CRP 201. Basic Graphic Skills. 4 units
Term Typically Offered: F
Basic techniques used in graphic communication for representation of the real world on two-dimensional planes. Use of scale, drawing conventions, orthographic and isometric projections, perspective drawings. Basic design and site analysis skills. Sketching, delineation and rendering including the use of black and white and color techniques. 4 laboratories.

CRP 202. Urban Design Studio I. 4 units
Term Typically Offered: W
Prerequisite: CRP 201, CRP 211 or consent of instructor.
Exploring elements and principles of environmental design. Understanding the form and character of the designed urban environment. Introduction to problem analysis and problem solving in environmental design. Implications of design decisions and solutions on urban context. Assignments of object, project and system scale in an urban context. 4 laboratories.

CRP 203. Urban Design Studio II. 4 units
Term Typically Offered: SP
Prerequisite: CRP 202 and CRP 204.
Applications of basic design fundamentals and skills to the design of environments through design exercises applied to planning. Problem analysis and problem solving skills as applied to environmental design issues. 4 laboratories.

CRP 204. Theories and Methods of Urban Design. 3 units
Term Typically Offered: W
Prerequisite: CRP 201. Corequisite: CRP 202.
Definition/nature of urban design: a typology of procedures and products. Urban design as a field between planning, architecture, and landscape architecture. Visual assessment and townscape movement. Environmental perception, behavior and spatial fit. Typo-morphology and the architecture of the city. 1 lecture, 2 activities.

CRP 211. Cities: Form, Culture and Evolution. 4 units
Term Typically Offered: W
Historical overview of the evolution of cities - how the form and function of cities evolved among different societies from antiquity to contemporary times. Includes early cities in Mesopotamia, Central America; Greece and Rome; Renaissance, Baroque; and North and South America. 4 lectures.

CRP 212. Introduction to Urban Planning. 4 units
Term Typically Offered: F, W, SP
Understanding the issues of contemporary urban growth and change. Development of theories of urban planning and design. Introduction to zoning, planning regulations and codes, and professional practice. Relationship of environmental design disciplines, citizen groups, and individuals to urban planning. 4 lectures.

CRP 213. Population, Housing and Economic Applications. 4 units
Term Typically Offered: F
Prerequisite: CRP 212.
Collection, organization, and presentation of information and data related to population, housing and employment. Analytical applications to estimate population over time, housing demand by type and income and employment by standard classification. Application of urban economic theory related to jobs and housing. 3 lectures, 1 laboratory.

CRP 214. Land Use and Transportation Studies. 4 units
Term Typically Offered: SP
Prerequisite: CRP 212.
How cities and regions work. Relationship between human activities and patterns of land use and circulation. Spatial analysis and location theories. Methods for conducting studies to describe, analyze, and map land uses. Regional-scale transportation analysis, traffic impact studies, and multimodal transportation plans. 3 lectures, 1 activity.

CRP 215. Planning for and with Multiple Publics. 4 units
Term Typically Offered: SP
Prerequisite: Completion of GE Area D1. Recommended: ES 112.
How the social/spatial relationships among racial/ethnic and gender groups are expressed in terms of human settlement patterns, civic involvement and everyday negotiations. Ways in which segregation and marginalization are expressed in western and non-western contexts. 4 lectures. Crosslisted as CRP/ES 215. Fulfills USCP.

CRP 216. Representing the City. 2 units
Term Typically Offered: F
Introduction to the understanding and the representation of the city through different analog and digital media. 1 lecture, 1 laboratory.

CRP 270. Selected Topics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Open to undergraduate students and consent of instructor.
Directed group study of selected topics. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 lectures.

CRP 314. Planning Theory. 4 units
Term Typically Offered: W
Prerequisite: CRP 212.
Theories of planning. Role of planner in society, purpose of planning, administrative framework in which planning takes place. Alternative approaches to planning, values, ethics in planning. Activities aimed at exploring communicative and participatory aspects of planning theory. 3 lectures, 1 activity.

CRP 315. Fiscal and Project Feasibility. 4 units
Term Typically Offered: W
Prerequisite: Completion of GE Area D2.
Analysis of the revenue streams and costs involved in project development. Impact analysis of costs and revenues on private and public sectors included. Construction of pro-formas for various project types. 3 lectures, 1 laboratory.
CRP 325. Reflections on Biking, Walking and the City. 4 units
GE Area D5
Term Typically Offered: SP
Prerequisite: Junior standing; completion of GE Area A with grades of C- or better; completion of one course in GE Area B1 with a grade of C- or better; and one lower-division course in GE Area D.
Study of the design of cities for walking and bicycling and its importance to the future of transportation and the resilience of cities. Reflection on how bicycles and pedestrians shape the urban environment through literature, music, policy, and design practices. 4 lectures. Fulfills GE Area D5.

CRP 334. Cities in a Global World. 4 units
GE Area D5
Term Typically Offered: W
Prerequisite: Junior standing; completion of GE Area A with grades of C- or better; completion of one course in GE Area B1 with a grade of C- or better; and two lower-division courses in GE Area D.
Examination of the changes in the social and spatial organization of urban settlements in the twenty-first century caused by the urbanization and globalization processes. Comparative analysis of the traditional and contemporary cities in the Pacific Rim, South America and Eastern Europe. 4 lectures. Fulfills GE Area D5.

CRP 336. Introduction to Environmental Planning. 4 units
Term Typically Offered: F
Prerequisite: CRP 212.
Examination of the challenges that arise when human and natural systems interact and the tools planners have to manage this interaction. Relevant principles from a variety of disciplines are used to assess environmental problems and identify solutions in human-dominated systems. 4 lectures.

CRP 338. Digital Cities. 4 units
GE Area B7; GE Area F
Term Typically Offered: W, SP
Prerequisite: Junior standing; completion of GE Area A with grades of C- or better; completion of GE Area B1 with a grade of C- or better in at least one of the courses; and completion of GE Areas B2, B3, and B4.
Explores changes in urban form and urban experience associated with advances in digital technology. Implications for the design of places and the distribution of economic and social benefit. Lecture-discussions and opportunities to explore technology initiatives in community building. Course may be offered in classroom-based or online format. 4 lectures. Fulfills GE Area B7 or GE Area F.

CRP 341. Urban Design Studio III. 4 units
Term Typically Offered: SP
Prerequisite: CRP 203, CRP 213, or CRP 214.
Urban design theories and methods related to planning and urban development. Integration of circulation, environmental, land-use, and design aspects. Infill or new development projects at the scale of a neighborhood, large PUD, complex circulation corridor, small town or planned community. 4 laboratories.

CRP 342. Environmental Planning Methods. 4 units
Term Typically Offered: W
Prerequisite: CRP 336.
Case studies and applications of theory and methods to regional and environmental systems. Interrelationships between natural, economic, and social and political systems. Application of California Environmental Quality Act and environmental impact assessment methods. Environmental equity and sustainable bioregions. 2 lectures, 2 laboratories.

CRP 351. Introduction to Emergency Management in California. 3 units
Term Typically Offered: TBD
Prerequisite: Completion of GE Area B3 or D.
Emergency management emphasizing the Standardized Emergency Management System (SEMS) and Emergency Operations Center (EOC) operations. Earthquake hazard used as the case to explore potential wide geographic impacts, multiple secondary hazards, and multidisciplinary problem-solving methods in natural disasters faced by local governments and communities. 2 lectures, 1 activity. Crosslisted as CRP/NR 351.

CRP 400. Special Problems for Advanced Undergraduates. 1-2 units
Term Typically Offered: F, W, SP
Prerequisite: Consent of instructor.
Individual or group investigation, research, studies, or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

CRP 401. Disaster Recovery. 3 units
Term Typically Offered: TBD
Prerequisite: CRP/NR 351.
Strategies and procedures for public sector management of recovery from disasters. Understanding the role of, and relationship between, federal, state and local agencies to provide assistance to individuals and communities in the post-disaster environment. Issues in the recovery process. 2 lectures, 1 activity. Crosslisted as CRP/NR 401.

CRP 402. Contemporary Urban Design. 4 units
Term Typically Offered: TBD
Prerequisite: Completion of GE Area A1 with a grade of C- or better and CRP 341; or graduate standing.
Study of contemporary urban design through the detailed examination of major city/country case studies. Analysis of the cultural, social and political factors influencing the practice of urban design and its major trends in different countries. 4 lectures.

CRP 404. Environmental Law. 3 units
Term Typically Offered: SP
Prerequisite: Junior standing.
Detailed examination of the law governing use and protection of natural resources with focus on the legal institutions entrusted with the public duty of protecting the environment. 3 lectures. Crosslisted as CRP/NR 404.
CRP 408. Water Resource Law and Policy. 3 units
Term Typically Offered: W
Prerequisite: Junior standing.
Detailed examination of the various legal systems of water use, regulation and management in California and the United States. Discussion on the key concepts and principles of state, federal and interstate water quantity and quality control, focusing on issues and problems, why conflicts occur and how solutions evolve. 3 lectures. Crosslisted as CRP/NR 408.

CRP 409. Planning Internship. 2 units
CR/NC
Term Typically Offered: F, SP
Prerequisite: Consent of instructor.
Work experience as a supervised employee in a planning-related agency or private firm. Prior contract specifying the product of internship required between student, agency and faculty. Sixty hours work experience for two units of credit. Credit/No Credit grading.

CRP 410. Community Planning Laboratory I. 4 units
Term Typically Offered: F
Prerequisite: CRP 336, CRP 341 or consent of instructor.
Application of planning theory and methods to the analysis and creation of community plans. Interrelationships in the natural and built environments related to land use, circulation, social and other conditions. Includes field trips and individual, team and interdisciplinary approaches. 4 laboratories.

CRP 411. Community Planning Lab II. 4 units
Term Typically Offered: W
Prerequisite: CRP 410, or consent of instructor.
Continuation of CRP 410. Application of planning theory and methods to the analysis and creation of community plans. Interrelationships in the natural and built environments related to land use, circulation, social and other conditions. Includes field trips and individual, team and interdisciplinary approaches. 4 laboratories.

CRP 412. Plan Implementation. 4 units
Term Typically Offered: SP
Prerequisite: CRP 212.
Theory and practice of plan implementation. Regulation and nonregulatory approaches to plan implementation, including development regulation, economic development, growth management, habitat conservation planning, capital improvement planning, redevelopment programs, and transportation system management. The California Specific Plan will serve as the course model. 4 lectures.

CRP 420. Land Use Law. 4 units
Term Typically Offered: W
Prerequisite: CRP 212 and upper division standing.
Public controls protecting natural environmental systems. Land use and environmental controls. Review of control mechanisms. State and federal legislation. Legal implications of controls, public planning and policy issues. 4 lectures.

CRP 426. Planning Healthy Communities. 4 units
Term Typically Offered: TBD
Prerequisite: Junior standing; completion of GE Area A with grades of C- or better; and completion of two lower division GE Area D courses.
Introduction to advanced topics on the relationship between the built environment and public health, assessment methods, and planning approaches to creating healthier communities. 4 lectures.

CRP 428. International Planning and Development. 4 units
Term Typically Offered: F
Prerequisite: Junior standing. Recommended: CRP 334.
Comparative assessment of planning for international development to improve the quality of life of people in cities and regions around the world. Critical analysis of theories and practices underlying programs and projects and their pertinence to the United States. 4 lectures.

CRP 430. Professional Planning Practice. 3 units
Term Typically Offered: F
Prerequisite: CRP 212.
Relationships of planning organizations to other governmental bodies, public agencies and citizen groups. Working in a public planning agency and private practice. Current topics in planning practice. 3 lectures.

CRP 435. Transportation Theory. 4 units
Term Typically Offered: F
Prerequisite: CRP 212, senior standing, or graduate standing.
Circulation and transportation elements of the General Plan. Transportation planning theory, methods and tools related to systematic analysis of city and regional transportation problems including environmental impact assessment. Application of techniques for assessing transportation systems, gravity models, route selections, land use models and relationship to transportation. 3 seminars, 1 activity.

CRP 436. Collaborative Planning. 4 units
Term Typically Offered: TBD
Prerequisite: CRP 212 or graduate standing.
Focus on processes and skills of citizen participation and consensus building. Application of mediation and negotiation techniques. Use of collaboration in forming visions of the future and reaching agreements among multiple interests. Use of group process skills to establish effective communication and agreements. Organizing and operating public meetings. 3 lectures, 1 laboratory.

CRP 438. Pollution Prevention and Control. 4 units
Term Typically Offered: TBD
Prerequisite: Senior standing or graduate standing.
Interdisciplinary exploration of policy and planning associated with pollution prevention and control, including institutional, legal, economic, political, social, and technology-related aspects. Includes hands-on activity in small groups. 4 lectures.
CRP 440. Climate Action Planning. 4 units
Term Typically Offered: SP
Prerequisite: CRP 212 or graduate standing. Recommended: CRP 336.
Introduction of the planning role in reducing greenhouse gas emissions and adapting to climate change. Basic climate science, greenhouse gas emissions inventories, politics of climate change, and federal/state policy. Focus on development and implementation of local climate action plans. 4 lectures.

CRP 442. Housing and Planning. 4 units
Term Typically Offered: W
Prerequisite: Junior standing.
Understanding housing issues, policies and programs from a planning perspective. Analysis of the economic underpinnings of land markets and housing markets, housing plans, finance, public programs, affordable housing. 4 seminars.

CRP 445. Planning and Urban Ecology. 4 units
Term Typically Offered: TBD
Prerequisite: Upper division or graduate standing.
Introduction to urban ecology as an organizing framework for addressing environmental problems. Provides the opportunity to explore an urban ecological research question through quantitative stream assessment and qualitative social survey data collection and analysis. 3 lectures, 1 laboratory.

CRP 446. Development Review and Entitlement. 4 units
Term Typically Offered: TBD
Prerequisite: Upper division standing or graduate standing.
Application of zoning regulations, subdivision ordinances, design standards, building codes, exactions, fees, and related requirements within the development review process leading to land use entitlement. Land development is evaluated from permit application submittal to condition compliance during the plan check, construction, and operational phases of a project. 4 lectures.

CRP 448. Principles of Urban Design. 4 units
Term Typically Offered: W
Prerequisite: CRP 341 or graduate standing.
Introduction to philosophies and theories of urban design. Holistic comprehension of forces generating the city form. Exploration of evaluation criteria and critical analysis of the built environment. Cultural, economic, political, behavioral, visual, perceptual, and morphological aspects of urban form. 4 seminars.

CRP 452. Community Design Methods. 4 units
Term Typically Offered: TBD
Prerequisite: CRP 201 and CRP 202, Upper division or graduate standing.
Introduction to community design as an interdisciplinary subject. Focus on the active involvement of end-users in the creation and management of built environments. Principles and techniques of participatory design and planning, including charrettes, design games and participatory technologies. Demonstration of participatory techniques through case studies and application. 3 lectures, 1 laboratory.

CRP 456. Web Technologies for Planning. 2 units
Term Typically Offered: SP
Prerequisite: CRP 212, or graduate standing.
Introduction to the use of web technologies for planning and community engagement. Includes web publishing, mapping, surveys, video, collaboration and social media tools. Course may be offered in classroom-based or online format. 2 lectures.

CRP 457. GIS Applications in Planning. 3 units
Term Typically Offered: F
Prerequisite: CRP 216 and junior standing, or graduate standing.
GIS applications using computer-based systems in gathering, managing and analyzing information pertinent to planning. Development of skills in systematic data acquisition, processing and maintenance with applied planning problems within the convenient medium of GIS and general information systems. 2 seminars, 1 laboratory.

CRP 458. Local Hazard Mitigation Planning and Design. 4 units
Term Typically Offered: F
Prerequisite: GE Areas D2, D3 and F or graduate standing.
Creation of safer, more resilient cities through systematic application of urban disaster risk reduction and regeneration planning principles and methods. Integration of insights from the design, resource management, and urban administration professions for minimizing disaster losses and improving recovery activities. 4 lectures.

CRP 461. Senior Project I. 2 units
Term Typically Offered: F, W, SP
Prerequisite: CRP 341, CRP 342.
Research and problem analysis in planning. Selection and completion of a project under faculty supervision. Projects typical of problems addressed in planning practice. Project results presented in a formal report. To be completed in two quarters. Minimum 120 hours time.

CRP 462. Senior Project II. 2 units
Term Typically Offered: F, W, SP
Prerequisite: CRP 410.
Research and problem analysis in planning. Selection and completion of a project under faculty supervision. Projects typical of problems addressed in planning practice. Project results presented in a formal report. To be completed in two quarters. Minimum 120 hours time.

CRP 463. Senior Project Professional Practice. 4 units
Term Typically Offered: SP
Prerequisite: CRP 410 and senior standing.
Practical applications of city and regional planning theory and practice solving problems related to the built environment. Assembly of project documents and reports that meet the senior project requirement. 4 seminars.

CRP 470. Selected Advanced Topics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of instructor.
Directed group study of selected topics for advanced students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 lectures.
CRP 471. Selected Advanced Laboratory. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of instructor.

Directed group laboratory study of selected topics for advanced students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 laboratories.

CRP 472. Planning Colloquium. 1 unit
CR/NC
Term Typically Offered: TBD
Prerequisite: Upper division standing or graduate standing.

Lecture and discussion by faculty members and invited guests on controversial or topical planning related subject matter at campus and/or off-campus locations. Topics to be announced in advance by CRP Department. Total credit limited to 3 units. Credit/No Credit grading only. 1 seminar.

CRP 483. Special Studies in City and Regional Planning. 1-12 units
Term Typically Offered: TBD
Prerequisite: Upper division or graduate standing.

Study of special issues and problems through field research and other forms of investigation and involvement in an off-campus setting. Requirements determined prior to individual project through contractual arrangement between the student and the department. Departmental Off-Campus Study Program guidelines apply. The Class Schedule will list topic selected.

CRP 500. Individual Study. 2-3 units
Term Typically Offered: F, W, SP
Prerequisite: Graduate standing with minimum of 12 core units.

Independent research, studies, or surveys of selected subjects. Total credit limited to 9 units.

CRP 501. Foundations of Cities and Planning. 4 units
Term Typically Offered: F
Prerequisite: Graduate standing.

Origins and evolutionary stages of settlement patterns and the use of land and natural environment. Changing spatial structure in the development of cities and regions. Beginnings and the historical development of the planning profession. 4 lectures.

CRP 504. Sustainable Communities. 4 units
Term Typically Offered: F
Prerequisite: Graduate standing.

Introduction to the theory and practice of sustainable communities. Addresses creating communities that foster economic and environmental health, social equity, and citizen participation. Promotes comprehensive planning through urban design, transportation, environment, and community development. Includes hands-on learning and field study. 3 seminars, 1 laboratory.

CRP 509. Professional Development. 1-3 units
CR/NC
Term Typically Offered: TBD
Prerequisite: Graduate standing.

Professional development course, including environmental assessment workshop, applied research workshop, internship seminar, and other events. Total credit limited to 3 units. Credit/No Credit grading only. 1-3 activities.

CRP 510. Planning Theory. 4 units
Term Typically Offered: F
Prerequisite: Graduate standing or consent of instructor.


CRP 512. Introduction to Visual Communication and GIS. 4 units
CR/NC
Term Typically Offered: W
Prerequisite: Graduate standing.

Introduction to geographic information systems (GIS) as a tool for analyzing and managing spatial information pertinent to planning. Introduction to various drawing media and delineation techniques for planners, including three-dimensional visualization and graphic skills. Integration of visual and digital media in presentations. Credit/No Credit grading only. 4 laboratories.

CRP 513. Planning Research and Analysis. 4 units
Term Typically Offered: SP
Prerequisite: Graduate standing.

Application of research design to planning issues. Comparison of case study, comparative and problem-solving methods. Primary and secondary data sources, including field survey techniques. 4 seminars.

CRP 516. Demographic and Analytic Tools. 4 units
Term Typically Offered: W
Prerequisite: Graduate standing or consent of instructor.

Problem recognition, data selection, analysis and synthesis with applications of system design, statistical techniques and symbolic modeling to urban design and regional growth and development policies. 3 seminars, 1 laboratory.

CRP 518. Policy Development. 4 units
Term Typically Offered: F
Prerequisite: CRP 501.

Analysis of the social, economic, environmental, political contexts of public policy decisions. Public policy issues and use of concepts and tools related to monitoring and assessment. 4 lectures.

CRP 520. Feasibility Studies. 4 units
Term Typically Offered: TBD
Prerequisite: CRP 501 or consent of instructor.

Fundamental analysis for assessing feasibility of public and private development projects. Principles and techniques for analyzing markets and assessing cash flow for individual projects. Economic, fiscal and tax impacts as factors determining public participation in private projects. 4 seminars.
CRP 525. Plan Implementation. 4 units
Term Typically Offered: SP
Prerequisite: Graduate standing or consent of instructor.

Theory and practice of plan implementation. Regulatory and non-regulatory frameworks for plan implementation. Growth management, development regulation, capital improvement programs, redevelopment. 4 seminars.

CRP 530. Planning Agency Management. 4 units
Term Typically Offered: SP
Prerequisite: CRP 501 or graduate standing.

Preparation for professional practice in public planning agencies and private firms. Applications of organization theory to planning agencies and firms. Work programs, staff development, budgets, contracting, proposal preparation, conflict management. Relationships with other agencies and firms, clients, public and media. 4 seminars.

CRP 535. Land Use and Planning Law. 4 units
Term Typically Offered: W
Prerequisite: Graduate standing, or consent of instructor.

The role of law in the planning and regulation of land use. Constitutional constraints on land use regulation. Legal and policy issues for environmental protection and public administration. Relevant legislation and case law. 4 lectures.

CRP 545. Principles of Environmental Planning. 4 units
Term Typically Offered: W
Prerequisite: Graduate standing or consent of instructor.

Environmental planning as a field of inquiry and action. Several parallel streams of knowledge are pursued: environmental planning theory; ecological process and assessment in human-dominated settings; environmental impact assessment; and the review and application of environmental planning tools. 3 seminars, 1 laboratory.

CRP 552. Community and Regional Planning Studio I. 4 units
Term Typically Offered: F
Prerequisite: CRP 501, CRP 525, or consent of instructor.

Application of planning theory and methods to community and regional planning projects. Structured for research, analysis, synthesis, and implementation practice. Interrelationships of natural and built environments, transportation systems, and economic and social conditions at various planning scales. Includes field trips and individual, team and interdisciplinary approaches. 2 seminars, 2 laboratories.

CRP 554. Community and Regional Planning Studio II. 4 units
Term Typically Offered: W
Prerequisite: CRP 552.

Application of planning theory and methods to community and regional planning projects. Structured for research, analysis, synthesis, and implementation practice. Interrelationships of natural and built environments, transportation systems, and economic and social conditions at various planning scales. Includes field trips, and individual, team and interdisciplinary approaches. 2 seminars, 2 laboratories.

CRP 556. Community and Regional Planning Studio III. 4 units
Term Typically Offered: SP
Prerequisite: CRP 554, or consent of instructor.

Application of planning theory and methods to community and regional planning projects. Individual faculty-assigned laboratory work leading to the completion of a professional quality project focused on a real-world planning task. Structured for research, analysis, synthesis and implementation practice. 3 seminars and supervised work.

CRP 570. Selected Topics in Planning. 1-4 units
Term Typically Offered: TBD
Prerequisite: Graduate standing or consent of instructor.

Directed group study of selected planning topics. Total credit limited to 12 units. 4 seminars.

CRP 571. Selected Advanced Laboratory. 1-4 units
Term Typically Offered: TBD
Prerequisite: Graduate standing or consent of instructor.

Directed group laboratory study of selected topics for advanced students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 laboratories.

CRP 596. Professional Project. 2-4 units
Term Typically Offered: F, W, SP
Prerequisite: CRP 513, and consent of the graduate program coordinator.

Individual research under the supervision of the faculty, leading to completion of a professional project based on a real world planning task or carefully constructed simulation. Must be taken in all quarters requiring supervision; minimum of 6 units required for degree. Total credit limited to 8 units.

CRP 599. Thesis. 2-4 units
Term Typically Offered: F, W, SP
Prerequisite: CRP 513, and consent of the graduate program coordinator.

Individual research under the general supervision of the faculty, leading to a graduate thesis. Must be taken in all quarters requiring supervision; minimum of 6 units required for degree. Total credit limited to 8 units.