

## URBAN PLANNING UP

Department of Geography  
College of Social Science

- 100 The City**  
Spring. 3(3-0)  
Evolution, character, dimensions and elements of cities.
- 201 The Role of Planning in Urban and Regional Development**  
Fall, Spring. 4(4-0)  
Contemporary urban issues, historical contexts, and the role of planning in the solutions of the problems faced by cities and their surrounding regions.
- 314 Methods for Investigation of Urban Systems**  
Spring. 4(3-2) Interdepartmental with Geography. P: (STT 201 and CSE 101) RB: (UP 201)  
Models, approaches, and techniques for urban and regional problem analysis, research, program evaluation, and project management. Application of related computer software.
- 324 Visual Communication and the Design Process**  
Fall. 4(2-4) P: (UP 201 or concurrently) R: Open only to sophomores or juniors or seniors in Urban and Regional Planning. SA: UP 231, UP 233, UP 334  
Expressing concepts in visual terms for solutions to physical planning projects: graphic techniques and reproduction. Using the design process for solving land use problems: inventory, analysis, synthesis, community input and strategies for implementation.
- 343 Planning Theory: Ethics and Politics (W)**  
Spring. 4(4-0) P: (UP 201 or concurrently) and completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in the College of Social Science. SA: UP 344  
Political impact of community decision-making on planning. Ethics and values of professional practice. Gender, equity, and diversity issues within this context will be explored.
- 353 Land Use Planning**  
Fall. 4(4-0) P: (UP 201 or concurrently) RB: (PLS 100) SA: UP 323  
Principles and techniques of land use planning, including role of social, economic and political systems. Comprehensive planning, neighborhood/sector planning, practical tools for land regulation and environmentally sensitive development.
- 365 Planning Law (W)**  
Spring. 3(3-0) P: (UP 201) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Urban and Regional Planning or Interdisciplinary Studies in Social Science majors. SA: UP 465  
Statutory and case law for local government planning and development regulation.
- 400 Special Topics in Urban Planning**  
Fall, Spring. 2 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: Completion of Tier I writing requirement. R: Open only to juniors or seniors or graduate students in Urban and Regional Planning.  
Issues and problems in contemporary urban planning.

- 802 Stage Voice**  
Fall. 2(0-4) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Theatre.  
Principles and exercises for developing the speaking voice. Application to selected dramatic texts.
- 803 Acting Theory**  
Spring of even years. 3(3-0) R: Open only to graduate students in Theatre.  
Theories, processes, techniques, and styles of acting set forth in the writings of prominent performers, teachers and critics.
- 809 Stage Combat**  
Spring. 2(1-2) P:M: (THR 450)  
Safe and effective methods of depicting violence for stage and film. Hand to hand combat such as kicks, punches, and falls. Weapon work with rapier, dagger, broadsword, quarterstaff, foil, axe and shield.
- 811 Problems in Theatre Design**  
Spring. 3(2-2) A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to graduate students in Theatre.  
Approaches to design problems in costumes, scenery, lighting, architecture, properties, or sound.
- 812 Modern and Contemporary Theatrical Design**  
Fall of odd years. 3(3-0) R: Open only to graduate students in Theatre.  
Scenic design concepts from Appia and Craig to the present.
- 813 Period Resources for Directors and Designers**  
Fall of even years. 3(3-0) R: Open only to graduate students in Theatre.  
Methodology for researching historical customs and artifacts that directors and designers adapt for use in sets, props, costumes, and directing.
- 814 Digital Design Media for Theatre**  
Spring. 3(2-2)  
Targeted exploration of common software tools for theatrical production designers in costumes, scenery and lighting.
- 831 Studies in Theatre History**  
Fall of odd years. Spring of odd years. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in Theatre.  
Selected periods and genres of world theatre history. Theatre as cultural expression and as performance art. Topics vary.
- 832 Studies in Comparative Theatre and Drama**  
Fall, Spring. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with English. SA: ENG 832  
Comparative study of selected playwrights, developments, movements, and trends in world drama from their beginnings to the present.
- 833 Contemporary Issues of Theatrical Theory and Criticism**  
Fall. 3(3-0) R: Open only to graduate students in Theatre.  
Critical and theoretical texts on drama from the early Greeks to the present.
- 841 Advanced Directing Practices**  
Spring of even years. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Theatre.  
Directing theory and practice in contemporary theatre, including research and experimentation.
- 850 Portfolio Development: Digital and Traditional**  
Spring. 2(1-2)  
Practices in traditional media as a basis for digital portfolio technologies. Software and hardware options applied to theatrical design portfolios.
- 860 Advanced Movement for the Actor**  
Spring. 2(0-4) P:M: (THR 450)  
Continued development of the actor's instrument and application of Laban's effort and spatial concepts. Improvisation, alignment and physical character invention through the introduction of Neutral Mask.
- 871 Voice and Speech**  
Fall. 2(0-4)  
Principles of voice production for the actor. Ear training, speech sounds, International Phonetic Alphabet (IPA) vocal core, anatomy and physiology. Application to poetry and prose.
- 872 Advanced Voice and Speech**  
Spring. 2(0-4) P:M: (THR 871)  
Development of the actor's vocal instrument and application to heightened text including poetry, narrations, speeches and The American Standard Dialect.
- 873 Voice and Movement Practicum**  
Fall. 2(0-4)  
Heightened language skills and period movement as a complement to studio acting.
- 874 Dialects and Voice**  
Spring. 2(0-4)  
Application of dialects for stage performance and voice-over techniques in radio and television commercials.
- 890 Independent Study**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in Theatre or approval of department.  
Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.
- 894 Special Projects in Theatre**  
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in Theatre. Approval of department.  
Special projects related to specific assignments in acting, directing, or design in departmentally approved production.
- 899 Master's Thesis Research**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to graduate students in Theatre.  
Directed research leading to a master's thesis, used in partial fulfillment of Plan A master's degree requirements.

## Urban Planning—UP

- 408 Comparative Urban Development Planning**  
Spring. 3(3-0) RB: (UP 201) R: Open only to majors in Urban and Regional Planning, or Urban and Regional Planning-Urban Studies.  
Community planning concepts and practices, tools and techniques in different countries. Case studies.
- 413 Urban Geography**  
Fall. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. R: Not open to freshmen or sophomores.  
Theories and models of urban spatial form. Underlying structures and processes. Socio-spatial dimensions of modern urbanism. Differentiation and locational conflict in residential, commercial, and industrial space.
- 414 Geography of Transportation**  
Fall of odd years. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. P: (GEO 113) R: Not open to freshmen.  
Spatial principles of transportation. Theories of interaction, network structures, and location-allocation models. Role of transport and transport planning.
- 415 Location Theory and Land Use Analysis**  
Fall. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. P: (GEO 113 or UP 201) RB: One of the prerequisites or an introductory ECON course. R: Not open to freshmen or sophomores.  
Classical and neoclassical, static and dynamic models of industrial location and spatial organization. Land rent theory. Central place theory. Multi-locational organization. Growth transmission.
- 418 The Ghetto**  
Fall of odd years. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. R: Not open to freshmen or sophomores.  
Analysis of the ghetto including its spatial organization and structure. Distribution of racial and ethnic populations. Emphasis on U.S. cities.
- 425 Geographic Information Systems**  
Spring. 4(3-2) Interdepartmental with Geography. Administered by Department of Geography. P: (GEO 221)  
Technical and theoretical issues in the design, evaluation, and implementation of geographic information systems for research and application.
- 439 Golf Course Planning and Design**  
Fall of even years. 3(3-0) Interdepartmental with Landscape Architecture. RB: (LA 342) R: Open only to seniors or graduate students in Urban and Regional Planning or Urban and Regional Planning-Urban Studies or Landscape Architecture.  
History, planning, and design of the golf course as a component of the community. Environmental, regulatory, technical, and financing issues.
- 454 Local Economic Planning**  
Fall. 3(3-0) P: (UP 353 and EC 201) RB: (UP 201) R: Open only to seniors in the College of Social Science. SA: UP 354  
The economic component of comprehensive community planning. Taxation and services delivery. Fiscal health and physical and social development of a community.
- 457 Local Economic Development**  
Fall. 3(2-2) R: Open only to juniors or seniors.  
Principles and techniques of local economic development planning. Impacts of state, federal, and global economic policies and programs.
- 458 Housing and Real Estate Development**  
Spring of even years. 3(2-2)  
Real estate development process from idea inception to asset management. Finance, organization, design and implementation. Housing, social impacts, and public sector involvement.
- 463 Introduction to Quantitative Methods for Geographers and Planners**  
Fall. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. RB: Completion of University mathematics requirement. R: Open only to majors in Geography, Urban Planning, and Landscape Architecture.  
Quantitative techniques in the analysis and classification of spatial data.
- 478 Urban Transportation Planning**  
Spring. 3(3-0) Interdepartmental with Geography. R: Open only to juniors or seniors in Urban and Regional Planning or Geography or approval of department.  
Principles of decision-making in urban transportation planning. Demand and supply analysis, social and environmental impacts, implementation programs. Use of computer models.
- 480 Internship in Urban Planning**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to majors in Urban and Regional Planning or Urban and Regional Planning-Urban Studies. Approval of department.  
Supervised planning experience in a professional setting.
- 490 Independent Study in Urban Planning**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen or sophomores. Approval of department.  
Faculty-supervised individual study in aspects of urban planning.
- 494 Planning Practicum**  
Spring. 4(0-8) P: (UP 365 and UP 454) SA: UP 494A, UP 494B  
Collection, analysis and synthesis of planning information for an established urban or regional area. Problem identification and alternative plan formulation. Formulation of comprehensive physical development policies and plans, implementation of programs.
- 800 Special Topics in Urban Planning**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Urban and Regional Planning.  
Issues and current research in urban planning.
- 801 Concepts and Issues in Planning and Development**  
Fall. 4(4-0)  
Urban and regional planning and development. History of the planning profession. Current urban issues and planning approaches.
- 814 Applied Research Methods for Planning and Development**  
Spring. 3(2-2) Interdepartmental with Geography. RB: (UP 813) R: Open only to graduate students in Urban and Regional Planning, Public Administration, and Geography.  
Techniques in urban and regional planning analysis. Forecasting models. Methods of urban project evaluation.
- 823 Urban Land Management**  
Fall. 4(4-0) RB: (UP 801 or concurrently)  
Concepts, principles, tools, and techniques of urban and regional land management. Land use planning, public facilities, infrastructure location, and environmental sensitivity in land management.
- 834 Urban Design and Project Development**  
Spring. 3(1-4) RB: (UP 801) R: Open only to graduate students in Urban and Regional Planning.  
Design of development projects. Integration of structures, spaces, activities, and design elements in various urban settings.
- 838 Land Use Law**  
Spring. 3(3-0) Interdepartmental with Resource Development; Agricultural Economics; Forestry. Administered by Department of Community, Agriculture, Recreation and Resource Studies. RB: (RD 430)  
Public and private land use controls in the U.S. Civil rights, housing, energy problems, growth management, waste management, and land conservation. Cases, statutes and other regulations.
- 844 Decision Theory for Urban Planning and Development**  
Spring. 4(4-0) RB: (UP 801) or two graduate courses in the Master of Public Administration program.  
The planning and development process. Decision making in a political context. Professional ethics and practice. Gender, class, race and ethnicity in relationship to planning and development.
- 848 Urban Policy Analysis**  
Spring. 3(3-0)  
History of national urban policy. Developmental stages in processing new public policies.
- 854 Economics of Planning and Development**  
Spring. 3(3-0) Interdepartmental with Geography. RB: (UP 801)  
The physical urban environment and local economic development.
- 865 Planning and Development Law**  
Fall. 3(3-0) RB: (UP 801)  
Constitutional and statutory bases for planning and development. Effects of case law on design, administration, and implementation of regulations.
- 868 Growth Management and Environmental Planning**  
Fall. 3(3-0) P:M: (UP 865 or concurrently and UP 801 or concurrently and UP 823) R: Open only to graduate students in Urban and Regional Planning or Urban and Regional Planning-Urban Studies or Geography. SA: UP 468  
Principles and techniques of growth management and environmental planning, with a focus on land use issues. Selected environmental regulation topics relevant to planning in urban areas.

- 889 Master's Research**  
Fall, Spring, Summer. 3 credits. RB: (UP 897 or concurrently) R: Open only to master's students in the Urban and Regional Planning major. Approval of department. Supervised individual research for Plan B master's program.
- 890 Independent Study**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Faculty-supervised study in aspects of urban planning.
- 893 Internship in Urban Planning**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Supervised individual experience in approved agencies and departments in the Lansing area.
- 894 Planning Practicum**  
Fall. 4(0-8) RB: (UP 801 and UP 823 and UP 865) R: Open only to second-year master's students in the Urban and Regional Planning major. SA: UP 894A, UP 894B. Professional practice in the collection, analysis and synthesis of information by students or student groups under faculty supervision. Developing solutions to specific urban problems.
- 897 Research Writing Seminar**  
Fall. 2(2-0) R: Open only to second-year master's students in the Urban and Regional Planning major. Research writing and presentation methods.
- 899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (UP 897) or concurrently. R: Approval of department. Master's thesis research.

- 130 Comparative Anatomy for Veterinary Technicians**  
Fall. 2(1-2) R: Open only to Veterinary Technology majors. Gross anatomy of the common animal species encountered in veterinary medicine. Overview of the functional anatomy of the musculoskeletal, digestive, cardiovascular, cutaneous, respiratory, urogenital, nervous, and endocrine systems and the special senses.
- 140 Pharmacology for Veterinary Technicians**  
Fall. 2(2-0) R: Open only to Veterinary Technology majors. Fundamentals of characteristics, classification and usage of veterinary pharmaceuticals. Introduction to and application of dosage and formulation calculations.
- 150 Hospital Procedures and Communication**  
Spring. 2(2-0) P: (VM 110 and VM 140) R: Open only to Veterinary Technology majors. Development of various modalities of professional and client communication skills.
- 155 Veterinary Technology Careers and Professional Development**  
Fall. 1(1-0) R: Open only to Veterinary Technology majors. Career options in veterinary technology, discussion of professional, ethical and legal considerations. Portfolio development, resume and cover-letter writing skills.
- 160 Small Animal Nursing Skills**  
Spring. 2(1-3) P: (VM 110 and VM 130 and VM 140) R: Open only to Veterinary Technology majors. Small animal nursing including principles of restraint, physical examination, medical management techniques, and behavior of common companion animals. Recognition of common canine and feline breeds.
- 165 Large Animal and Laboratory Animal Nursing Care Techniques**  
Fall. 2(1-2) P: (VM 110 and VM 130 and VM 140) R: Open only to Veterinary Technology majors. Fundamentals of the handling of equine, food animal and laboratory animal species. Breed identification, specimen collection, physical exam, medication administration and other nursing care procedures relevant to the species.
- 170 Hematology and Immunology for Veterinary Technicians**  
Spring. 2(2-0) P: (VM 110 and VM 120) R: Open only to Veterinary Technology majors. C: VM 175 concurrently. Structure and function of normal blood cells, cellular and humoral immunity, mechanisms of hemostasis, blood group serology, transfusion medicine and vaccinology.
- 175 Clinical Pathology Laboratory I for Veterinary Technicians**  
Spring. 1(0-2) P: (VM 110 and VM 120) R: Open only to Veterinary Technology majors. C: VM 170 concurrently. Veterinary clinical pathology laboratory including diagnostic procedures in hematology, serology and ELISA methodology.

- 176 Clinical Pathology Laboratory II for Veterinary Technicians**  
Fall. 1(0-2) P: (VM 175 and VM 170) R: Open only to Veterinary Technology majors. Comprehensive veterinary clinical pathology laboratory, including diagnostic procedures in urology, dermatology, cytology, and advanced methods in hematology.
- 210 Surgical Nursing for Veterinary Technicians**  
Fall. 2(2-0) P: (VM 160) R: Open only to Veterinary Technology majors. C: VM 215 concurrently, VM 303 concurrently. Role of the veterinary technician as a member of the veterinary surgical team.
- 215 Surgical Nursing and Anesthetic Management Laboratory**  
Fall. 1(0-4) R: Open only to Veterinary Technology majors. C: VM 210 concurrently, VM 303 concurrently. Principles and techniques in veterinary surgical nursing and anesthesia.
- 245 Parasitology for Veterinary Technicians**  
Spring. 2(1-2) P: (VM 140 and VM 175) RB: (VM 250) R: Open only to Veterinary Technology majors. Parasites of veterinary and public health importance, including gross and microscopic morphology, transmission, and control.
- 250 Veterinary Comparative Clinical Physiology**  
Spring. 5(5-0) P: (VM 110 and VM 120 and VM 130) R: Open only to Veterinary Technology majors. Function, regulation and integration of organs and organ systems of common domestic species. Concepts with clinical relevance.
- 255 Small Animal Diseases and Management**  
Fall. 3(3-0) P: (VM 160 and VM 170 and VM 250) R: Open only to Veterinary Technology majors. Pathophysiology, transmission, diagnostic process, clinical management and prevention of canine and feline diseases.
- 265 Dentistry Techniques for Veterinary Technicians**  
Spring. 1(0-4) P: (VM 215) R: Open only to Veterinary Technology majors. Veterinary dental techniques and oral cavity assessment for companion animals.
- 270 Health Care Development for Veterinary Technicians**  
Spring. 1(0-3) P: (VM 210 and VM 215 and VM 255) R: Open only to Veterinary Technology majors. Service-oriented approach to the health care development in an operational animal care facility.
- 275 Large Animal Diseases and Management**  
Spring. 3(3-0) P: (VM 165 and VM 170 and VM 250) R: Open only to Veterinary Technology majors. Diseases, husbandry, preventative health care and client education for equine and food animal species.
- 285 Clinical Nutrition for Veterinary Technologists**  
Fall. 1(1-0) P: (VM 250) R: Open only to Veterinary Technology majors. Nutritional assessment and management of common domestic species in veterinary medicine.

## VETERINARY MEDICINE VM

### College of Veterinary Medicine

- 101 Veterinary Medicine in Society**  
Spring. 1(1-0). Role of the veterinary profession in animal and human health. Impact of veterinary medicine on society.
- 110 Veterinary Medical Terminology**  
Fall. 1(1-0) R: Open only to Veterinary Technology majors. Veterinary medical terminology, focusing on fundamental recognition, interpretation and usage of medical terms.
- 120 Applied Biochemistry and Nutrients for Veterinary Technicians**  
Fall. 2(2-0) R: Open only to Veterinary Technology majors. Basic fundamentals of cell structure and metabolism. Energy metabolism, nutrients and nutrient requirements of common domestic species.