credits: 3. Contact Hours: Lecture 3.
Introduction to concepts of smart and sustainable cities. Study of novel technologies for smart and sustainable cities, including sustainable energy, innovative tools for citizens' engagement, improved safety, smart mobility, and happy living. Examples of national and international smart cities. Students may gain experience with ArcGIS Online, ArcUrban and/or other emerging software.

CRP 4560: GIS Programming and Automation
(Dual-listed with ABE 5560/ CRP 5560).
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 3510 *or* AGRON 2700 *or* NREM 3450 *or* GEOL 4520 *or LA 3020 or* CRP 5510 *or* GEOL 5520
Introduction to automated geoprocessing in Geographic Information Systems using Python. Focus on learning scripting language and object-oriented programming, automation of custom-designed geoprocessing scripts, and application toward student research and/or interests. (Typically Offered: Fall)

CRP 4570: Geogames for Civic Engagement
(Dual-listed with CRP 5570).
Credits: 3. Contact Hours: Lecture 3.
Explore, design, and implement participatory geospatial games; define GeoGames; learn about different types of GeoGames and their formal and dramatic elements; design GeoGames for civic engagement, community visioning, and community planning. (Typically Offered: Spring)

CRP 4590X: Geospatial Techniques for Nature-Based Solutions
(Dual-listed with CRP 5590X).
Credits: 3. Contact Hours: Laboratory 2, Lecture 2.
Exploration of the application of Geographic Information Systems (GIS) in planning Nature-Based Solutions (NBS), which are strategies that leverage natural processes to enhance resilience and address environmental, social, and economic challenges. Foundational knowledge of GIS principles and NBS, such as gathering and processing geospatial data, and conducting spatial analyses to assess and map ecosystems services. In this interdisciplinary course, students will use GIS tools to identify suitable locations and design strategies for NBS, and develop scenarios for disaster risk reduction, land use planning, and agriculture conservation planning.

CRP 4600: Social Justice and Planning
(Dual-listed with CRP 5600).
Credits: 3. Contact Hours: Lecture 3.
Investigation of the topic of social justice as it relates to the challenge of planning more socially just urban societies, emphasizing the importance of social justice issues to planning in a globalized world. Includes a range of issues and case studies of local social justice initiatives, both US and global. Students will complete individual service learning projects as part of the course requirement. Offered even-numbered years. (Typically Offered: Spring)

CRP 4710: Real Estate Development
Credits: 3. Contact Hours: Lecture 3.
Summary of the process to develop real property. Using case studies, examine how the development process differs between residential, office, retail and mixed-use projects. Study the development process using a diverse set of analytical tools including market research, planning and legal analysis, and the discounted cash flow method. (Typically Offered: Spring)

CRP 4750: Grant Writing
(Dual-listed with CRP 5750).
Credits: 1. Contact Hours: Lecture 1.
A short introduction to effective grant writing for the public and non-profit sectors. Includes identifying appropriate funding sources for an organization, identifying goals and objectives, and budgeting. (Typically Offered: Fall)

CRP 4790: Public Finance and Planning
(Dual-listed with CRP 5790).
Credits: 3. Contact Hours: Lecture 3.
Overview of public finance theory, particularly in how it relates to local governments and the work of planning and community development. Concepts include theories of taxation, challenges unique to local public finance, collective action, and a survey of the different revenue sources used to fund local government. (Typically Offered: Spring)

CRP 4840: Sustainable Communities
(Dual-listed with CRP 5840). (Cross-listed with ENVS 4840).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
The history and theory of sustainable community planning. Procedural and substantive dimensions. Case studies of communities engaged in sustainability planning. Use and development of indicators. (Typically Offered: Spring)

CRP 4900: Independent Study
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
Investigation of an approved topic commensurate with student's interest and ability. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

CRP 4900H: Independent Study: Honors
Credits: 1-3. Repeatable.
Prereq: Permission of Instructor; Membership in the University Honors Program
Investigation of an approved topic commensurate with student's interest and ability. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

CRP 4910: Environmental Law and Planning
(Dual-listed with CRP 5910/ LA 5910). (Cross-listed with ENVS 4910/ LA 4910).
Credits: 3. Contact Hours: Lecture 3.
Prereq: 6 credits natural sciences or permission of instructor
Environmental law and policy as applied in planning at the local and state levels. Brownfields, environmental justice, water quality, air quality, wetland and floodplain management, and local government involvement in ecological protection through land use planning and other programs. (Typically Offered: Spring)

CRP 4920: Planning Law, Administration and Implementation
Credits: 3. Contact Hours: Lecture 3.
Prereq: Junior classification
The basis in constitutional, common, and statutory law for the powers of plan implementation. Problems of balancing public and private interests as revealed in the study of leading court cases. Administration of planning agencies and programs. (Typically Offered: Fall)

CRP 4940: Senior Seminar in Planning
Credits: 1-3. Contact Hours: Lecture 3.
Repeatable, maximum of 2 times.
Prereq: Senior classification
An advanced forum for seniors that focuses upon recent trends and important issues affecting planning today. Topics addressed will vary. A demonstration of understanding of current issues and their effects upon planning applications is expected. (Typically Offered: Fall, Spring)

Courses primarily for graduate students, open to qualified undergraduates:

CRP 5010: The Practice of Planning
Credits: 1. Contact Hours: Lecture 1.
Prereq: Graduate Standing or Permission of Instructor
Exploration of the practice of planning in the United States. Discussion of the role of professional planning; field trips to meet practicing planners; learn about local government structure, functions and key issues confronting Iowa and US communities; examination of career paths within the planning profession. (Typically Offered: Fall)

CRP 5100: Professional Work Experience
Credits: Required. Repeatable.
Prereq: Instructor Permission for Course
Approved professional work experience. (Typically Offered: Fall, Spring, Summer)

CRP 5110: Documenting the Historic Built Environment
Credits: 3-4. Contact Hours: Lecture 4.
Prereq: Graduate Standing or Permission of Instructor
Principals and methods for researching, identifying, recording, and analyzing buildings, districts, and sites that are historically or architecturally significant. Classroom and fieldwork components will use real-world historic places as case studies. (Typically Offered: Fall)

CRP 5160: Urban Design Practice
(Dual-listed with CRP 4160).
Credits: 6.
Prereq: Graduate Standing or Permission of Instructor
Principles of urban design and their application to residential and commercial development in studio project. (Typically Offered: Spring)

CRP 5170: Urban Revitalization
(Dual-listed with CRP 4170).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Planning methods available to further revitalization and preservation efforts, with particular attention to housing and neighborhoods. Relationship between neighborhood change and urban development process; public policy implications. (Typically Offered: Spring)

CRP 5210: Historic Preservation Planning: Theory and Practice
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Introduction to the history, theory, and practice of historic preservation and cultural resource management. Cases exploring preservation in US and global contexts; politics of preservation; preservation technologies; and relationship of preservation to other community issues. (Typically Offered: Spring)

CRP 5240X: Land Planning and Development
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 3020 *or Graduate Classification or Instructor Permission*
Land development processes in commercial and residential asset classes of Office, Retail, Industrial, Mixed-Use, Multi-Family,#Single-Family Homes, and Condos in green field and urban revitalization projects. (Typically Offered: Spring)

CRP 5260: Real Estate Development
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Overview of the real estate development process. Topics include the history of real estate development, roles of planning and market forces in real estate development, and financial management of real estate development. Projects involve analysis of market niches, market penetration rates, lease rates, synergism and tenant mix, and the go/no go decision applied to residential, commercial, and mixed-use development.

CRP 5270: Sustainable Community Development
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Introduces the central principles of sustainable community design and its implementation in the residential and commercial real estate development sectors. Topics include current practices and regulatory mandates, with a focus on the importance of private participation in the development of sustainable communities.

CRP 5280: Financing Historic Preservation Projects and Revitalizing Communities
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Investigation of the financial tools and incentives used to promote the rehabilitation and redevelopment of historic buildings and neighborhoods in cities and towns. Study of broader economic and social impacts on communities. Examinations of completed preservation projects around the United States.

CRP 5290: Planning in Developing Countries
(Dual-listed with CRP 4290).
Credits: 3. Contact Hours: Lecture 3.
Introduction to issues in planning and governance in an international setting. Problems and strategies may include population movement and change, economic globalization, urban growth, rural development, and housing. (Typically Offered: Fall, Spring)

CRP 5300: Practicum
Credits: 1-3. Repeatable, maximum of 6 credits.
Prereq: Graduate Standing or Permission of Instructor
Practical planning experience. Structured work in range of tasks under close supervision of a professional planner. Relationships between theory and practice, exposure to variety of roles in functioning specialties. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

CRP 5320: Community Planning Studio
Credits: 4-6.
Prereq: Graduate Standing or Permission of Instructor
Comprehension and analysis of various geographic contexts pertinent to community planning and the use of planning theory, tools and techniques in an applied setting. Process of making a community plan: historical patterns, current conditions and strategies for planning. (Typically Offered: Fall)

CRP 5350: Planning in Small Towns
(Dual-listed with CRP 4350).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Contemporary planning problems in small towns and the design of viable strategies to enhance their social and economic position in today's society. Offered even-numbered years. (Typically Offered: Fall)

CRP 5360: Community Economic Development
(Dual-listed with CRP 4360).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
The nature and process of economic development in the context of community development. Recent changes and trends and their implications for local and regional development. Selected case studies and applications. Contemporary community economic development issues. Offered odd-numbered years. (Typically Offered: Fall)

CRP 5420: Site Development
(Dual-listed with CRP 4420).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Introduction to site development, including site review. Studio project integrating concept, finance, selection, analysis, and design. (Typically Offered: Spring)

CRP 5450: Transportation Policy and Planning
(Dual-listed with CRP 4450).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Comprehensive overview of key policy issues related to transportation planning and investment in the United States and abroad. Policy issues explored include safety, environmental impact, sustainable communities, and economic development. Policy analysis and planning are studied in conjunction with each policy issue explored. Issues of concern to state, metropolitan, and local governments. (Typically Offered: Fall)

CRP 5490: Geodesign: Planning for Sustainable Futures
(Dual-listed with CRP 4490).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Geodesign combines design creativity with scientific thinking based on spatial data. Special focus on sustainable development of future neighborhoods, communities, cities and/or countries. Students learn the geodesign process and implement a set of techniques and technologies that enable project conceptualization, data collection and visualization, spatial analysis, design creation, impact evaluation and stakeholder participation. Final project involves developing cases for analysis using GIS software.

CRP 5500: Making Resilient Environments
(Cross-listed with SUSE 5500).
Credits: 3. Contact Hours: Lecture 2.
Prereq: Graduate Standing or Permission of Instructor
Major theories and ideas revolving around the concept of resilience. Assessing the social and political processes associated with policy making for resilience. Application of the concept of resilience in order to understand and evaluate environments. Evaluate the different approaches toward resilience and develop an understanding of the relationship between sustainability and resilience. Case studies of communities that proactively prepare for, absorb, recorver from, and adapt to actual or potential future adverse events. (Typically Offered: Spring)

CRP 5510: Introduction to Geographic Information Systems
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Prereq: Graduate Standing or Permission of Instructor
Introduction to geographic information systems, including discussions of GIS hardware, software, data structures, data acquisition, data conversion, data presentation, analytical techniques, and implementation procedures. Laboratory emphasizes practical applications and uses of GIS. (Typically Offered: Fall, Spring, Summer)

CRP 5520: Geographic Data Management and Planning Analysis
(Dual-listed with CRP 4520).
Credits: 3.
Prereq: Graduate Standing or Permission of Instructor
Extensive coverage of geo-relational database concept and design, GIS database creation and maintenance, geographic data manipulation and analysis. GIS output generation and geographic data presentation. Laboratory emphasizes practical applications and uses of GIS. (Typically Offered: Fall, Spring)

CRP 5530: Analytical Planning/GIS
Credits: 3.
Prereq: Graduate Standing or Permission of Instructor
Integration of exploratory, participatory and predictive spatial analyses and 3D visualization into the planning process. GIS tools and techniques are used to automate decision analysis and facilitate future planning in analyzing and visualizing planning actions. Laboratory emphasizes practical uses of GIS tools and techniques. (Typically Offered: Fall)

CRP 5540: Fundamentals of Remote Sensing and Spatial Analysis
(Dual-listed with CRP 4540/ LA 4540). (Cross-listed with LA 5540).
Credits: 3. Contact Hours: Lecture 3.
Introduction to image processing techniques needed for analysis of optical remote sensing imagery, including filtering, enhancement, and classification. Analysis of elevation surfaces, hydrology, distance, overlays and visual programming with Model Builder. Practical applications in a variety of topics to understand how to analyze imagery. (Typically Offered: Spring)

CRP 5550: Smart and Sustainable Cities
(Dual-listed with CRP 4550).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Introduction to concepts of smart and sustainable cities. Study of novel technologies for smart and sustainable cities, including sustainable energy, innovative tools for citizens' engagement, improved safety, smart mobility, and happy living. Examples of national and international smart cities. Students may gain experience with ArcGIS Online, ArcUrban and/or other emerging software.

CRP 5560: GIS Programming and Automation
(Dual-listed with CRP 4560). (Cross-listed with ABE 5560).
Credits: 3. Contact Hours: Lecture 3.
Prereq: CRP 3510 *or* AGRON 2700 *or* NREM 3450 *or* GEOL 4520 *or LA 3020 or* CRP 5510 *or* GEOL 5520
Introduction to automated geoprocessing in Geographic Information Systems using Python. Focus on learning scripting language and object-oriented programming, automation of custom-designed geoprocessing scripts, and application toward student research and/or interests. (Typically Offered: Fall)

CRP 5570: Geogames for Civic Engagement
(Dual-listed with CRP 4570).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Explore, design, and implement participatory geospatial games; define GeoGames; learn about different types of GeoGames and their formal and dramatic elements; design GeoGames for civic engagement, community visioning, and community planning. (Typically Offered: Spring)

CRP 5580: Web Mapping and Spatial Data Visualization
(Cross-listed with LA 5580).
Credits: 3. Contact Hours: Lecture 2, Laboratory 2.
Prereq: Graduate Standing or Permission of Instructor
Use and development of online mapping tools and coding to support participatory GIS, Volunteered Geographic Information, information sharing, geodesign, and decision-making actions. Geoprocessing, spatial data science, and user interface design. Laboratory emphasis on practical applications and uses of Web GIS.

CRP 5590X: Geospatial Techniques for Nature-Based Solutions
(Dual-listed with CRP 4590X).
Credits: 3. Contact Hours: Laboratory 2, Lecture 2.
Repeatable, maximum of 3 credits.
Exploration of the application of Geographic Information Systems (GIS) in planning Nature-Based Solutions (NBS), which are strategies that leverage natural processes to enhance resilience and address environmental, social, and economic challenges. Foundational knowledge of GIS principles and NBS, such as gathering and processing geospatial data, and conducting spatial analyses to assess and map ecosystems services. In this interdisciplinary course, students will use GIS tools to identify suitable locations and design strategies for NBS, and develop scenarios for disaster risk reduction, land use planning, and agriculture conservation planning.

CRP 5600: Social Justice and Planning
(Dual-listed with CRP 4600).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Investigation of the topic of social justice as it relates to the challenge of planning more socially just urban societies, emphasizing the importance of social justice issues to planning in a globalized world. Includes a range of issues and case studies of local social justice initiatives, both US and global. Students will complete individual service learning projects as part of the course requirement. Offered even-numbered years. (Typically Offered: Spring)

CRP 5610: Planning Theory
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Use and development of theory/action relationship in planning practice. Competing normative theories of planning and their evolution, key components and fundamental critiques. Exploration of planning frameworks and approaches, including comprehensive planning; incrementalism; advocacy; communicative rationality; and others. (Typically Offered: Spring)

CRP 5630: Planning the American Metropolis
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Focus on the historical role of planning in the shaping of American cities and regions, from the beginning of the Republic to the present. Examine the legacy of planning by exploring the intersection of design, politics and policy. Investigate the factors and the processes that produce the built environment. (Typically Offered: Fall)

CRP 5640: Introduction to Analytical Methods for Planning
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Applications of analytical methods in planning with emphasis on the collection, description, analysis, presentation, and interpretation of planning data. Introduction to descriptive statistics. Sources of planning information and data including primary and secondary data types and sources. Demographic analysis, population projection techniques for planning at local and regional levels. (Typically Offered: Fall)

CRP 5660: Policy Analysis and Planning
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Principles and methods for analyzing community problems and policies including forecasting, efficiency and equity measures, cost/benefit, political feasibility, and sensitivity analysis. Examination of social, political, economic, and environmental values and their manifestation in decision making methods used in planning. Application of tools used to analyze planning problems, project evaluation and public policies. (Typically Offered: Fall)

CRP 5680: Planning and Development
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Exploration and evaluation of the techniques, processes, and professional skills required to effectively manage land use change at various scales. Land classification systems; land supply and needs inventory for residential uses and commercial and employment centers; capacity and needs analysis for public infrastructure. Includes land use planning project(s) designed to apply the methods explored in this and other courses. (Typically Offered: Spring)

CRP 5730: Contemporary Issues in Global Housing
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Investigation of broader social and economic processes around the globe from the housing perspective. Case study approach to shelter struggles and the various policy and design responses related to them, as a means of understanding a range of issues important to urban systems including poverty, development, urbanization, migration, social movements and citizenship. (Typically Offered: Fall)

CRP 5750: Grant Writing
(Dual-listed with CRP 4750).
Credits: 1. Contact Hours: Lecture 1.
Prereq: Graduate Standing or Permission of Instructor
A short introduction to effective grant writing for the public and non-profit sectors. Includes identifying appropriate funding sources for an organization, identifying goals and objectives, and budgeting. (Typically Offered: Fall)

CRP 5780: MRED Capstone Project
(Cross-listed with FIN 5780).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Enrollment in Master of Real Estate Development
Refinement of students' problem-solving, communication and negotiation skills. Students work on an actual case. Teams will apply knowledge acquired in the classroom to some aspect of a current development on-the-ground and in-process project.

CRP 5790: Public Finance and Planning
(Dual-listed with CRP 4790).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Overview of public finance theory, particularly in how it relates to local governments and the work of planning and community development. Concepts include theories of taxation, challenges unique to local public finance, collective action, and a survey of the different revenue sources used to fund local government. (Typically Offered: Spring)

CRP 5840: Sustainable Communities
(Dual-listed with CRP 4840/ ENVS 4840).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
The history and theory of sustainable community planning. Procedural and substantive dimensions. Case studies of communities engaged in sustainability planning. Use and development of indicators. (Typically Offered: Spring)

CRP 5900A: Special Topics: Planning Law, Administration and Implementation
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900B: Special Topics: Economic Development
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900C: Special Topics: Urban Design
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900D: Special Topics: Housing and Urban Revitalization
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900H: Special Topics: Environmental Planning
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900I: Special Topics: Land Use and Transportation Planning
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900N: Special Topics: International Planning
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900O: Special Topics: Spatial Analytical Methods
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900P: Special Topics: Planning in Small Towns
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900Q: Special Topics: Diversity and Equity in Planning
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5900R: Special Topics: Geographic Information Systems
Credits: 1-3. Repeatable.
Prereq: Instructor Permission for Course
(Typically Offered: Fall, Spring, Summer)

CRP 5910: Environmental Law and Planning
(Dual-listed with CRP 4910/ ENVS 4910/ LA 4910). (Cross-listed with LA 5910).
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
Environmental law and policy as applied in planning at the local and state levels. Brownfields, environmental justice, water quality, air quality, wetland and floodplain management, and local government involvement in ecological protection through land use planning and other programs. (Typically Offered: Spring)

CRP 5920: Land Use and Development Regulation Law
Credits: 3. Contact Hours: Lecture 3.
Prereq: Graduate Standing or Permission of Instructor
An in-depth analysis of the legal constructs that shape the practice of planning and plan implementation in the United States. An exploration of how land use regulations are applied to reconcile the competing needs and diverse uses of land. The positive and negative consequences of developing and implementing regulatory controls will be addressed. (Typically Offered: Fall)

CRP 5930X: Field Travel
Credits: 1-2. Contact Hours: Lecture 2.
Repeatable.
Prereq: Senior or graduate classification
Field travel, either domestic or international, to observe and analyze local professional planning practices and to provide firsthand exposure to the destination community and its residents. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

CRP 5950: Seminar in GIS Applications/Research
Credits: 1. Contact Hours: Lecture 1.
Prereq: Graduate Standing or Permission of Instructor
Discussion and demonstration of current GIS applications and research in multiple disciplines. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring)

CRP 5980X: Comprehensive Exam Preparation
Credits: 3. Contact Hours: Lecture 3.
Repeatable.
Prereq: Graduate Standing or Permission of Instructor
Preparation to complete the capstone requirement for the MCRP program, which is a comprehensive exam that will be administered as part of this course. Material based on content of required courses and electives as well as study and test-taking strategies. Ideally taken in the Fall semester of a student's second academic year immediately prior to graduation. Offered on a satisfactory-fail basis only. (Typically Offered: Fall, Spring, Summer)

Courses for graduate students:

CRP 6990: Research
Credits: 1-30. Repeatable.
Prereq: Instructor Permission for Course
Offered on a satisfactory-fail basis only.