COMMUNITY AND REGIONAL PLANNING

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, 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, 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 hour credit 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 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 cr.
Only 65 cr. from a two-year institution may apply which may include up to 16 technical cr.; 9 P-NP cr. of free electives; 2.00 minimum GPA average; Completion of all requirements listed below.

International Perspective: 3 cr.
U.S. Diversity: 3 cr.
Communication: 13 cr.
(C or better grade)

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

Total Credits 13

Humanities: 9 cr., 6 cr. 300 level or above
PHIL 201 or PHIL 206 or PHIL 230        Introduction to Philosophy, Introduction to Logic and Scientific Reasoning, Moral Theory and Practice 3
Six credits from program curriculum sheet 6

Total Credits 9

Social Sciences: 18 cr. 300 level or above
ECON 101 or ECON 102        Principles of Microeconomics, Principles of Macroeconomics 3
POL S 215        Introduction to American Government                          3
SOC 134        Introduction to Sociology                                3
Nine credits from program curriculum sheet.

Total Credits 18

Math/Physics/Biol. Sciences: 13 cr.
STAT 101 Principles of Statistics, 6 cr. in Natural Sciences, 3 cr. in Math.

Design Core: 3 cr.
DSN S 102 Design Studio I 3-4
or DSN S 183 Design Cultures

Total Credits 3-4

Community and Regional Planning Core: 24 cr.
C R P 201 The North American Metropolis 3
C R P 293 Environmental Planning 3
C R P 301 Planning Methods Studio 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 4-6
C R P 492 Planning Law, Administration and Implementation 3
C R P 331 Professional Practice Seminar 2

Total Credits 23-25

Planning Elective: 24 cr.
24 cr. from:
C R P 416 Urban Design and Practice 6
C R P 417 Urban Revitalization 3
C R P 429 Planning in Developing Countries 3
C R P 435 Planning in Small Towns 3
C R P 445 Transportation Policy and Planning 3
C R P 451 Introduction to Geographic Information Systems 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

General Electives: 24 cr.
Twenty-four 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 Systems (GIS).

The Urban Studies minor is earned by completing both CRP 201 (The North American Metropolis) and CRP 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 cr.
C R P 201 The North American Metropolis 3
C R P 291 World Cities and Globalization 3

Advanced Urban Studies: 9 cr.
C R P 293 Environmental Planning 3
C R P 301 Planning Methods Studio 4
C R P 320 Urban Geography 3
C R P 383 Theory of the Planning Process 3
C R P/ECON 376 Rural, Urban and Regional Economics 3
C R P 391 Field Travel 1-2
C R P 417 Urban Revitalization 3
C R P 427X Comparative Urbanism 3
C R P 429 Planning in Developing Countries 3
C R P 451 Introduction to Geographic Information Systems 3
C R P 457X GeoGames and Civic Engagement 3
C R P 460 Social Justice 3
C R P 471X Real Estate Development 3
C R P 484 Sustainable Communities 3
C R P 492 Planning Law, Administration and Implementation 3
C R P/ARCH 519 Middle Eastern Cities 3
C R P 521X Introduction to Historic Preservation Planning: Theory and Practice 3
C R P/POL 53X Contemporary Issues in Global Housing 3
POL S 310 State and Local Government 3
POL S 311 Municipal Government and Polics 3
POL S 334 Politics and Society 3
POL S 371 Public Organizations and Leadership 3
POL S 480 Ethics and Public Policy 3
ARCH 221 History of Architecture I 3
ARCH 222 History of Architecture II 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
SOC 310 Community 3
SOC 331 Social Class and Inequality 3
SOC 332 The Latino/Latina Experience in U.S. Society 3
SOC 360 Globalization and Development 3
SOC 435 Urban Sociology 3
ANTHR 418 Global Culture, Consumption and Modernity 3
### The Geographic Information Systems (GIS) minor is earned by taking CRP 251 and CRP 351, plus 9 additional credit 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 GIS minor is open to students in any college and any major.

**Foundation of GIS: 6 cr.**
- CRP 251X Introduction to Geographic Information Systems 3
- CRP 351X Intermediate Geographic Information Systems 3

**GIS Tools and Techniques: 9 cr.**
- CRP 452 Geographic Data Management and Planning Analysis 3
- CRP 454 Fundamentals of Remote Sensing 3
- CRP 456 GIS Programming and Automation 3
- CRP 457X GeoGames for Civic Engagement 3
- CRP 458 Web Mapping/GIS 3
- NREM 345 Natural Resource Photogrammetry and Geographic Information Systems 3
- NREM 546 Integrating GPS and GIS for Natural Resource Management 3
- GEOG 452 GIS for Geoscientists 3
- GEOG 488 GIS for Geoscientists II 3

### 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 M.C.R.P. 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 (21 credits), electives (21-23 credits) and one of the following: capstone studio (4 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.

<table>
<thead>
<tr>
<th>CRP Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CRP 532</td>
<td>Community Planning Studio</td>
<td>4</td>
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<tr>
<td>CRP 561</td>
<td>Planning Theory for Practice</td>
<td>3</td>
</tr>
<tr>
<td>CRP 564</td>
<td>Introduction to Analytical Methods for Planning</td>
<td>3</td>
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<tr>
<td>CRP 566</td>
<td>Policy Analysis and Planning</td>
<td>3</td>
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<tr>
<td>CRP 568</td>
<td>Planning and Development</td>
<td>3</td>
</tr>
<tr>
<td>CRP 592</td>
<td>Land Use and Development Regulation Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Admission to the M.C.R.P. program is by application to the department and to the Graduate College. Students with a Bachelors 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 (M.C.R.P./M.Arch.), business administration (M.C.R.P./M.B.A.), landscape architecture (M.C.R.P./M.L.A.) and sustainable agriculture (M.C.R.P./M.S.). The department also participates in the interdisciplinary 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/communityplanning (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 (http://www.design.iastate.edu/CRP).

CRP currently offers several courses via distance learning to graduates and planning professionals interested in expanding their knowledge of planning. Further details of current distance course offerings may be found on the CRP website and on the ISU Continuing Education website. For more information, send an e-mail to crp@iastate.edu.

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 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: Planning Methods Studio**
(3-2) Cr. 4. S.
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 330: Practicum**
Cr. 1-3. Repeatable. 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 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.S.
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 201
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 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, 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: C R P 201 or 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 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: C E 350 or equivalent. Note: 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 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 451 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
(Cross-listed with L A). (3-0) Cr. 3. F.
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: one of the following: CRP 451, CRP 551, NREM 345, NREM 546, 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 459: Digital Design Methods for Landscape Architecture
(Dual-listed with C R P 559). (Cross-listed with L A). (3-0) Cr. 3. S.
Introduction to digital tools used by landscape architects for design
communication, visualization, and design development. Include 2D
drafting, 3D modeling, image CAD, geospatial data handling (GIS), and
animation. Emphasis on concepts and workflow interoperability.

C R P 460: Social Justice and Planning
(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 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.
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
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.S.S.
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.S.S.
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: C R P 383
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.S.S.
Prereq: Permission of department chair
Approved professional work experience.

C R P 516: Urban Design and Practice
(Dual-listed with C R P 416). (3-6) Cr. 6. S.
Prereq: C R P 201
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 519: Middle Eastern Cities
(Cross-listed with ARCH). (3-0) Cr. 3.
Prereq: Graduate or Senior classification
Introduction to basic academic writings on Middle Eastern cities in addition to other contemporary cultural productions of the region. Study of various aspects of Middle Eastern life and the built environments that this life produces.
Meets International Perspectives Requirement.

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. F.S.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
(1-6) Cr. 4. 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: C R P 201 or 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: C E 350 or equivalent. Note: 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 551: Introduction to Geographic Information Systems  
(2-2) Cr. 3. F.S.S.  
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 451 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 556: GIS Programming and Automation  
(Dual-listed with C R P 456). (2-2) Cr. 3. F.  
Prereq: one of the following: CRP 451, CRP 551, NREM 345, NREM 546, 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 559: Digital Design Methods for Landscape Architecture  
(Dual-listed with C R P 459). (Cross-listed with L A). (3-0) Cr. 3. S.  
Introduction to digital tools used by landscape architects for design communication, visualization, and design development. Include 2D drafting, 3D modeling, image CAD, geospatial data handling (GIS), and animation. Emphasis on concepts and workflow interoperability.

C R P 561: Planning Theory for Practice  
(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 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.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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.S.S.
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 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 R P 699: Research
Cr. arr. Repeatable.