Courses

UPP 403. Planning Practices for Great Cities. 3 or 4 hours.
Patterns of city growth, physical, socio-economic, and environmental issues. Contemporary planning issues. Future of cities. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Advanced undergraduate standing or consent of the instructor.

UPP 405. Researching the City. 0-4 hours.
Addresses basic issues of quantitative reasoning in planning and policy, including use of data sources, organizing, sorting, managing, and analyzing data. Emphasizes presenting findings visually and in writing. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Field work required. Prerequisite(s): Grade of C or better in ECON 120; and junior standing or above; or consent of the instructor. Recommended background: Grade of B or better or concurrent registration in US 202. To be properly registered, students must enroll in one Lecture and one Discussion/Recitation.

Comparative investigation of urban, economic, social, and political issues in the two global cities. Includes classes, study, and living in London. Course Information: Field work required. Prerequisite(s): Junior standing or above and selection by the Office of Study Abroad admission committee.

UPP 458. Introduction to Geospatial Analysis and Visualization I. 2 hours.
A basic introduction to the softwares used and rules governing effective communication of geospatial and other data in visual format. Course Information: Extensive computer use required. Meets eight weeks of the semester. Credit is not given for UPP 458 if the student has credit in UPP 460. Prerequisite(s): Graduate standing.

UPP 459. Introduction to Geospatial Analysis and Visualization II. 2 hours.
In-depth instruction in softwares used and rules governing effective communication of geospatial and other data in visual format. Exploration of design principles for communicating complex information in a variety of formats. Course Information: Credit is not given for UPP 459 if the student has credit in UPP 460. Extensive computer use required. Meets eight weeks of the semester. Prerequisite(s): Grade of B or better in UPP 458; and senior standing or above; or consent of the instructor.

UPP 460. Introduction to Geospatial Analysis and Visualization. 3 or 4 hours.
Exploration of geospatial analysis and visualization theory and tools; how to appropriately choose and use tools. Cognition, communication, modeling, cartography, web authoring, 3-D visualization, and aerial and satellite photography. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Centrino 2 Duo processor, 2 GB RAM and 100 GB hard drive minimum recommendations. Prerequisite(s): Junior standing or above; and approval of the department. Priority registration will be given to students admitted to the campus certificate program in Geospatial Analysis and Visualization.

UPP 461. Geographic Information Systems for Planning and Policy. 3 or 4 hours.
Applications of Geographic Information Systems to understanding spatial relationships for their importance in planning use and policy making across a variety of disciplines/policy sectors. Course Information: Same as GEOG 469. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Junior standing or above; and consent of the instructor. Priority registration will be given to students admitted to a campus certificate program in Geospatial Analysis and Visualization.

UPP 462. Intermediate GIS for Planning and Policy. 3 or 4 hours.
To reinforce and expand on topics taught in UPP 461 and introduce more advanced features of GIS and its applications to urban planning and policy. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): Junior standing or above; and approval of the department. Priority registration will be given to students admitted to the campus certificate program in Geospatial Analysis and Visualization.

UPP 463. Complexity-based Models for Planning and Policy. 3 or 4 hours.
Introduction to complexity-based models and their possible applications to a range of planning and public policy issues. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): Junior standing or above; and approval of the department. Priority registration will be given to students admitted to the campus certificate program in Geospatial Analysis and Visualization. Recommended background: Experience in object-oriented programming is helpful but not required.

UPP 464. Advanced Visualization Techniques. 3 or 4 hours.
Specialized computational abilities for various planning areas including: database and spreadsheet analyses, spatial information systems, imageries and image editing, 3D modeling and virtual reality, hypermedia or multimedia, and the internet. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): Junior standing or above; and approval of the department. Priority registration will be given to students admitted to the campus certificate program in Geospatial Analysis and Visualization.

UPP 465. Topics in Geospatial Analysis and Visualization. 0-5 hours.
Intensive exploration of specialized topics in Geospatial Analysis and Visualization. Course Information: 1 to 4 undergraduate hours. 2 to 5 graduate hours. May be repeated to a maximum of 9 hours for undergraduate students and 12 hours for graduate students. Students may register in more than one section per term. Extensive computer use required. Prerequisite(s): Grade of B or better in UPP 460; or Grade of B or better in UPP 461; and appropriate score on the department placement test; and senior standing or above; and consent of the instructor.

UPP 470. Cohort Seminar for Urban Developers. 3 or 4 hours.
Application of the financial calculator, use of spreadsheets, and other tools commonly used in real estate-based urban development projects. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Consent of the instructor.
UPP 471. Housing and Community Development for Urban Developers. 3 or 4 hours.
Housing policy at federal, state and local levels affecting urban housing markets. Emphasis on assessment of market conditions affecting community development decisions. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): UPP 470 or consent of the instructor.

UPP 472. Development Finance For Urban Developers. 3 or 4 hours.
Key financial principles of real estate development, particularly those related to the financing of affordable housing. How to develop a real estate pro forma. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Consent of the instructor.

UPP 473. Organizational Essentials for Urban Developers. 3 or 4 hours.
Theory and practice of management in public and non-profit settings. Focus on developing communication, leadership and legal skills for each step in development. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Consent of the instructor.

UPP 474. Community Development Process for Urban Developers. 3 or 4 hours.
Developing affordable housing: development team, acquisition strategy, legal issues, construction management and project sustainability, as it pertains to different types of housing developments. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Consent of the instructor.

UPP 475. Sustaining the Housing for Urban Developers. 3 or 4 hours.
Introduces students to a range of management issues: property management and maintenance, resident relations and services, and financial asset management as it relates to sustaining affordable housing. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Consent of the instructor.

UPP 492. Topics in Urban and Public Affairs. 3 hours.
In depth study of selected issues of urban and public affairs. Course Information: May be repeated to a maximum of 6 hours. Students may register for more than one section per term. Prerequisite(s): Admission to the BA Program in Urban and Public Affairs or consent of the instructor.

UPP 493. Topics in Urban Planning and Policy. 1-4 hours.
Intensive analysis of selected planning problems or policy issues. Course Information: May be repeated to a maximum of 12 hours. Students may register for more than one section per term. Prerequisite(s): Junior standing or above; and consent of the instructor.

UPP 494. Senior Capstone Experience in Urban and Public Affairs I. 3 hours.
A selection of a capstone topic and introductory research on the topic. Course Information: Field work required. Prerequisite(s): Senior standing or above; Admission to the BA in Urban and Public Affairs Program or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Conference.

UPP 500. History and Theory of Urban Planning. 4 hours.
Course surveys the history and theory of the planning profession and introduces major currents of thought and innovation that have guided and continue to shape theoretical and practical planning problems. Course Information: Prerequisite(s): Admission to the Urban Planning and Policy program or consent of the instructor.

UPP 501. Urban Space, Place and Institutions. 4 hours.
Students will learn to use a variety of social science disciplines to explain and interpret the form and function of urban space, including urbanization, suburbanization, regionalism, globalization, and sustainability. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or the Master of Arts in Real Estate; or consent of the instructor.

UPP 502. Planning Skills: Computers, Methods and Communication. 4 hours.
Introduction to methods for collecting, analyzing, and presenting socio-economic and spatial data with a focus on computer-based methods and an emphasis on effective communication of findings and dispute resolution strategies. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or consent of the instructor.

UPP 505. Plan Making. 4 hours.
Lecture to instruct students on making plans. Students learn to combine knowledge, skills and values in each of three major areas of plan making: framing problems, composing alternatives and devising implementation strategy. Course Information: Prerequisite(s): Admission to the Master of Urban Planning and Policy program and credit or concurrent registration in UPP 502; or consent of the instructor. Corequisite(s): Requires concurrent registration in UPP 506.

UPP 506. Plan-Making Studio. 4 hours.
Instructs students on making plans. Students learn to combine knowledge, skills and values in each of these major areas of plan making: framing problems, composing alternatives and devising implementation strategy. Course Information: Prerequisite(s): Admission to the Master of Urban Planning and Policy program and credit or concurrent registration in UPP 502; or consent of the instructor. Corequisite(s): Requires concurrent registration in UPP 505.

UPP 507. Computer Topics in Urban Planning. 4 hours.
Specialized computational abilities for various planning areas including data base, project scheduling, statistics, graphics, and simulations. Topics will vary each semester. Course Information: Prerequisite(s): Graduate standing in the Urban Planning and Policy program.

UPP 508. Global Urbanization and Planning. 4 hours.
A historical overview of urbanization; development of urban places worldwide; socio-economic influences and planning practices shaping global cities/ regions today; theoretical approaches and literatures; global dimensions of urban planning and policy. Course Information: Prerequisite(s): Consent of the instructor.

UPP 510. Data Analysis for Planning and Management I. 4 hours.
Basic introduction to data analysis techniques most commonly used in urban planning. Addresses issues of decision-making based on limited or imperfect information. Prerequisite(s): Graduate standing in Urban Planning and Policy or consent of the instructor.

UPP 514. Economic Analysis for Planning and Management. 4 hours.
Basic micro, macro, and welfare economics theory; related analytical concepts including input-output, economic base, benefit cost. Economic forces which shape urban areas and affect public policy. Course Information: Prerequisite(s): Graduate standing in Urban Planning and Policy or consent of the instructor.

UPP 516. Issues of Class, Race, and Gender in Planning. 4 hours.
Critically examines the significant role of race, class, ethnicity and gender as factors in planning public policy formation, implementation, and evaluation. Course Information: Prerequisite(s): Consent of the instructor.
UPP 517. Regional and Metropolitan-Wide Planning. 4 hours.
History of regional planning. Course Information: Prerequisite(s): UPP 500.

UPP 520. Globalization and International Planning I: Theory and Applications. 4 hours.
Overview of international development theories and their practical applications. Particular emphasis is placed on globalization. Urban versions and applications of these theories. Course Information: Prerequisite(s): Consent of the instructor.

UPP 521. Globalization and International Planning II: Comparative Planning and Policies. 4 hours.
Policies and practice of public sector planning and development in three regional areas of the world: Europe, South America, and Asia. Course Information: Prerequisite(s): UPP 520 or consent of the instructor.

UPP 525. Globalization and International Planning: Special Topics. 1-4 hours.
Special topics selected for intensive analysis in international development planning. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 530. Economic Development I: Analysis. 4 hours.
Theoretical perspectives, data, data sources and research techniques for analysis of regional, metropolitan and neighborhood economies. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or the Master of Arts in Real Estate; or consent of the instructor. Recommended background: UPP 514.

UPP 531. Economic Development II: Planning. 4 hours.
Overview of development strategies including financing, business development, industry retention and human resources; implementation and evaluation. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy and UPP 530; or consent of the instructor.

UPP 533. Development Finance Analysis. 4 hours.
Financial feasibility analysis for residential, commercial, and industrial projects. Financial valuation and accounting principles, legal interests in real estate, and tax issues affecting cash flow and returns on investment. Course Information: Graduate standing in Urban Planning and Policy or enrollment in the Master of Arts in Real Estate program; or consent of the instructor. Recommended background: UPP 514.

UPP 535. Economic Development: Special Topics. 1-4 hours.
Special topics selected for intensive analysis in economic development. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 536. Urban Employment Planning. 4 hours.
The importance of employment as a focus in planning and policy making. History, theories and methodologies of urban markets; labor market analysis methodologies and emergent public policies. Course Information: Prerequisite(s): Graduate standing and UPP 514; or consent of the instructor.

UPP 540. Community Development I: Theory. 4 hours.
Critically examines community development as a field of practice, policy intervention, implementation and analysis; emphasis on community and social dynamics of disadvantaged groups. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or consent of the instructor.

UPP 541. Community Development II: Practice. 4 hours.
Examines the methods and techniques used or adapted in community development as a field of planning practice, analysis and evaluation: emphasis on community based settings, applications and foci. Course Information: Prerequisite(s): Consent of the instructor.

UPP 542. Metropolitan Housing Planning. 4 hours.
Urban housing market structure and dynamics: impacts of government housing policy on market; development of local housing plans. Course Information: Prerequisite(s): Graduate standing and UPP 514; or consent of the instructor.

UPP 543. Planning for Healthy Cities. 4 hours.
Investigates the needs of special populations such as the elderly or mentally ill, the role of the planner in serving these groups and community based strategies to meet needs. Course Information: Prerequisite(s): Graduate standing.

UPP 544. Urban Revitalization and Gentrification. 4 hours.
Urban change in U.S. cities since World War II that is associated with socioeconomic restructure under globalization. The course examines restructure under the new global order and its impact on cities and urban planning and different social groups. Course Information: Graduate standing in Urban Planning and Policy or consent of the instructor.

UPP 545. Community Development: Special Topics. 1-4 hours.
Special topics selected for intensive analysis in community development. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 550. Spatial Planning: Theoretical Foundations. 4 hours.
Physical form, economic characteristics, social qualities and government structure of cities, suburbs and regions; theories of urban spatial organization and planning; the relationship between planned space and social considerations in planning. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or consent of the instructor.

UPP 553. Land Use Law. 4 hours.
Legal constraints on land use control; constitutional and statutory principles and judicial review. Course Information: Prerequisite(s): Graduate standing or consent of instructor.

UPP 555. Spatial Planning: Special Topics. 1-4 hours.
Special topics selected for intensive analysis in such areas as housing, transportation, land development. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 556. Spatial Planning: Studio. 4-8 hours.
Methods and tools for analysis, policy making and evaluation of urban spaces including theoretical approaches and trends, social dimensions, methods, policy formulation, computer applications, and project examples. Course Information: May be repeated to a maximum of 12 hours. Students may register in more than one section per term. Prerequisite(s): Admission to a degree program in Urban Planning and Policy, and UPP 550 and UPP 557; or consent of the instructor.

UPP 557. Spatial Planning: Methods. 4 hours.
Quantitative and qualitative tools for analysis and evaluation of spatial plans, from the regional, to the city, suburb and block, including standards and analyses of plans at different scales, spatial interdependence, and spatial reasoning. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or consent of the instructor.
UPP 558. Land Use Regulation and Planning. 4 hours.
Urban spatial planning strategies and various land use control techniques which can be employed to carry out development policies; social implications of land use policy and practice. Course Information: Prerequisite(s): Admission to a degree program in Urban Planning and Policy or consent of the instructor.

UPP 560. Urban Transportation I: Introduction and Policy. 4 hours.
Transportation planning and policy; key concepts; linkages with urban land use and regional economic development; transportation data; recent trends, traditional problems and emerging issues. Course Information: Credit is not given for UPP 560 if the student has credit in UPP 561. Prerequisite(s): Consent of the instructor.

UPP 561. Urban Transportation II: Policy and Methods. 4 hours.
Formation and implementation of transportation policy at the national, regional, and local levels. Students will prepare an in-depth study of a major policy issue. Course Information: Prerequisite(s): UPP 560 or consent of the instructor.

UPP 562. Urban Transportation II: Laboratory. 4 hours.
Software packages for urban transportation planning, transportation GIS and air quality modeling. Heavy reliance on case studies. Course Information: Prerequisite(s): UPP 560 or consent of the instructor.

UPP 563. Transportation Management. 4 hours.
Transit system planning, scheduling, pricing policy, and management; traffic control techniques and demand management; paratransit alternatives. Course Information: Prerequisite(s): UPP 560.

UPP 564. Public Transit Management. 4 hours.
Introduces students to the theories and practical applications involved in the general management of a transit system.

UPP 565. Transportation: Special Topics. 1-4 hours.
Examination of specific and current problems in urban and regional transportation. Topics to be determined at the time the course is offered. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 566. Transportation Project Funding and Finance. 4 hours.
Provides working knowledge of transportation projects funding and financing. Comprehensive overview of options and strategies for most major modes of transportation. Background political process governing transportation funding.

UPP 567. Principles of Computational Transportation Science. 4 hours.
Builds on the fundamentals of transportation science and emphasizes its high-level computational aspects. Topics covered include database design and theory, spatial and temporal information systems issues and travel modeling. Course Information: Same as CME 567 and CS 567. Prerequisite(s): Grade of B or better or concurrent registration in UPP 560. Open only to Ph.D. students; or consent of the instructor.

UPP 569. Infrastructure Management. 4 hours.
Integrated approach to the management of infrastructure systems: design, construction, operations, maintenance and rehabilitation of facilities. Performance of facilities, approaches to management, and available tools and developing technologies. Course Information: Same as CME 580. Prerequisite(s): IE 201 or the equivalent or consent of instructor. Recommended background: Familiarity with computer spreadsheets.

UPP 570. Environmental Planning and Policy. 4 hours.
Provides a foundation in the principles of environmental planning and policy, major federal/state programs, environmental risk and avoidance, and environmental justice. Course Information: Previously listed as UPP 554. Prerequisite(s): Graduate standing and consent of the instructor.

UPP 571. Economic and Environmental Planning. 4 hours.
Explores the sources of environmental problems and the economic methods used to address these problems. Course Information: Previously listed as UPP 537. Prerequisite(s): UPP 570; and UPP 514; and graduate standing; or consent of the instructor.

UPP 572. Systems Methods for Environmental Planning and Policy. 4 hours.
Explores methods/analytical techniques for examining environmental impacts of urbanization. Explores evolution of environmental policy and development of methods to forecast distribution of environmental risk. Course Information: Prerequisite(s): UPP 570 or consent of the instructor.

UPP 575. Special Topics in Environmental Planning and Policy. 4 hours.
Intensive exploration of specialized topics in environmental planning and policy. Course Information: Prerequisite(s): Consent of the instructor.

UPP 580. Workshop for Doctoral Students. 1 hour.
Faculty-led workshop for doctoral students. Organized discussions about strategies for developing dissertation research topics, preparing publications, career development and assist students towards successful completion of the PhD program and beyond. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 2 hours. Prerequisite(s): Consent of the instructor.

UPP 581. Introduction to Scientific Inquiry. 2 hours.
Examines the epistemological and philosophical frameworks underpinning scientific inquiry for the purpose of designing research projects. Course Information: Meets eight weeks of the semester. Prerequisite(s): Open only to Ph.D. degree students; or consent of the instructor.

UPP 583. Advanced Planning Theory. 4 hours.
Study of theoretical ideas and debates about planning; the rational model and its competitors; critical review of planning methods and practice; composing alternative plans. Course Information: Prerequisite(s): Consent of the instructor.

UPP 584. Methods of Policy Analysis. 4 hours.
Analytic, allocative and evaluative techniques in public policy analysis. Preparation of case studies in problem analysis and policy recommendation. Course Information: Same as PPA 584. Prerequisite(s): Consent of the instructor.

UPP 586. Topics in Urban Planning Research. 1-4 hours.
Course may highlight research activities and opportunities related to research centers, or explore research topics in a seminar setting. Course Information: May be repeated. Prerequisite(s): Open only to Ph.D. degree students; or consent of the instructor.

UPP 587. Planning and Policy Research Practicum. 4 hours.
Ph.D. students work with a faculty member on engaged research related to their discipline. The topic and scope is determined by mutual agreement. Course Information: Prerequisite(s): UPP 586 and consent of the instructor. Open only to Ph.D. degree students.

UPP 588. Research Design and Evaluation. 4 hours.
Methods used to evaluate policies and programs; quasi-experimental designs, valuation problems, and emerging evaluation methods. Course Information: Prerequisite(s): Consent of the instructor.
UPP 589. Data Analysis for Planning and Management II. 4 hours.
Advanced topics in data analysis and model building including specific models used in urban planning. Course Information: Prerequisite(s): UPP 510 or consent of the instructor.

UPP 590. Professional Practice Experience. 0-4 hours.
300 hours of practical planning experience through an internship placement approved by the Urban Planning and Policy Program. Course Information: Satisfactory/Unsatisfactory grading only. Field work required. Prerequisite(s): Approval of the Department and completion of 12 hours of credit towards the Master of Urban Planning and Policy degree.

UPP 591. Professional Practice. 1 hour.
Reviews issues and problems in professional practice; analyzes prerequisites for rational, strategic, and ethical planning; considers career options; and defines professional goals. Course Information: Prerequisite(s): Graduate standing in Urban Planning and Policy. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Practice.

UPP 592. International Student Exchange Program. 1-18 hours.
The Student Exchange Program enables the reciprocal exchange of students between UIC and colleges or universities in other countries. UPP has a number of negotiated agreements to meet the needs of students wishing to study abroad. Course Information: Determination of the number of credits to be granted is part of the proposal approval process. Prerequisite(s): Graduate standing in Urban Planning and Policy, completion of one semester of coursework in UPP, and acceptance into an exchange program approved by the Office of International Affairs.

UPP 593. Independent Research in Urban Planning and Policy. 1-8 hours.
Advanced study and analysis of a topic selected by a student under the guidance of a faculty advisor. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 594. Topics in Urban Planning and Policy. 1-4 hours.
Intensive analysis of selected planning problems or policy issues. Course Information: May be repeated to a maximum of 12 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 595. Professional Portfolio. 2 hours.
Guides production of a portfolio that demonstrates students' summative learning from required core courses, specialization courses, and electives. Demonstrates individual students' knowledge, skills and abilities. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Graduate standing only. Class Schedule Information: To be properly registered, students must enroll in one Conference and one Lecture.

UPP 596. Independent Study in Urban Planning and Policy. 1-4 hours.
Advanced study and analysis of topic selected by student under the guidance of faculty advisor. Course Information: May be repeated. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

UPP 597. Master's Project Research. 0-4 hours.
Preparation of plan, research report, or other document which demonstrates readiness for professional planning responsibility. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Open only to degree candidates, upon approval of student's faculty advisor.

UPP 598. Master's Thesis Research. 0-16 hours.
Preparation of a major research paper under the guidance of a faculty committee. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Open only to degree candidates, upon consent of the director of graduate studies.

UPP 599. Ph.D. Thesis Research. 0-16 hours.
Individual study and research. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Prerequisite(s): Open only to degree candidates, upon approval of topic by the dissertation committee.