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, 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.


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 advisers 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)

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<td>ENGL 150</td>
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<td>ENGL 250</td>
<td>Written, Oral, Visual, and Electronic Composition</td>
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<td>ENGL 309</td>
<td>Proposal and Report Writing</td>
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<td>or ENGL 314</td>
<td>Technical Communication</td>
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<td>Fundamentals of Public Speaking</td>
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Humanities: 9 credits; 6 credits 300-level or above

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<td>or PHIL 206</td>
<td>Introduction to Logic and Scientific Reasoning</td>
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<tr>
<td>or PHIL 230</td>
<td>Moral Theory and Practice</td>
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Social Sciences: 18 credits 300 level or above

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<tr>
<td>ECON 101</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>or ECON 102</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>POL S 215</td>
<td>Introduction to American Government</td>
<td>3</td>
</tr>
<tr>
<td>SOC 134</td>
<td>Introduction to Sociology</td>
<td>3</td>
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Nine credits from program curriculum sheet.

Total Credits 18

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

Total Credits 3-4

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

Total Credits 25

Planning Elective: 24 credits

24 credits from:

C R P 251 Fundamentals of Geographic Information Systems 3
C R P 325X 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 437X Public Participation in Planning 3
C R P 445 Transportation Policy and Planning 3
C R P 451 Introduction to Geographic Information Systems 3
C R P 449 Geodesign 3
C R P 453 Smart Cities 3
C R P 471X Real Estate Development 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

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 325X 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 453 Smart Cities 3
C R P 457X GeoGames for Civic Engagement 3
C R P 460 Social Justice and Planning 3
C R P 471X 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 573X Contemporary Issues in Global Housing 3
or ARCH 573X Contemporary Issues in Global Housing
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 570 Contemporary Urban Design Theory 3

General Electives: 24 credits

24 credits of general electives from program curriculum sheet
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<td>ANTHR 418</td>
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<td>CL ST 275</td>
<td>The Ancient City</td>
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<td>HIST 429</td>
<td>&quot;Monstrous London&quot;: London's Histories 1500-1800</td>
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<td>HIST 465</td>
<td>The American West</td>
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<td>SOC 310</td>
<td>Community</td>
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<td>SOC 331</td>
<td>Social Class and Inequality</td>
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<td>SOC 332</td>
<td>The Latino/Latina Experience in U.S. Society</td>
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<td>SOC 360X</td>
<td>Globalization and Development</td>
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<td>LA 274</td>
<td>The Social and Behavioral Landscape</td>
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<td>LA 371</td>
<td>History of Modern Landscapes, 1750 to Present</td>
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<td>URB D 521</td>
<td>Foundations of Urban Design</td>
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<td>URB D 522</td>
<td>Contemporary Urban Design Practices</td>
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<td>NREM 546</td>
<td>Integrating GPS and GIS for Natural Resource Management</td>
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<td>GEOL 452</td>
<td>GIS for Geoscientists</td>
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<td>GEOL 488</td>
<td>GIS for Geoscientists II</td>
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Community and Regional Planning, B.S.

**First Year**

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<th>Term</th>
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**Second Year**

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<td>STAT 101</td>
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**Third Year**

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<td>C R P 492</td>
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<td>C R P 383</td>
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<tr>
<td>ENGL 309 or ENGL 314</td>
<td>3 Social Science/Humanities Electives</td>
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**Fourth Year**

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<tr>
<td>C R P 432</td>
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<td>300-400 Elective</td>
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Graduate Study

The department offers the Master of Community and Regional Planning degree with areas of concentration in land use and transportation, community design and development, and rural and environmental planning. Students may design their own area of concentration with the assistance of their major professor. 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 (18-20 credits), and one of the following: capstone studio (6 credits), professional report (4 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 (POS) committee.

C R P 532  Community Planning Studio  4-6
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 of class of the student's first semester in the program to have credits waived. Students are encouraged to complete an internship in a planning office. 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). The department also participates in the interdepartmental major in transportation (see Transportation). 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/CRP), or send an email to crp@iastate.edu.

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/ (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 251: Fundamentals of Geographic Information Systems
Cr. 3. F.
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.

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.
CRP 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.

CRP 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.

CRP 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.

CRP 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.

CRP 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.

CRP 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.

CRP 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.

CRP 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.

CRP 410: Professional Work Experience  
Cr. R. F.S.SS.  
Prereq: Permission of department chair  
Approved professional work experience.

CRP 416: Urban Design and Practice  
(Dual-listed with CRP 516). (3-6) Cr. 6. S.  
Prereq: CRP 301  
Principles of urban design and their application to residential and commercial development in studio projects.

CRP 417: Urban Revitalization  
(Dual-listed with CRP 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.  

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  
(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 ESRI ArcGIS Online and GeoPlanner 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 453: Smart Cities  
Cr. 3. S.  
Introduction to concepts of smart cities. Study of novel technologies for smart governance, sustainable energy, innovative ways for citizens’ engagement, improved safety, mobility and healthy living. Examples of national and international smart cities. Living Lab experience.
C R P 454: Fundamentals of Remote Sensing  
(Dual-listed with C R P 554). (Cross-listed with L A). (3-0) Cr. 3. F.  
Prereq: CRP 351 or equivalent or permission of the instructor  
Introduction to remote sensing techniques needed for basic analysis of satellite images, including: filtering and conflation techniques, stacking, pan sharpening, image rectification, image enhancement, unsupervised and supervised classification. Practical applications in a variety of topics to understand how to interpret images.

C R P 456: GIS Programming and Automation  
(Dual-listed with C R P 556). (2-2) Cr. 3. F.  
Prereq: CRP 351 or CRP 551 or NREM 345 or NREM 546 or GEOL 552  
Introduction to automated geoprocessing in Geographic Information Systems. 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 458: Web Mapping/GIS  
(Dual-listed with C R P 558). (Cross-listed with L A). (2-2) Cr. 3.  
Prereq: CRP 451/551, LA 302. GEOL 452/552 or instructor permission.  
Use and development of online mapping tools to support participatory GIS, Volunteered Geographic Information, information sharing, geodesign and decision making actions. Geoprocessing and Web Scripting/coding and user interface design. Laboratory emphasis practical applications and uses of Web GIS.

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 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 nonprofit 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.  
Effective management of state and local government finance critical to successful community and regional planning. Economic concepts, topics in budgeting, revenue, expenditure, and financing, analytical techniques, economic impact, and case studies. Understanding of economic assessment in planning and understanding of various linkages between planning and public finance.

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  

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.S.
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
(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 ESRI ArcGIS Online and GeoPlanner 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: CRP 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
(Dual-listed with C R P 454). (Cross-listed with L A). (3-0) Cr. 3. F.
Prereq: CRP 351 or equivalent or permission of the instructor
Introduction to remote sensing techniques needed for basic analysis of satellite images, including: filtering and conflation techniques, stacking, pan sharpening, image rectification, image enhancement, unsupervised and supervised classification. Practical applications in a variety of topics to understand how to interpret images.

C R P 556: GIS Programming and Automation
(Dual-listed with C R P 456). (2-2) Cr. 3. F.
Prereq: CRP 351 or CRP 551 or NREM 345 or NREM 546 or GEOL 552
Introduction to automated geoprocessing in Geographic Information Systems. 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 558: Web Mapping/GIS
(Dual-listed with C R P 458). (Cross-listed with L A). (2-2) Cr. 3.
Prereq: CRP 451/551, LA 302. GEOL 452/552 or instructor permission.
Use and development of online mapping tools to support participatory GIS, Volunteered Geographic Information, information sharing, geodesign and decision making actions. Geoprocessing and Web Scripting/coding and user interface design. Laboratory emphasis 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 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.  
Effective management of state and local government finance critical to successful community and regional planning. Economic concepts, topics in budgeting, revenue, expenditure, and financing, analytical techniques, economic impact, and case studies. Understanding of economic assessment in planning and understanding of various linkages between planning and public finance.

C R P 584: Sustainable Communities  
(Dual-listed with C R P 484). (3-0) Cr. 3. S.  
Prereq: Junior classification  

C R P 590: Special Topics  
Cr. 1-3. Repeatable. F.S.S.  
Prereq: Graduate classification and written approval of instructor and department chair on required form
C RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 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 RP 591: Environmental Law and Planning
(Dual-listed with C RP 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 RP 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 RP 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 RP 599: Professional Planning Report
Cr. arr. Repeatable.
Independent planning project with practical application, including research element.

Courses for graduate students:

C RP 698: Capstone Studio
(1-6) Cr. 4. S.
Prereq: Permission of instructor.
Synthesis and integration of core planning knowledge into professional work in a team setting.

C RP 699: Research
Cr. arr. Repeatable.