

# COMMUNITY AND REGIONAL PLANNING

[www.design.iastate.edu/community-and-regional-planning](http://www.design.iastate.edu/community-and-regional-planning) (<http://www.design.iastate.edu/communityplanning/>)

Community and regional planning is a field of study aimed at understanding the ever-changing socioeconomic and physical environments of our communities and planning for their future. Planners evaluate and seize opportunities to solve problems. Planners work at multiple levels of government, as well as the private sector, and they are concerned with issues that affect every corner of the world: the preservation and enhancement of the quality of life in a community, the protection of the environment, the promotion of equitable economic opportunity; and the management of growth and change of all kinds.

Graduates of the Community and Regional Planning department are able to integrate planning knowledge and skills in a variety of practical applications, and can communicate effectively in written and oral form. Graduates will be qualified for a variety of entry-level positions. They will also be well prepared for graduate study in a variety of fields, including law, public policy, public health, environmental science, geography, sociology, urban design, and architecture.

Graduates of the Community and Regional Planning department are expected to understand the structure and functions of urban settlements, including the history of planning and urban development and the processes for plan and policy making. Graduates should have skills in problem formulation, quantitative analysis, written/oral and graphic communications, and collaboration, and in synthesizing and applying knowledge to practice. Graduates are expected to be able to assess the impact of plans and alternatives based on equity and social justice, economic welfare and efficiency, environmental sustainability, and cultural heritage in the context of citizen involvement in decision making.

The curriculum is accredited by the Planning Accreditation Board of the American Institute of Certified Planners and the Association of Collegiate Schools of Planning. Our students gain an education that, when combined with experience, supports eligibility for membership in the American Institute of Certified Planners.

The department administers two undergraduate minors: Urban Studies and Geographic Information Science (GIS). The department cooperates in the undergraduate minors in Design Studies, Digital Media, Critical Studies in Design, Environmental Studies, and Sustainability.

## Curriculum in Community and Regional Planning

The Department of Community and Regional Planning administers the 128-credit-hour undergraduate program leading to the Bachelor of Science. Students have the opportunity to work with their faculty advisors to define their own areas of interest, which may include a minor.

The BS in Community and Regional Planning program can be completed in two to four years. Students may apply for admission to the program at any time during their enrollment at Iowa State University. If applying by transfer from another program or institution, admission is based on the student's cumulative GPA and a departmental review of course work.

Transfer applications from students in programs in sociology, political science, history, geography, engineering, and other related disciplines are encouraged. Community and Regional Planning emphasizes responsibility and citizenship, writing and analytical ability, and critical thinking.

### Total Degree Requirement: 128 credits

Only 65 credits from a two-year institution may apply which may include up to 16 technical credits; 9 P-NP credits of free electives; 2.00 minimum GPA; completion of all requirements listed below.

### International Perspective: 3 credits

### U.S. Diversity: 3 credits

### Communication: 13 credits

(C or better grade in ENGL 150 and ENGL 250)

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
ENGL 309	Proposal and Report Writing	3
or ENGL 314	Technical Communication	
SP CM 212	Fundamentals of Public Speaking	3
LIB 160	Information Literacy	1
<b>Total Credits</b>		<b>13</b>

### Humanities: 9 credits; 6 credits 300-level or above

PHIL 201	Introduction to Philosophy	3
or PHIL 206	Introduction to Logic and Scientific Reasoning	
or PHIL 230	Moral Theory and Practice	
Six credits from program curriculum sheet		6
<b>Total Credits</b>		<b>9</b>

### Social Sciences: 18 credits 300 level or above

ECON 101	Principles of Microeconomics	3
or ECON 102	Principles of Macroeconomics	
POL S 215	Introduction to American Government	3
SOC 134	Introduction to Sociology	3

Nine credits from program curriculum sheet.	9
<b>Total Credits</b>	<b>18</b>

**Math/Physics/Biol. Sciences: 13 credits**

STAT 101 Principles of Statistics, 6 credits in Natural Sciences, 3 credits in Math

**Design Core: 3 credits**

DSN S 102 Design Studio I	3-4
or DSN S 183 Design in Context	

<b>Total Credits</b>	<b>3-4</b>
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**Community and Regional Planning Core: 25 credits**

C R P 201 The North American Metropolis	3
C R P 293 Environmental Planning	3
C R P 301 Urban Analytical Methods	4
C R P 383 Theory of the Planning Process	3
C R P 391 Field Travel	1
C R P 432 Community Planning Studio	6
C R P 492 Planning Law, Administration and Implementation	3
C R P 331 Professional Practice Seminar	2

<b>Total Credits</b>	<b>25</b>
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**Planning Elective: 24 credits**

24 credits from:

C R P 251 Fundamentals of Geographic Information Systems	3
C R P 325 US Housing Policy	3
C R P 351 Intermediate Geographic Information Systems	3
C R P 416 Urban Design and Practice	6
C R P 417 Urban Revitalization	3
C R P 421 Financing Historic Preservation Projects	3
C R P 429 Planning in Developing Countries	3
C R P 435 Planning in Small Towns	3
C R P 437 Public Participation in Planning	3
C R P 445 Transportation Policy and Planning	3
C R P 449 Geodesign: Planning for Sustainable Futures	3
C R P 452 Geographic Data Management and Planning Analysis	3
C R P 471 Real Estate Development	3
C R P 455 Smart and Sustainable Cities	3
C R P 479 Public Finance and Planning	3
C R P 484 Sustainable Communities	3
C R P 491 Environmental Law and Planning	3
C R P 494 Senior Seminar in Planning	3
C R P 511 Documenting the Historic Built Environment	3-4

C R P 521 Historic Preservation Planning: Theory and Practice	3
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**General Electives: 24 credits**

24 credits of general electives from program curriculum sheet

**Undergraduate Minors**

The Department of Community and Regional Planning offers 15-credit minors in Urban Studies and Geographic Information Science (GISC).

The Urban Studies minor is earned by completing both C R P 201 (The North American Metropolis) and C R P 291 (World Cities and Globalization), plus 9 additional credit hours from the approved list of courses. At least 6 credit hours must be in courses numbered 300 or above at Iowa State. The College of Design requires students to earn a C or higher in at least 6 of the required 300-level credits. The minor must include at least nine credits that are not used to meet any other department, college or university requirement except the credit requirement for graduation. The Urban Studies minor is open to students from any college and any major.

**Introduction to Urban Studies: 6 credits**

C R P 201 The North American Metropolis	3
C R P 291 World Cities and Globalization	3

**Advanced Urban Studies: 9 credits**

C R P 251 Fundamentals of Geographic Information Systems	3
C R P 293 Environmental Planning	3
C R P 301 Urban Analytical Methods	4
C R P 320 Urban Geography	3
C R P 325 US Housing Policy	3
C R P 351 Intermediate Geographic Information Systems	3
C R P 376 Rural, Urban and Regional Economics	3
or ECON 376 Rural, Urban and Regional Economics	
C R P 383 Theory of the Planning Process	3
C R P 417 Urban Revitalization	3
C R P 421 Financing Historic Preservation Projects	3
C R P 429 Planning in Developing Countries	3
C R P 455 Smart and Sustainable Cities	3
C R P 457 Geogames for Civic Engagement	3
C R P 460 Social Justice and Planning	3
C R P 471 Real Estate Development	3
C R P 479 Public Finance and Planning	3
C R P 484 Sustainable Communities	3
C R P 492 Planning Law, Administration and Implementation	3
C R P 573 Contemporary Issues in Global Housing	3
ARCH 221 History of Pre-Modern Architecture	3

ARCH 321	History of the American City	3
ARCH 420	Topics in American Architecture	3
ARCH 429	Topics in Italian Architecture and Urbanism	3
ARCH 575	Contemporary Urban Design Theory	3
ANTHR 418	Global Culture, Consumption and Modernity	3
C E 451	Urban Transportation Planning Models	3
CL ST 275	The Ancient City	3
HIST 429	"Monstrous London": London's Histories 1500-1800	3-4
HIST 465	The American West	3
SOC 310	Community	3
SOC 331	Social Class and Inequality	3
SOC 332	The Latino/Latina Experience in U.S. Society	3
SOC 360X	Globalization and Development	3
L A 274	The Social and Behavioral Landscape	3
L A 371	History of Modern Landscapes, 1750 to Present	3
L A 373	Gardens and Landscapes from Antiquity to 1750	3
POL S 310	State and Local Government	3
POL S 334	Politics and Society	3
POL S 480	Ethics and Public Policy	3
POL S 271	Public Organizations and Leadership	3
URB D 521	Foundations of Urban Design	3
URB D 522	Contemporary Urban Design Practices	3

The Geographic Information Science (GIS) minor is earned by taking CRP 251 and CRP 351, plus 9 additional credits from the approved list of courses. At least 6 credit hours must be in courses numbered 300 or above at Iowa State. The College of Design requires students to earn a C or higher in at least 6 of the required 300-level credits. The minor must include at least 9 credits that are not used in any other department, college or university requirement except the credit requirement for graduation. The GIS minor is open to students in any college and any major.

#### Foundations of GIS: 6 credits

C R P 251: Introduction to Geographic Information Systems	3
C R P 351: Intermediate Geographic Information Systems	3

#### GIS Tools and Techniques: 9 credits

C R P 449	Geodesign: Planning for Sustainable Futures	3
or C R P 549	Geodesign: Planning for Sustainable Futures	
C R P 452	Geographic Data Management and Planning Analysis	3
C R P 454	Fundamentals of Remote Sensing and Spatial Analysis	3
C R P 455	Smart and Sustainable Cities	3

or C R P 555	Smart and Sustainable Cities	
C R P 456	GIS Programming and Automation	3
C R P 457	Geogames for Civic Engagement	3
or C R P 557	Geogames for Civic Engagement	
C R P 558	Web Mapping and Spatial Data Visualization	3
NREM 345	Natural Resource Photogrammetry and Geographic Information Systems	3
NREM 546	Integrating GPS and GIS for Natural Resource Management	3
GEOL 452	GIS for Geoscientists	3
GEOL 488	GIS for Geoscientists II	3

Community and Regional Planning. B.S.

#### First Year

Fall	Credits Spring	Credits
DSN S 102 or 183	3-4 Math/Science	3
ENGL 150	3 SP CM 212	3
ECON 101 or 102	3 PHIL 201, 206, or 230	3
SOC 134	3 Natural Sciences	3
Elective	3 Elective	3
LIB 160	1	
<b>16-17</b>		<b>15</b>

#### Second Year

Fall	Credits Spring	Credits
C R P 201	3 C R P 293	3
STAT 101	4 C R P 301	4
ENGL 250	3 C R P 391	1-2
POL S 215	3 Soc. Science/Humanities Elective	6
Humanities Elective	3 Elective	3
<b>16</b>		<b>17-18</b>

#### Third Year

Fall	Credits Spring	Credits
C R P 492	3 Planning Electives	6
C R P 383	3 Elective	3
ENGL 309 or 314	3 Social Science/Humanities Elective	3
Social Science/Humanities	3 Elective	3
Elective		
Elective	3	
<b>15</b>		<b>15</b>

**Fourth Year**

Fall	Credits Spring	Credits
C R P 432	4-6 Planning Elective or Option Studio	6
C R P 331	2 Planning Elective	3
Planning Elective	3 Planning Elective	3
300-400 Elective	3 Planning Elective	3
300-400 Elective	3 300-400 Elective	3
<b>15-17</b>		<b>18</b>

**Graduate Study**

The Department of Community and Regional Planning (CRP) offers three different graduate degree options for individuals interested in engaging with communities and helping to shape their future: a Master of Community and Regional Planning (MCRP), an interdisciplinary Master of Science with an emphasis in Community Development (CDEV), and a Master of Real Estate Development (MRED).

The primary focus of the MCRP degree is to prepare students with the education and practical skills to be leaders in the practice of planning. The program of graduate study is accredited by the Planning Accreditation Board of the American Institute of Certified Planners and the Association of Collegiate Schools of Planning.

Degree requirements include completion of a 2-year, 48-credit program, including a required core (24 credits), electives (18-21 credits), and a capstone component consisting of either a comprehensive exam (3 credits) or thesis (6 credits). The required core consists of C R P 532, 561, 563, 564, 566, 568 and 592. Students select electives in consultation with their Program of Study Committee (POSC). Students are encouraged to complete an internship in a planning office during their course of study.

C R P 532	Community Planning Studio	6
C R P 561	Planning Theory	3
C R P 563	Planning the American Metropolis	3
C R P 564	Introduction to Analytical Methods for Planning	3
C R P 566	Policy Analysis and Planning	3
C R P 568	Planning and Development	3
C R P 592	Land Use and Development Regulation Law	3

Admission to the MCRP program is by application to the department and to the Graduate College. Students with a bachelor's degree in planning or students who have taken highly relevant coursework may be able to waive up to 9 credits of course requirements. Students must petition the department's Director of Graduate Education (DOGE) in writing prior to the first day class of the student's first semester in the program to have

credits waived. No foreign language is required for the degree Master of Community and Regional Planning.

Double degree programs are offered with architecture (MCRP/MArch), business administration (MCRP/MBA), landscape architecture (MCRP/MLA) and sustainable agriculture (MCRP/MS). Information about our programs and how to apply can be obtained from the department's web page at: [www.design.iastate.edu/community-and-regional-planning](http://www.design.iastate.edu/community-and-regional-planning) (<http://www.design.iastate.edu/CRP/>), or send an email to [crp@iastate.edu](mailto:crp@iastate.edu).

CRP offers an interdisciplinary Master of Science degree with an emphasis in Community Development (CDEV) through the department's affiliation with the Great Plains Interactive Distance Education Alliance (GPIDEA). The CDEV program consists of 30-credit hours offered in an on-line format. Information about the CDEV program may be obtained from the department office and from the department's web page at: <https://www.design.iastate.edu/community-and-regional-planning/degrees/master-of-community-and-regional-planning/community-development-masters-program/>.

In partnership with the Department of Finance in the College of Business, CRP offers a two-year, 33-credit Master of Real Estate Development (MRED) degree. The program is designed for working professionals, with coursework delivered in a blended online/on-campus format. During the academic year, students complete coursework remotely and come to campus for three, one-week intensive workshops throughout the two-year degree. More information on the MRED program is available on the program website: <https://www.ivybusiness.iastate.edu/masters/mred/>.

The Certificate in Preservation and Cultural Heritage (P+CH) is a multidisciplinary graduate program that provides the practical skills and background needed to succeed in the fields of historic preservation and cultural resource management. The certificate program is open to Iowa State University graduate students in any College of Design major as well as those majoring in history, anthropology, and related disciplines. Interested students should visit <https://www.design.iastate.edu/programs-minors/certificates/preservation-and-cultural-heritage/> or contact [historicplaces@iastate.edu](mailto:historicplaces@iastate.edu) for guidance.

The department also offers a 13-credit graduate certificate in Geographic Information Systems (GIS) in spatial analysis, GIS applications, and program management. The program is open to graduate students in all disciplines of the university. Information about the graduate certificate may be obtained from the department office and from the department's web page at: [www.design.iastate.edu/programs-minors/certificates/gis-certificate/](http://www.design.iastate.edu/programs-minors/certificates/gis-certificate/) (<https://www.design.iastate.edu/programs-minors/certificates/gis-certificate/>)

**Courses primarily for undergraduates:**

**C R P 201: The North American Metropolis**

(3-0) Cr. 3. F.S.

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.

Meets U.S. Diversity Requirement

**C R P 211: Digital Design Methods for Landscape Architecture**

(Cross-listed with L A). (3-0) Cr. 3. S.

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.

**C R P 251: Fundamentals of Geographic Information Systems**

Cr. 3. F.

Fundamentals of the concepts, models, functions and operations of Geographic Information Systems (GIS). Principles 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.

**C R P 291: World Cities and Globalization**

(3-0) Cr. 3. F.S.

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.

**C R P 293: Environmental Planning**

(Cross-listed with ENV S). (3-0) Cr. 3. F.S.

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.

**C R P 301: Urban Analytical Methods**

(3-2) Cr. 4. S.

*Prereq: STAT 101*

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.

**C R P 320: Urban Geography**

(3-0) Cr. 3. F.S.

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.

**C R P 325: US Housing Policy**

Cr. 3. S.

Housing problems, government housing policy, and housing as a field of urban planning practice. Introduction to empirical analysis of housing-related issues and applications to policy. Particular focus on the social and spatial segmentation of housing in the U.S. and the role of policy in housing production and regulation.

**C R P 330: Practicum**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS.

*Prereq: Major in community and regional planning*

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.

**C R P 331: Professional Practice Seminar**

(2-0) Cr. 2. F.

*Prereq: CRP 301 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.

**C R P 351: Intermediate Geographic Information Systems**

Cr. 3. F.S.

*Prereq: CRP 251X*

Intermediate GIS for design and non-design students to learn concepts of digital management and representation of spatial data, including spatial problems, data sources and structures, simple spatial operations and cartographic issues. Gain skill set to effectively display feature and tabular data, query features using logical expressions, edit spatial and attribute data, associate tables with joins and relates, produce maps, reports, and graphs.

**C R P 376: Rural, Urban and Regional Economics**

(Cross-listed with ECON). (3-0) Cr. 3.

*Prereq: ECON 101*

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.

**C R P 383: Theory of the Planning Process**

(3-0) Cr. 3. F.

*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.

**C R P 391: Field Travel**

Cr. 1-2. Repeatable. F.S.

*Prereq: CRP major and permission of instructor*

Observation of professional practice and community or regional problems and issues. Offered on a satisfactory-fail basis only.

**C R P 410: Professional Work Experience**

Cr. R. F.S.SS.

*Prereq: Permission of department chair*

Approved professional work experience.

**C R P 416: Urban Design and Practice**

(Dual-listed with C R P 516). (3-6) Cr. 6. S.

*Prereq: C R P 301*

Principles of urban design and their application to residential and commercial development in studio projects.

**C R P 417: Urban Revitalization**

(Dual-listed with C R P 517). (3-0) Cr. 3. Alt. S., offered odd-numbered years.

*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.

**C R P 421: Financing Historic Preservation Projects**

(3-0) Cr. 3. F.

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.

**C R P 429: Planning in Developing Countries**

(Dual-listed with C R P 529). (3-0) Cr. 3. F.S.

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.

**C R P 432: Community Planning Studio**

(1-6) Cr. 4-6. F.S.

*Prereq: C R P 201, C R P 301, C R P 383, 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.

**C R P 435: Planning in Small Towns**

(Dual-listed with C R P 535). (3-0) Cr. 3. Alt. F., offered even-numbered years.

*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.

**C R P 436: Community Economic Development**

(Dual-listed with C R P 536). (3-0) Cr. 3. Alt. F., offered odd-numbered years.

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.

**C R P 437: Public Participation in Planning**

(3-0) Cr. 3. S.

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. None

**C R P 442: Site Development**

(Dual-listed with C R P 542). (3-0) Cr. 3. S.

Introduction to site development including site review. Studio project integrating concept, finance, selection, analysis, and design.

**C R P 445: Transportation Policy and Planning**

(Dual-listed with C R P 545). (3-0) Cr. 3. F.

*Prereq: Junior classification; CRP 545 prerequisite: Graduate 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.

**C R P 449: Geodesign: Planning for Sustainable Futures**

(Dual-listed with C R P 549). (3-0) Cr. 3. S.

*Prereq: CRP 251 or equivalent or permission of the 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.

**C R P 451: Introduction to Geographic Information Systems**

(2-2) Cr. 3. F.S.SS.

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.

**C R P 452: Geographic Data Management and Planning Analysis**

(Dual-listed with C R P 552). (2-2) Cr. 3. F.S.

*Prereq: C R P 351 or equivalent*

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.

**C R P 454: Fundamentals of Remote Sensing and Spatial Analysis**

(Dual-listed with C R P 554). (Cross-listed with L A). (3-0) Cr. 3. S.

*Prereq: C R P 351 or equivalent or permission of the instructor*

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.

**C R P 455: Smart and Sustainable Cities**

(Dual-listed with C R P 555). Cr. 3. S.

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.

**C R P 456: GIS Programming and Automation**

(Dual-listed with C R P 556). (Cross-listed with A B E). (3-0) Cr. 3. F.

*Prereq: C R P 351 or equivalent or permission of instructor*

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.

**C R P 457: Geogames for Civic Engagement**

(Dual-listed with C R P 557). (3-0) Cr. 3. S.

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.

**C R P 460: Social Justice and Planning**

(Dual-listed with C R P 560). (3-0) Cr. 3. Alt. S., offered even-numbered years.

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.

**C R P 471: Real Estate Development**

(3-0) Cr. 3. S.

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.

**C R P 475: Grant Writing**

(Dual-listed with C R P 575). (1-0) Cr. 1. F.

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.

**C R P 479: Public Finance and Planning**

(Dual-listed with C R P 579). (3-0) Cr. 3. S.

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.

**C R P 484: Sustainable Communities**

(Dual-listed with C R P 584). (Cross-listed with ENV S). (3-0) Cr. 3. S.

*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.

**C R P 490: Independent Study**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Written approval of instructor and department chair on required form*

Investigation of an approved topic commensurate with student's interest and ability. Offered on a satisfactory-fail basis only.

**C R P 490H: Independent Study: Honors**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Written approval of instructor and department chair on required form*

Investigation of an approved topic commensurate with student's interest and ability. Offered on a satisfactory-fail basis only.

**C R P 491: Environmental Law and Planning**

(Dual-listed with C R P 591). (Cross-listed with ENV S, L A). (3-0) Cr. 3. S.

*Prereq: 6 credits in natural sciences*

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.

**C R P 492: Planning Law, Administration and Implementation**

(3-0) Cr. 3. F.

*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.

**C R P 494: Senior Seminar in Planning**

Cr. 1-3. Repeatable, maximum of 2 times. F.S.

*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.

**Courses primarily for graduate students, open to qualified undergraduates:**

**C R P 510: Professional Work Experience**

Cr. R. F.S.SS.

*Prereq: Permission of department chair*

Approved professional work experience.

**C R P 511: Documenting the Historic Built Environment**

Cr. 3-4. F.

*Prereq: Knowledge of GIS helpful but not required.*

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.

**C R P 516: Urban Design and Practice**

(Dual-listed with C R P 416). (3-6) Cr. 6. S.

*Prereq: C R P 301*

Principles of urban design and their application to residential and commercial development in studio projects.

**C R P 517: Urban Revitalization**

(Dual-listed with C R P 417). (3-0) Cr. 3. Alt. S., offered odd-numbered years.

*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.



**C R P 521: Historic Preservation Planning: Theory and Practice**

(3-0) Cr. 3. S.

*Prereq: None*

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.

**C R P 526: Real Estate Development**

(3-0) Cr. 3.

*Prereq: Enrollment in the MRED or instructor permission.*

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.

**C R P 527: Sustainable Community Development**

(3-0) Cr. 3.

*Prereq: Enrollment in the MRED or instructor permission.*

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.

**C R P 528: Financing Historic Preservation Projects and Revitalizing Communities**

(3-0) Cr. 3.

*Prereq: Enrollment in the MRED or instructor permission.*

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.

**C R P 529: Planning in Developing Countries**

(Dual-listed with C R P 429). (3-0) Cr. 3. F.S.

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.

**C R P 530: Practicum**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS.

*Prereq: Graduate classification in Community and Regional Planning*

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.

**C R P 532: Community Planning Studio**

(3-6) Cr. 4-6. F.

*Prereq: C R P 564 or equivalent*

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.

**C R P 535: Planning in Small Towns**

(Dual-listed with C R P 435). (3-0) Cr. 3. Alt. F., offered even-numbered years.

*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.

**C R P 536: Community Economic Development**

(Dual-listed with C R P 436). (3-0) Cr. 3. Alt. F., offered odd-numbered years.

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.

**C R P 542: Site Development**

(Dual-listed with C R P 442). (3-0) Cr. 3. S.

Introduction to site development including site review. Studio project integrating concept, finance, selection, analysis, and design.

**C R P 545: Transportation Policy and Planning**

(Dual-listed with C R P 445). (3-0) Cr. 3. F.

*Prereq: Junior classification; CRP 545 prerequisite: Graduate 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.

**C R P 549: Geodesign: Planning for Sustainable Futures**

(Dual-listed with C R P 449). (3-0) Cr. 3. S.

*Prereq: CRP 251 or equivalent or permission of the 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.

**C R P 550: Making Resilient Environments**

(Cross-listed with SUS E). (3-0) Cr. 3. S.

*Prereq: senior or graduate standing.*

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, recover from, and adapt to actual or potential future adverse events.

**C R P 551: Introduction to Geographic Information Systems**

(2-2) Cr. 3. F.S.SS.

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.

**C R P 552: Geographic Data Management and Planning Analysis**

(Dual-listed with C R P 452). (2-2) Cr. 3. F.S.

*Prereq: C R P 351 or equivalent*

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.

**C R P 553: Analytical Planning/GIS**

(2-2) Cr. 3. F.

*Prereq: C R P 451/C R P 551*

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.

**C R P 554: Fundamentals of Remote Sensing and Spatial Analysis**

(Dual-listed with C R P 454). (Cross-listed with L A). (3-0) Cr. 3. S.

*Prereq: C R P 351 or equivalent or permission of the instructor*

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.

**C R P 555: Smart and Sustainable Cities**

(Dual-listed with C R P 455). Cr. 3. S.

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.

**C R P 556: GIS Programming and Automation**

(Dual-listed with C R P 456). (3-0) Cr. 3. F.

*Prereq: C R P 351 or equivalent or permission of instructor*

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.

**C R P 557: Geogames for Civic Engagement**

(Dual-listed with C R P 457). (3-0) Cr. 3. S.

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.

**C R P 558: Web Mapping and Spatial Data Visualization**

(Cross-listed with L A). (2-2) Cr. 3.

*Prereq: CRP 451/551. GEOL 452/552 or instructor permission.*

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.

**C R P 560: Social Justice and Planning**

(Dual-listed with C R P 460). (3-0) Cr. 3. Alt. S., offered even-numbered years.

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.

**C R P 561: Planning Theory**

(3-0) Cr. 3. S.

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.

**C R P 563: Planning the American Metropolis**

(3-0) Cr. 3. F.

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.

**C R P 564: Introduction to Analytical Methods for Planning**

(3-0) Cr. 3. F.

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.

**C R P 566: Policy Analysis and Planning**

(3-0) Cr. 3. F.

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.

**C R P 568: Planning and Development**

(3-0) Cr. 3. S.

*Prereq: C R P 564 or equivalent*

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.

**C R P 573: Contemporary Issues in Global Housing**

(3-0) Cr. 3. F.

*Prereq: Senior or graduate standing*

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.

**C R P 575: Grant Writing**

(Dual-listed with C R P 475). (1-0) Cr. 1. F.

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.

**C R P 578: MRED Capstone Project**

(Cross-listed with FIN). (3-0) Cr. 3.

*Prereq: Enrollment in MRED.*

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.

**C R P 579: Public Finance and Planning**

(Dual-listed with C R P 479). (3-0) Cr. 3. S.

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.

**C R P 584: Sustainable Communities**

(Dual-listed with C R P 484). (3-0) Cr. 3. S.

*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.

**C R P 590: Special Topics**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590A: Special Topics: Planning Law, Administration and Implementation**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590B: Special Topics: Economic Development**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590C: Special Topics: Urban Design**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590D: Special Topics: Housing and Urban Revitalization**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590H: Special Topics: Environmental Planning**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590I: Special Topics: Land Use and Transportation Planning**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590N: Special Topics: International Planning**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590O: Special Topics: Spatial Analytical Methods**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590P: Special Topics: Planning in Small Towns**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590Q: Special Topics: Diversity and Equity in Planning**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 590R: Special Topics: Geographic Information Systems**

Cr. 1-3. Repeatable. F.S.SS.

*Prereq: Graduate classification and written approval of instructor and department chair on required form*

**C R P 591: Environmental Law and Planning**

(Dual-listed with C R P 491). (Cross-listed with L A). (3-0) Cr. 3. S.

*Prereq: 6 credits in natural sciences*

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.

**C R P 592: Land Use and Development Regulation Law**

(3-0) Cr. 3. F.

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.

**C R P 595: Seminar in GIS Applications/Research**

(1-0) Cr. 1. F.S.

*Prereq: 9 credits in GIS Certificate program*

Discussion and demonstration of current GIS applications and research in multiple disciplines. Offered on a satisfactory-fail basis only.

**C R P 599: Professional Planning Report**

Cr. arr. Repeatable.

Independent planning project with practical application, including research element.

**Courses for graduate students:**

**C R P 699: Research**

Cr. arr. Repeatable.