

COLLEGE OF ARCHITECTURE AND PLANNING

www.bsu.edu/cap

Architecture Building 104, (765) 285-5861

Dean of the College: Guillermo Vasquez de Velasco

Associate Dean: Michel Mounayar

The College of Architecture and Planning, established by the Indiana Legislature in 1965, is dedicated to the development of professional competency in the functional, aesthetic, and humane design of the physical environment. The primary mission of the college is to offer undergraduate and graduate education programs of high quality in architecture, landscape architecture, and planning and such related subjects as historic preservation and urban design. The college also stresses scholarly and creative activity and public service, including educational service to university students, professionals, and the general public.

The college enrolls approximately 500 students and has more than 45 faculty and professional staff members. Because members of the college faculty have a wide variety of educational and experiential backgrounds and expertise, they approach their work in different ways. The curricula stress dedication, initiative, and a strong commitment to creativity, technical skill, and social and professional responsibility.

The programs are supported by extensive resources. The architecture library contains more than 27,000 volumes. A collection of 60,000 slides is available for use by students as well as faculty members. The Drawings and Documents Archive maintains architectural, planning, and landscape architectural drawings and other materials documenting significant historic sites and structures in Indiana. Each graduate student is assigned individual work space in a studio or graduate office. Additional facilities in the college include wood and metal shops, photography labs, computer labs, and a mobile lab to support off-campus studies.

The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards. Master's degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

COLLEGE OF ARCHITECTURE AND PLANNING (CAP)**500 Community-Based Projects**

Workshops. (1–3) Independent study in urban design, planning, landscape architecture, and architecture, offered in conjunction with the college's Community-Based Projects Program. A multidisciplinary approach to problem solving in collaboration with faculty and professional consultants.

Prerequisite: permission of Community-Based Projects coordinator.

A total of 3 hours of credit may be earned.

505 Context for Design and Planning.

(2) An intensive immersion introducing principles and introductory skills necessary to the design and planning of the environment. May include field study, historical case studies, philosophical issues, overview of professional practice skills, technology, vocabulary and concepts, and opportunities for interdisciplinary studies.

Prerequisite: permission of the instructor.

551 Research Methods. (3) Introduction to methods and techniques in the design, preparation, and execution of urban design research. Emphasis will be on procedures and techniques for the development of critical evidence-based urban design.

Prerequisite: permission of the MUD program coordinator.

581 Introduction to Computer-Aided Design 1. (3)

Introduction to two-dimensional computer-aided design (CAD) using micro- and large-computer CAD systems, hardware and operating system concepts, and drawing editing commands. Emphasizes environmental design and planning applications.

Prerequisite: permission of the dean of the College of Architecture and Planning.

582 Introduction to Computer-Aided Design 2. (3)

A continuation of CAP 581 in a three-dimensional environment. Introduction to the drawing environment, view manipulation, projections, coordinate systems, and hidden-line and hidden-surface shading. Emphasizes environmental design and planning applications.

Prerequisite: CAP 581; permission of the dean of the College of Architecture and Planning.

598 Special Projects in the College of Architecture and Planning. (1–3)

projects in the College of Architecture and Planning undertaken by groups under faculty direction.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

Open only to CAP graduate students, or by permission of the associate dean.

URBAN DESIGN (UD)**501 Urban Design Studio 1: Urban Design Analysis. (2)**

Focuses on the resolution of urban design analysis problems that require multifaceted understanding of urban context as the direct resolution of political, social, economic, as well as, physical forces acting in union. Students will develop analysis skills and techniques for the decoding of urban visual evidence.

Prerequisite: permission of the MUD program coordinator.

502 Urban Design Studio 2: Transportation Systems. (2)

Focuses on the study of urban transportation systems. The study of multimodal interrelationships in complex urban settings including pedestrian, bicycle, rail, light rail, inter and intra urban systems and their influences on urban living and design.

Prerequisite: UD 501; permission of the MUD program coordinator.

503 Urban Design Studio 3: Community-Based Design. (2)

Explores the interpretive dimensions of community, politics, and culture. Encourages critical thinking about the relationship of ethics, politics, and development. Sustainability, equity, and justice in urban design will be examined through context-rich community-based projects.

Prerequisite: UD 501; permission of the MUD program coordinator.

561 Urban Design Communication and Media 1. (2)

Urban design communication theory, techniques, and media 1. The study of the design and development of effective oral, written, and graphic public design presentations. The study and application of new technologies including digital and visual media in the exploration of complex urban design projects.

Prerequisite: permission of the MUD program coordinator.

562 Urban Design Communication and Media 2. (2)

Design communication theory, techniques, and media 2. Design

and development of effective urban design communication strategies using new mass publishing technologies including newspapers, World Wide Web, and video.

Prerequisite: permission of the MUD program coordinator.

569 Topical Computer Graphics

Workshop. (1) Various topical computer workshops designed to explore specific computer applications in urban design.

Prerequisite: permission of the MUD program coordinator.

598 Special Projects in Urban Design. (1–3)

Directed elective projects in urban design undertaken by groups or individual students.

Prerequisite: graduate status and permission of the MUD program coordinator.

A total of 9 hours of credit may be earned, but no more than 3 in any one semester or term.

601 Urban Design Studio 4: Public Open Space Design. (2)

Focuses on the study of urban, shared space, such as public streets and plazas. Students will be engaged in the study and exploration of the principles of public open space. Methods of planning and designing active people spaces will be examined through site specific design problems.

Prerequisite: UD 502 or 503; permission of the MUD program coordinator.

602 Urban Design Capstone. (4) Student-defined capstone urban design project developed through an urban design question exploring specialized areas of interest and concentration. Each student project is self generated and defined. Projects must meet graduate school creative project requirements.

Prerequisite: UD 601 or 502 or 503; permission of the MUD program coordinator.

637 Urban Design Topics and Colloquia. (1)

Various urban design seminars will be offered. Each seminar will explore timely issues related to urban design practice and theory. Degree-seeking students must complete a minimum of 4 hours of urban design topics and colloquia.

Prerequisite: permission of the MUD program coordinator.

A total of 4 hours of credit may be earned, but no more than 1 in any one semester or term.

640 History of Urban Form. (3)

The survey of the history of urban form exploring the design of major cities and urban centers. Students will develop an understanding of significant precedent in urban design. Layout of major urban centers will be studied through presentations, readings, and lectures. Physical form and regional influences will be systematically studied.

Prerequisite: permission of the MUD program coordinator.

663 Computer Visualization. (2) Theory and application of 3-D digital modeling in the preparation of visual representations and simulations of urban design projects. 3-D model-making, rendering, fly through, and architectural animation will be explored.

Prerequisite: permission of the MUD program coordinator.

690 Practice-Based Synthesis. (2) Directed writings reflecting on capstone project completed through UD 602. Critical evaluation of design proposals and analysis of UD 602 capstone urban design project is required. Attention to transferable and applied knowledge is required. Publication of project findings will be encouraged.

Prerequisite: UD 602; permission of the MUD program coordinator.

ARCHITECTURE

www.bsu.edu/architecture

Architecture Building 402, (765) 285-1900

Interim Chairperson: Edward W. Wolner

Director of Master of Architecture Professional Degree Program: Pamela Harwood

Director of Master of Architecture II Program: Wes Janz

Interim Director of Master of Science of Historic Preservation Program: Francis Parker
Graduate Faculty: Bilello, Chiuini, Coddington, deBrea, Dotson, Eggink, Flores, Glass, Gray, Harwood, Janz, Keddy, Kendall, Klinger, Koester, Kolarevic, Mounayar, Palmer, Risting, Seager, Spodek, Wolner

PROGRAMS

Master of architecture (MArch and MArch II) and master of science in historic preservation (MSHP)

MASTER OF ARCHITECTURE

Admission

The professional master of architecture degree (MArch) is the second component of architectural education at Ball State University for students who seek licensure in the profession. It is accredited by the National Architectural Accrediting Board (NAAB).

Applicants to the MArch program must meet the admission requirements of the Graduate School and must have the approval of the Department of Architecture. A portfolio is required as part of the application process. Applicants must hold a baccalaureate degree from an accredited program in architecture or equivalent or may be required to take additional coursework.

Program

Students must complete: a minimum of 60 credit hours; an approved professional practicum; a 6-hour thesis or creative project; and an approved concentration consisting of a minimum of 9 credit hours.

The professional practicum (field-studies in architecture or allied professions) may be accomplished in three ways: three summers; one gap-year; or a semester and a summer. The MArch program offers four options for undertaking and completing the professional practicum and students are required to enroll in one of the following:

Option 1: Three-summer professional practicum beginning summer following third-year of undergraduate studies and concluding summer following first-year of graduate studies. Enrollment in or completion of this practicum does not guarantee admission to graduate studies.

Open only to students who have completed their pre-professional undergraduate studies at Ball State University.

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	501	Arch Dsgn 1	6
	502	Arch Dsgn 2	6
	526	Fund Hist Pres	3
	529	Hst Th Crit	3
	552	Cult Factors	3
	555	Prof Practcm	0
	558	Refl Ar Prac	3
	559	Prof Prac	3
	601	Arch Dsgn 3	6
	629	Arch Theory	3
	652	Res Mthds	3
	655	Prof Practcm	0
	602	Arch Dsgn 4 (6)	
	or		
THES	698	Thesis (1–6)	6
Electives (concentrations)			15
			60 hrs
Foundation undergraduate course			
ARCH	455	Prof Practcm	0
<i>Option 2:</i> Gap-year professional practicum accomplished between completion of undergraduate studies and beginning of graduate studies. Enrollment in or completion of this practicum does not guarantee admission to graduate studies.			
ARCH	501	Arch Dsgn 1	6
	502	Arch Dsgn 2	6
	526	Fund Hist Pres	3
	529	Hst Th Crit	3
	552	Cult Factors	3
	555	Prof Practcm	0
	558	Refl Ar Prac	3
	559	Prof Prac	3
	601	Arch Dsgn 3	6
	629	Arch Theory	3
	652	Res Mthds	3
	602	Arch Dsgn 4 (6)	
	or		
THES	698	Thesis (1–6)	6
Electives (concentrations)			15
			60 hrs

Option 3: Six-month professional practicum accomplished during the summer preceding graduate studies and continuing through the fall semester of the first-year. *Open only to* students who have completed their pre-professional undergraduate studies at Ball State University.

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	502	Arch Dsgn 2	6
	526	Fund Hist Pres	3
	529	Hst Th Crit	3
	552	Cult Factors	3
	556	Prof Practcm	9
	557	Case Studies	3
	558	Refl Ar Prac	3
	559	Prof Prac	3
	601	Arch Dsgn 3	6
	629	Arch Theory	3
	652	Res Mthds	3
	602	Arch Dsgn 4 (6)	
	or		
THES	698	Thesis (1–6)	6
Electives (concentrations)			9
			60 hrs

Option 4: Six-month professional practicum accomplished during the spring semester of the first year and continuing into the summer.

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	502	Arch Dsgn 2	6
	526	Fund Hist Pres	3
	529	Hst Th Crit	3
	552	Cult Factors	3
	556	Prof Practcm	9
	557	Case Studies	3
	558	Refl Ar Prac	3
	559	Prof Prac	3
	601	Arch Dsgn 3	6
	629	Arch Theory	3
	652	Res Mthds	3
	602	Arch Dsgn 4 (6)	
	or		
THES	698	Thesis (1–6)	6
Electives (concentrations)			9
			60 hrs

A candidate for a master's degree in the MArch program choosing the graduate research methodology course plan option will complete the research methods course ARCH 652 for 3 semester hours.

Option 5: Required study for candidates holding a bachelor's degree but not holding

a pre-professional degree in architecture. Foundation courses at the undergraduate level are required for all candidates in this option except where prior equal course work is documented. Candidates holding a pre-professional degree in a related environmental design and planning area (e.g. historic preservation, landscape architecture, urban planning, interior architecture) may receive advanced standing. This option is known as the first professional degree program in architecture for nonarchitecture undergraduate degree holders.

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	501	Arch Dsgn 1	6
	502	Arch Dsgn 2	6
	526	Fund Hist Pres	3
	529	Hst Th Crit	3
	552	Cult Factors	3
	555	Prof Practcm	0
	558	Refl Ar Prac	3
	559	Prof Prac	3
	601	Arch Dsgn 3	6
	611	Dsg Studio 1	3
	612	Dsg Studio 2	3
	613	Dsg Studio 3	6
	614	Dsg Studio 4	6
	629	Arch Theory	3
	652	Res Mthds	3
	655	Prof Practcm	0
	663	Dsgn Media 1	2
	666	Dsgn Media 2	2
	602	Arch Dsgn 4 (6)	
	or		
THES	698	Thesis (1–6)	6
Electives (concentrations)			12
			79 hrs

Foundation undergraduate courses

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	214	Build Tech 1	3
	218	Structures 1	3
	229	Hist Arch 1	3
	252	Intro Social	3
	263	Digital Med	3
	274	Env Sys 1	3
	314	Build Tech 2	3
	318	Structures 2	3
	329	Arch Hist 2	3
	373	Env Sys 2	3
	418	Structures 3	3
	455	Prof Practcm	0
			33 hrs

MASTER OF ARCHITECTURE II (MArch II)

Core area	9–12
Optional area	9–12
Thesis or creative project	6
Electives	6
	30 hrs

The core area may be waived depending on the student's background and research interest; however, the minimum requirement for the MArch II degree is 30 hours of graduate credit. Areas of specialization available are architectural design; urban design; architectural history, preservation, and restoration; environmental science and technology; and communication technologies and design. The curriculum offers, in addition to greater depth of specialization than is possible at the undergraduate level, interdisciplinary study and studio participation with the graduate programs in landscape architecture and urban and regional planning. Each candidate's plan of study will be tailored to his or her specific needs.

Students are required to complete a 6-hour thesis or creative project. The candidate will take a final oral examination given by a committee on completion of the thesis or creative project.

MASTER OF SCIENCE (MS) IN HISTORIC PRESERVATION

This program offers students from diverse undergraduate backgrounds a solid academic foundation and the preparation necessary to undertake professional careers in historic preservation. Graduates of the program enter a wide variety of positions in both the public and private sectors. The intent of the program is to prepare professionals qualified to deal with the complex problems that arise in rejuvenating the historic cores of cities, in maintaining a sense of identity in small communities, in revitalizing neighborhoods, in restoring historic sites, and in rural preservation. Students are exposed to a variety of preservation organizations and speakers and are encouraged to participate in community and state activities.

The curriculum also offers students opportunities to take multidisciplinary courses and engage in projects involving architecture, urban planning, landscape

architecture, archaeology, history, business, and other related fields.

The MS in historic preservation is a two-year degree program. The first year is devoted to courses in basic theory, concepts, and supervised field experience. An internship is served with a private or public preservation agency. In the second year, students have an opportunity to examine more technical or specialized areas of interest and to bring these experiences to bear on the required thesis or 6-hour creative project.

A three-term option—a specialization in architectural history, preservation, and restoration under the master of architecture degree—is available to students holding professional degrees in architecture from accredited institutions.

Admission

Applicants must meet the admission requirements of the Graduate School. Admission to the MS in historic preservation also requires departmental permission. Because of the program's interdisciplinary nature, most undergraduate fields of study are considered appropriate.

Transfers of credit toward the graduate degree are reviewed individually. Up to 14 semester hours or 20 quarter hours of credit taken at the fifth-year level in architecture and planning in an accredited five-year program may be transferred if such courses meet the student's curricular requirements. In addition, up to 14 semester hours or 20 quarter hours taken at accredited institutions may be transferred if taken for graduate credit. If students are not transferring credit at the fifth-year level, 28 semester hours or 40 quarter hours of graduate credit may be transferred. The amount of transfer credit accepted will not exceed 28 semester hours or 40 quarter hours.

Master of Science in Historic Preservation, 56 hours

Degree Requirements

PREFIX	NO	SHORT TITLE	CR HRS
ARCH	506	Historc Dsgn	6
	528	Hst N A Arch	3
	530	Arch Midwest	3
	540	Intro H P	3
	541	Pr Law Plan	2

	542	Doc Bld 1	2
	544	Pres Econ	2
	545	Doc Bld 2	2
	547	H P Tech 1	2
	549	H P Tech 2	2
	573	Directed Res	2
	605	Design Tech	1
	669	Int Pres Res	4
	674	Th Prop	1
	696	Th Prep	3
THES	698	Thesis (1–6)	6
Electives			12
			56 hrs

The selection of electives will be made in consultation with the program director. One elective must be taken in history of architecture, landscape architecture, or urban planning.

The candidate will take an oral examination given by a committee on the completion of the thesis or creative project.

ARCHITECTURE (ARCH)

501 Architectural Design 1. (6) Graduate design course involves architectural problems of increasing scale and complexity and requires solutions that are thorough in their conception, development, and execution. Multiple studio sections are offered each semester.

Prerequisite: graduate standing or permission of the program director.

502 Architectural Design 2. (6) Graduate design course involves architectural problems of increasing scale and complexity and requires solutions that are thorough in their conception, development, and execution. Multiple studio sections are offered each semester.

Prerequisite: graduate standing.

506 Historic Preservation Design Studio. (6) Selected problems and issues in historic preservation at all scales in an applied context. Opportunity to implement concepts learned in a creative environment. Field trips to project sites.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

521 Topics in the History of Oriental Architecture. (3) Analysis of theoretical, cultural, and historical determinants as they may be applied to a selected array of architects and buildings from the Islamic world to the Far East.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in ARCH 421 or the equivalent.

526 Fundamentals of Historic Preservation for Architects. (3) Introduces the special qualities of historic properties and the importance of such properties in providing a varied and interesting architectural character to communities and rural areas. Emphasizes skills in documenting historic properties and in developing familiarity with criteria and standards for identifying such properties and rehabilitating them appropriately. The economics of historic preservation, preservation law, and Section 106 reviews are also investigated.

Not open to students who have credit in ARCH 426.

528 History of North American Architecture. (3) American architecture and urbanism from its colonial beginnings to the present. Emphasizes European antecedents, transformation by American conditions, and the rise of distinctly American architecture. Discusses methods of disseminating architectural knowledge and conflicting points of view.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

Not open to students who have credit in ARCH 428 or equivalent.

529 Architectural History, Theory, Criticism. (3) Examines contemporary architectural theory and criticism through the presentation and study of significant texts and buildings of the present and recent past. Introduces and investigates the formal, technological, social and cultural, political, and economic issues within the disciplines of architecture and design. Explores interactions between theory and practice, and examines strategies for the making of architecture.

Prerequisite: graduate standing or permission of the program director.

530 History of Architecture, Planning, and Engineering in the Midwest. (3) Analysis of the development of architecture, planning, engineering (canals, railroads, roads, bridges), and industrial architecture in the American Midwest from the frontier period through the twentieth century. Field trips to selected sites.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

Not open to students who have credit in ARCH 430 or the equivalent.

532 Historic Architectural Interiors. (3) Survey of European and American interiors, interior architecture, furnishings, and decorative arts highlighting cultural influences from antiquity to the present with emphasis on eighteenth- to twentieth-century examples.

Prerequisite: ARCH 528 or equivalent.

Not open to students who have credit in ARCH 432 or its equivalent.

535 Topics in the History of Renaissance and Baroque Architecture. (3) Analysis of theoretical, cultural, and historical determinants as they may be applied to a selected array of architects and buildings from Europe between 1400 and the late 1700s.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in ARCH 435 or equivalent.

537 Topics in the History of Nineteenth and Twentieth Century Architecture. (3) Analysis of theoretical, cultural, and historical determinants as they may be applied to a selected array of architects and buildings from around 1800 to the present.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in ARCH 437 or the equivalent.

540 Introduction to Historic Preservation. (3) Survey of history and philosophy of preservation in the United States and Europe. Emphasizes origins of current philosophies and approaches to preservation in the United States and the variety of organizations and agencies involved in preservation.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director.

Not open to students who have credit in ARCH 440; LA 420.

541 Historic Preservation Law and Planning. (2) Survey of fundamental legislation in the preservation field at federal, state, and local levels. Emphasizes applying knowledge of laws and regulations

to actual situations in practice. Survey of types of preservation planning used by federal, state, and local governments.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director; ARCH 540.

Not open to students who have credit in ARCH 441.

542 Documentation and Registration of Historic Properties 1. (2) Introduction to the methods of recording and registering historic properties, including buildings, structures, districts, landscapes, objects, and archaeological sites, using both written and graphic means. Emphasizes projects and exercises involving descriptions and statements of significance for historic properties.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director.

Not open to students who have credit in ARCH 442.

543 Field Workshop in Preservation. (3–6) Special and timely projects addressing real-world problems in historic preservation, undertaken in groups.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

Not open to students who have credit in ARCH 443 or equivalent.

544 Economics of Historic Preservation. (2) Developing skills in assessing the economics of preserving historic properties. Emphasizes exercises involving feasibility studies, pro formas, revolving funds, and identification of feasible users. Surveys also Main Street Program and heritage tourism and heritage areas as revitalization techniques.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director; ARCH 540.

Not open to students who have credit in ARCH 441.

545 Documentation and Registration of Historic Properties 2. (2) Application of skills and principles learned in ARCH 542 in a registration or documentation project.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director; ARCH 542; PLAN 605.

Not open to students who have credit in ARCH 442.

547 Historic Preservation Technology 1. (2) Survey of the materials and systems of construction used in historic buildings and the causes of deterioration, obsolescence, and failure in buildings. Emphasizes developing diagnostic skills through field investigations and laboratory analysis and exercises.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director.

Not open to students who have credit in ARCH 447.

549 Historic Preservation Technology 2. (2) Survey of the methods and philosophies of conservation and rehabilitation for historic buildings. Emphasizes identifying appropriate solutions to problems of deterioration and appropriate rehabilitation and restoration approaches. Field trips and laboratory analysis and projects.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director; ARCH 547.

Not open to students who have credit in ARCH 449.

552 Human and Cultural Factors of Design. (3) Addresses the ethical, social, and cultural factors brought to the design of the built environment. Includes: ethical values; cultural patterns and values; privacy and community; the symbolic content of form and environment; and design across cultures. Its concern is with critical thinking, and from the standpoint of design research, it enables students to understand theoretical constructs, use conceptual argumentation, and construct strategies for a design process.

Prerequisite: graduate standing or permission of the program director.

555 Professional Practice. (0) Prepares students for critical engagement in architectural practice. Field studies in architecture under the supervision of a licensed architect or allied professional.

Prerequisite: permission of the department chairperson.

Open only to master in architecture students.

556 Professional Practicum. (9) Prepares students for critical engagement in architectural practice. Field studies in architecture under the supervision of a

licensed architect or allied design professional.

Prerequisite: graduate standing; permission of the program director.

Parallel: ARCH 557, 558.

557 Case Studies. (3) Investigation of contemporary architectural practice through the use of the case study method based on the professional practicum, including structured interviews, analysis, and production of a detailed case study report.

Prerequisite: permission of the program director.

Parallel: ARCH 556, 558.

558 Practicum Reflection. (3) Reflection on architectural practice and theory based on professional practicum experience. Designed to teach reflective practice and build scholarship regarding the discipline.

Prerequisite: permission of the program director.

Parallel: ARCH 556, 557.

559 Professional Practice. (3) Explores the essential elements of architectural practice and related professions. Addresses administrative role of the architect, basic principles of architectural practice, leadership, legal responsibilities, and ethics and professional judgment in architectural design and practice.

Prerequisite: ARCH 556 or equivalent.

564 Architectural Photography. (3) An introduction to the basic technical, observational, and compositional skills and knowledge required for sensitive and competent description of architecture through the photographic medium. Assumes no previous experience but requires that students have their own suitable cameras and basic design abilities.

Prerequisite: CAP 102 or equivalent experience in basic design.

572 Contemporary Preservation Practice. (3) Seminar with regionally and nationally distinguished preservationists in continuing outside activities through a series of case studies.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

573 Directed Research. (2) Methods of conducting primary and secondary research to produce academic papers, theses, creative projects, and publishable reports or articles; survey of principles of scholarly professional

writing. Emphasizes exercises that develop skills in research and writing.

Prerequisite: graduate status in the College of Architecture and Planning; permission of the program director.

574 Architectural Aspects of Archaeological Fieldwork. (3)

Archaeological methods applied to architectural remains. Principles of stratigraphic excavation, dating methods, and techniques for surveying and recording; technical and comparative analysis of building elements for purposes of dating, interpretation, and reconstruction.

Not open to students who have credit in ARCH 474.

583 Life Safety in Architecture and Environmental Design. (3)

Survey of topics relevant to life safety encompassing wind, fire, ground motions, environmental conditions (including noise and criminal activity), home accidents, and matters pertaining to the Occupational Safety and Health Act (OSHA).

Not open to students who have credit in ARCH 483.

590 Independent Projects. (1–4)

Environmental topics.

Prerequisite: approval of the program proposal by the faculty advisor and the department chairperson.

A total of 8 hours of credit may be earned, but no more than 4 in any one semester or term.

592 Psychological Aspects of

Environmental Design. (3–6) Review of attempts to discover rational methods for predicting and evaluating environmental design. Basic research and analysis methods from the designer's point of view. Lecture, studio, and field activities.

Prerequisite: for students with majors other than architecture or landscape architecture; permission of the department chairperson.

A total of 6 hours of credit may be earned.

Not open to students who have credit in ARCH 492.

596 Facility Programming. (3) Problems and methods leading to the development of user requirements and their translation into facility performance criteria.

Prerequisite: graduate standing.

598 Special Projects in Architecture.

(3–6) Special and timely architectural projects undertaken by groups of students.

Prerequisite: graduate status in the College of Architecture and Planning.

A total of 9 hours of credit may be earned, but no more than 6 in any one semester or term.

601 Architectural Design 3. (6) Initiation and preparation of a thesis or creative project through topical explorations in architectural design.

Prerequisite: sixth-year standing or permission of the program director.

Parallel: ARCH 652.

602 Architectural Design 4. (6)

Development of a design project in student's concentration area, supported by a research component completed in the research methods course. Requires thorough background research and an insightful description of the design project proposition. Course is required for a master's professional degree candidate choosing the graduate research methodology option.

Prerequisite: ARCH 652.

Open only to MArch (professional) degree candidates.

605 Design and Presentation Techniques.

(1) Introduction to graphic techniques and design processes. Lecture and studio exercises on problem solving and public presentation of findings. For historic preservation students without undergraduate training in design.

Prerequisite: graduate status in College of Architecture and Planning; permission of the program director.

611 Design Studio 1. (3) Introduction to basic design, problem solving, concept formulation, design language, precedent studies, and analysis. Emphasis on form, space, light, and materiality. Design exercises are abstract and cumulative.

Parallel: ARCH 663.

Open only to MArch (professional) degree candidates.

612 Design Studio 2. (3) Introduction to the discipline of architecture and site design. Emphasis on space and place and the impact the natural and built environments have on architectural form. Small projects that integrate site and building design.

Parallel: ARCH 666.

Open only to MArch (professional) degree candidates.

613 Design Studio 3. (6) Principles of architectural design emphasizing space and place through site, function, circulation, structure, enclosure, context and building expression. Continued explorations of meaning and form, concept formulation, design methods, and site, program and precedent analysis. Projects of increasing scale and complexity that address figurative and modern spatial typologies.

Open only to MArch (professional) degree candidates.

614 Design Studio 4. (6) Integration of design determinants with emphasis on building tectonics including structure, natural and mechanical environmental systems, building materials and methods of construction, and building systems. Understanding thorough design of the inherent logic of technical systems and how these systems influence architecture form, space, meaning, and function.

Open only to MArch (professional) degree candidates.

629 Architectural Theory. (3) Examines contemporary architectural theory, criticism, and practice through the presentation and study of significant texts and built form.

Prerequisite: graduate standing or permission of the program director.

652 Research Methods. (3) Enables students to study and research social, technical, environmental, ethical issues, and the creative processes of design. Uses scenario planning, case studies, ethnographic, and textual analysis. Formulates a broad range of research proposals. Course satisfies the Graduate School's research methodology option and constitutes part of the master of architecture professional degree.

Prerequisite: graduate standing or permission of the program director.

Parallel: ARCH 601.

655 Professional Practice. (0) Prepares students for critical engagement in

architectural practice. Field studies in architecture under the supervision of a licensed architect or allied professional.

Prerequisite: ARCH 555; permission of the department chairperson.

Open only to master of architecture students.

663 Design Communications Media 1. (2) Introduction to architectural and design representation techniques and media including freehand drawing, orthographic drawing, analytic drawing, diagramming, and modeling.

Parallel: ARCH 611.

Open only to MArch (professional) degree candidates.

666 Design Communications Media 2. (2) Exercises exploring ways of representing architectural space, form, and context. Drawing and modeling as a means of visual thinking, perceiving and observing, and composition and experimentation.

Parallel: ARCH 612.

Open only to MArch (professional) degree candidates.

669 Internship in Historic Preservation. (4) A 10-week period of approved employment with a national, state, or local organization engaged in professional preservation work, or participation in an approved preservation activity, typically undertaken during the summer.

674 Thesis or Creative Project Proposal. (1) Selecting a topic for the master's thesis or creative project and preparing an acceptable proposal.

Prerequisite: ARCH 573; permission of the program director.

696 Thesis or Creative Project Preparation. (3) Conducting research and writing or preparing the thesis or creative project under the direction of the thesis committee.

Prerequisite: ARCH 573, 674; permission of the program director.

LANDSCAPE ARCHITECTURE

www.bsu.edu/landscape

Architecture Building 226, (765) 285-1971

Chairperson: Malcolm Cairns

Graduate Advisor: Calkins

Graduate Faculty: Benson, Blaloch, Cairns, Calkins, Corbin, Cruz, Hunt, Marlow, Motloch, Spangler

Landscape architecture involves the coordinated planning and design of land. It applies aesthetic and scientific principles in arranging objects and spaces on the landscape for human use, enjoyment, safety, health, and welfare. Landscape architecture is based on the recognition of long-term ecologic, economic, social, and psychological values. It embraces the conservation of natural resources and the design of land for specific purposes.

Landscape architects provide professional services for site planning, land-use projects, and feasibility studies and may be assisted by such allied professionals as architects, engineers, planners, ecologists, geologists, geographers, hydrologists, biologists, economists, and sociologists. Understanding the potentials and limitations of natural systems (soils, water, vegetation, wildlife, and climate) provides the basis for responding to complex problems of land use.

The MLA program is open to any qualified student holding any baccalaureate degree. Ball State University's programs in landscape architecture are fully accredited by the Landscape Architecture Accreditation Board of the American Society of Landscape Architects.

MASTER OF LANDSCAPE ARCHITECTURE (MLA)

Admission

Applicants must meet the admission requirements of both the Graduate School and the Department of Landscape Architecture.

Degree Requirements

Program 1: 39 hours (graduate)

Students with degrees in landscape architecture from a Landscape Architecture Accreditation Board-accredited program are required to enroll in the following minimum program of study.

PREFIX	NO	SHORT TITLE	CR HRS
LA	635	Methods	3
	651	Res Meth	3
	653	Readings	3

LA electives	6-12
Electives	12-18
THES 698 Thesis (1-6)	6

39 hrs

At least one elective must be a studio course.

Computer competency in Micro Station is the responsibility of the student.

Candidates will complete a minimum of 39 hours of graduate work, 19 hours of which must be taken at Ball State University.

Program 2: 46 hours (graduate), 19 hours (undergraduate)

The following is the required program of study for candidates holding professional degrees in related environmental design and planning areas (i.e., architecture, interior design, urban and regional planning, etc.). Foundation courses at the undergraduate

level are required for all candidates in this program except where prior equal course work is documented. **Computer competency in Micro Station is the responsibility of the student.** This degree program is known as a first professional degree program in landscape architecture.

PREFIX	NO	SHORT TITLE	CR HRS
LA	573	Envirn Sys	3
	602	Site Design	4
	603	Com/Urb Des	4
	604	Plan and Des	4
	605	Land Plan 1	4
	622	L A Hist	3
	635	Methods	3
	645	Plant Des	3
	651	Res Meth	3
	653	Readings	3
	668	Intern (0)	
		or	
	669	Pd Intern (0)	0
Electives			6
THES	698	Thesis (1-6)	6
			46 hrs
Foundation undergraduate courses			
LA	311	L A Engineer 1	4
	312	L A Engineer 2	4
	341	Plants 1	4
	413	L A Engineer 3	4
	460	Pro Practice	3
			19 hrs

Program 3: 54 hours (graduate), 22 hours (undergraduate)

The following is the required program of study for candidates not holding professional degrees in landscape architecture or related environmental design and planning areas. Foundation courses at the undergraduate level are required for all candidates in this program except where prior equal course work is documented. This degree program is known as a first professional degree program in landscape architecture.

PREFIX	NO	SHORT TITLE	CR HRS
LA	500	L A Context	1
	573	Envirn Sys	3
	601	L A Des Prin	4
	602	Site Design	4
	603	Com/Urb Des	4
	604	Plan and Des	4
	605	Land Plan 1	4
	622	L A Hist	3
	635	Methods	3

	645	Plant Des	3
	651	Res Meth	3
	653	Readings	3
	661	Des Com	3
	668	Intern (0)	
		or	
	669	Pd Intern (0)	0
Electives			6
THES	698	Thesis (1-6)	6
			54 hrs
Foundation undergraduate courses			
LA	280	L A Comp App	3
	311	L A Engineer 1	4
	312	L A Engineer 2	4
	341	Plants 1	4
	413	L A Engineer 3	4
	460	Pro Practice	3
			22 hrs

Other courses may substitute for LA 280 with departmental approval.

All MLA candidates are also required to make a public presentation upon completion of a thesis or creative project.

All MLA candidates will also enroll in the department's internship program if they have had no previous work experience under a registered landscape architect. A student will receive 3 hours of credit for a landscape architecture internship upon completion of one documented period of approved employment or of an approved work-study program directed by a registered landscape architect faculty member in the department.

LANDSCAPE ARCHITECTURE (LA)

500 Context for Landscape Architecture.

(1) An intensive immersion introducing principles and introductory skills necessary to the design and planning of the environment. May include field study, historical case studies, philosophical issues, overview of professional practice skills, technology, vocabulary and concepts, and opportunities for interdisciplinary studies.

Prerequisite: permission of the department chairperson.

520 Regional Landscape Architectural

History. (3) Major representative samplings of cultural developments and forces affecting evolution and transformation of the structure, pattern, image, and function of the midwestern landscape.

525 Historic Landscape Preservation. (3) Theory, concepts, methods, and case studies

in historic design and cultural landscape preservation.

530 Philosophy of Landscape Architecture. (3) Seminars and independent study of the background and development of prevailing philosophies of landscape architecture.

Not open to students who have credit in LA 430.

531 Rural Landscape. (3) Lectures, seminars, and field study focusing on the rural landscape of Indiana and the Midwest. Issues of policy and management of resources, land-use practices, and various other conditions, both natural and human-made, as they relate to landscape architecture.

538 Park and Recreation Planning and Design. (3) Interdisciplinary relationships in comprehensive and site-specific community recreation and park planning and design. A joint offering with the Indiana University Department of Recreation and Park Administration, presented over the Indiana Higher Education Telecommunications System.

573 Environmental Systems and Structures. (3) Qualitative investigations and analyses of and research in landscape systems. Studies include assessments of vegetation, climate, hydrology, soils, and surface geology as determinants of landscape architectural form; natural processes as they relate to the principles of landscape architectural construction.

590 Independent Projects. (1–9) Independent study in environmental topics relevant to landscape architecture.

Prerequisite: permission of the department chairperson.

A total of 9 hours of credit may be earned.

598 Special Projects in Landscape Architecture. (1–9) Special and timely landscape architectural projects undertaken by groups of students.

Prerequisite: permission of the department chairperson.

A total of 9 hours of credit may be earned.

601 Principles of Landscape Architectural Design. (4) Design projects, exercises, lectures, and field studies to develop awareness of principles and

concepts integrating natural and cultural elements in the landscape.

602 Site Design. (4) Continued applications of basic design principles, programming, and site analysis reinforcing design processes and visual thinking in the design of sites. Emphasizes open space planning and park design. May include projects in natural, rural, and urban settings. Computer applications as appropriate.

Prerequisite: LA 601 or departmental permission.

603 Community and Urban Space Design. (4) Continued application of principles of landscape architecture to community- and neighborhood-scale projects of increasing complexity, including housing, commercial and urban land planning, and development issues. Additional issues addressed include human behavioral principles and planting design concepts as they relate to landscape architectural spaces. Computer graphic and CAD techniques as appropriate.

Prerequisite: LA 602 or departmental permission.

604 Landscape Architecture Planning and Design. (4) Staged projects progressing through regional land planning and site design scales. Includes landscape planning (manual or GIS), overlay assessments, historic and cultural landscape conservation planning and design, and site design applications.

Prerequisite: LA 603, 635, or departmental permission.

605 Comprehensive Landscape Planning and Design. (4) Faculty-directed landscape architectural planning and design problems and projects. Student-initiated components in concentration area leading to thesis/creative project development. Weekly peer reviews and interim public presentation will be required in the course of development of the thesis or creative project.

Prerequisite: advisor selected for the thesis or creative project and proposal developed; LA 651, 653, and 604 or departmental permission.

606 Comprehensive Site Design 1. (4) Comprehensive site-scale design from the concept stage through detail documentation.

Prerequisite: LA 603 or permission of the instructor.

622 Landscape Architectural History. (3) Lecture and discussion on contributions of various cultures and eras to the landscape and their relationship to current issues in landscape design and theory.

631 Topical Seminars. (1) Issues, case studies, guest professionals, and student presentations relevant to broadening understanding of the diverse profession of landscape architecture.

635 Landscape Architecture Methods. (3) Theories and methods related to landscape planning, historic landscape preservation and conservation, and site designs.

645 Planting Design. (3) Use of plants as landscape-design elements; related specifications and detailing. Introduction to cost estimating.

Prerequisite: LA 341 or permission of the instructor.

651 Research Methods in Landscape Architecture. (3) Introduction to critical issues, methods, procedures, and techniques for comprehending, evaluating, and undertaking research, with an emphasis on proposal development.

Parallel: LA 653.

653 Readings in Landscape Architecture. (3) Directed and selected readings and written reports to broaden perspective in landscape architecture. Preliminary investigation for the literature review of the thesis/creative project.

661 Design Communications. (3) Theory and application in design communication, including free-hand and technical drawing and presentation skills. Includes demonstration of computer-automated drafting (CAD) and computer graphic simulation technologies.

668 Landscape Architecture Internship. (0) Minimum of one semester of supervised, unpaid employment under the direction of a landscape architect or allied-design professional. Departmental approval required in advance of qualified employment. Required employer and self-evaluation reports. Offered credit/no credit only.

Not open to students who have credit in LA 669.

669 Landscape Architecture Internship. (0) Minimum of one semester of supervised, paid employment under the direction of a landscape architect or allied-design professional. Departmental approval required before qualified employment. Requires employer and self-evaluation reports. Offered credit/no credit only.

Not open to students who have credit in LA 668.

690 Independent Projects. (1–3) Independent study in environmental topics relevant to landscape architecture.

Prerequisite: permission of the department chairperson.

A total of 9 hours of credit may be earned, but no more than 3 in any one semester or term.

698 Special Projects in Landscape Architecture. (1–3) Special and timely landscape architecture projects undertaken by students in groups.

Prerequisite: permission of the department chairperson.

A total of 9 hours of credit may be earned, but no more than 3 in any one semester or term.

URBAN PLANNING

www.bsu.edu/urban

Architecture Building 327, (765) 285-1963

Chairperson: Eric D. Kelly

Graduate Advisor: Francis H. Parker

Graduate Faculty: Frankel, Kelly, Kuehl, Hill, Parker, Perera, Schoen, Segedy, Truex

MASTER OF URBAN AND REGIONAL PLANNING

The professional field of planning and the programs of the department present significant and diverse opportunities to solve the problems of communities and shape the built environment. Our profession is uniquely dedicated to the quality of life impacted by place, to visions and policy consequences that extend beyond the short term, and to problem solving that relies on multiple disciplines. Our professional values commit us to environmental sustainability, social equity, participatory democracy, and deliberate design.

Planners promote public interest development through the implementation of plans formulated and adopted in the public interest. They perform this function in all three economic sectors—public, private for-profit, and private nonprofit. Professional career areas of opportunity include public planning and housing/ community development agencies, land development and professional service firms, and nonprofit corporations serving neighborhoods and various public interests.

We prepare students for these challenges by offering a rigorous course of study for the master of urban and regional planning (MURP), a professionally recognized degree leading to professional certification by the American Institute of Certified Planners (AICP).

Admission

Applicants must meet the admission requirements of the Graduate School and be approved by the Department of Urban Planning. International students must also meet the financial, English language, U.S. Immigration (visa), and transcript certification requirements of the Rinker Center for International Programs.

Degree Requirements

Tracks

The standard MURP track is a two-year, 48-credit hour program. The accelerated track program, available only to graduates of an urban planning baccalaureate program accredited by the Planning Accreditation Board (PAB), may be completed within one calendar year (a full academic year plus dual summer session) and requires 36 credit hours.

Examination

To assist in self-assessment and faculty advising newly admitted students must complete a diagnostic examination that evaluates their planning interests, perceptions, knowledge, and skills. Before graduation students must also complete a comprehensive examination that addresses the synthesis of knowledge of greatest significance in the student’s professional education. This exam assesses not only student competency and program effectiveness, but also student progress since the diagnostic exam.

Course of Study in Selected Area of Concentration

For the standard and accelerated tracks, 12 hours are required in the student’s selected area of concentrated study (ACS) in (1) comprehensive planning, (2) physical planning, (3) community development and enterprise planning, or (4) customized urban planning area; the latter requires faculty approval. This is comprised of an ACS core course, ACS studio, and two elective courses particular to the selected ACS; depending on ACS, there are certain requirements for electives.

Capstone Project

The degree requires a capstone project of 3 hours, typically in the student’s ACS, to demonstrate advanced competency in the use of knowledge or to create knowledge. The project may center on a field-based project that produces a professional report or on a topic of scholarship that produces a research paper (refer to RES 697). With faculty approval a student may engage in a creative project that produces a thesis for 6 credits (refer to THES 698). The program’s curriculum prepares students for the capstone project.

Remaining Electives

The remaining electives constitute 9 hours for the standard track and 6 hours for the accelerated track. Students select electives based on their ACS from courses offered within urban planning or from courses in other disciplines of the Graduate School, as approved by urban planning; a pre-approved list is available through the department or consult with the graduate faculty advisor for approval. Also, the required capstone project constitutes 3 hours by students enrolling in RES 697,

or if THES 698 is approved for 6 hours, the additional 3 credits may substitute as an elective.

Credits Transferred from Prior Graduate Study

Up to 15 credits for the standard and 9 credits for the accelerated track earned in prior graduate study outside the department and not resulting in a degree, may be applied toward the MURP. Such transfer credits must have been earned at an accredited institution, demonstrate relevancy for an equivalent course of study of the MURP program, and be approved by the department.

Degree Requirements

PREFIX	NO	SHORT TITLE	CR HRS
PLAN	500	Pln Diag Exa	0
	601	Plan Theo	3
	615	Intr Qunt An	1
	616	Dem Soc Met	1
	617	Intr Pln Res	1
	618	Adv Pln Res	2
	619	Qunt Mod Loc	1
	620	Hum Impt Any	2
	621	Env Imp Ana	1
	625	Plan Law	3
	626	Humn Set	1
	627	Ecol Plan	1
	628	Econ Plan	1
	629	Pl An Studio	3
	690	Pln Port Rev	0
	691	Pd Intern(0)	
	or		
	692	Internship(0)	0
	695	Pl Cap Rs Mt	1
	696	Pl Cap Rs M2	1
	697	Pl Res Met 3	1
	699	Pln Comp Exm	0
3–6 hours from			
RES	697	Research Ppr (1–3)	
	or		
THES	698	Thesis (1–6)	3–6
12 hours from			
		Area of Concentrated Study (ACS)	12
		Complementary electives from outside planning	9
For students with a Bachelor of Urban Planning and Development (BUPD) or equivalent degree			
PLAN	500	Pln Diag Exa	0
	604	Adv Pln Iss	3
	618	Adv Pln Res	2
	619	Qunt Mod Loc	1

620	Hum Impt Any	2	
621	Env Imp Ana	1	
690	Pln Port Rev	0	
691	Pd Intern (0)		
	or		
692	Internship (0)	0	
695	Pl Cap Rs Mt	1	
696	Pl Cap Rs M2	1	
697	Pl Res Met 3	1	
699	Pln Comp Exm	0	
3 hours from			
PLAN	625	Plan Law (3)	
	626	Humn Set (1)	
	627	Ecol Plan (1)	
	628	Econ Plan (1)	3
3–6 hours from			
RES	697	Research Ppr (1–3)	
THES	698	Thesis (1–6)	3–6
12 hours from			
		Area of Concentrated Study (ACS)	12
		Outside electives	6

URBAN PLANNING (PLAN)

500 Planning Diagnostic Exam. (0) The diagnostic exam, administered to incoming students, evaluates professional objectives, perception of the planning profession, and knowledge of several key topical areas with the intention of both the student and student’s faculty advisor using the results when selecting a course of study. Offered credit/no credit only.

504 Urban Design. (3) An exploration of the physical form of the public realm and how it has been shaped by social, economic, political, and cultural forces. Special attention will be paid to issues of identity, sense of place, placemaking, and sense of belonging.

506 Environmental Design Studio. (3) An interdisciplinary approach to the resolution of problems in environmental design. Appropriate projects to be determined in consultation between the students and faculty.

507 Computer Techniques for Design and Planning. (3) Introduces a variety of software and applications techniques in remote sensing, mapping, perspective drawing, and database graphics for architecture, landscape architecture, and planning.

512 Introduction to Geographic Information Systems for Urban Planning. (3) Designed to introduce

principles of GIS and GIS applications in an urban environment. Topics include GIS components, modeling methodology, and management of environments. Implications to urban and environmental policy development.

513 Advanced Concepts in Geographic Information Systems for Urban Planning. (3) Advanced topics in modeling and analysis of urban and regional environments. Techniques for database organization, database development, and analytical processes (algorithm development).

Prerequisite: PLAN 512.

521 Urban Land-Use Planning. (3) Planning the uses of land in urban areas. Land-use determinants, standards at the community level, information systems, preparation of land-use plans, and development of land-use control policies at the urban and county levels.

530 Housing and Community Development. (3) Public programs and private activities relating to the provision of affordable housing for all income levels. Topics include housing supply and demand, housing finance, the role of government subsidies, and coordinated policy for community development.

531 Urban Transportation Planning. (3) Transportation planning methods and policy, including analysis of travel demand, links between land use and transportation, choice of transportation modes, and design of balanced transportation systems.

533 Urban Environmental Planning. (3) Introduction to urban planning considerations for control and reduction of air, water, and land degradation, including waste management, noise pollution, and other side effects of urban development.

534 Regional Development Planning. (3) Seminar in techniques of regional planning analysis and policy formulation. Methods of integration of economic, ecological, and social objectives in regional development.

535 Energy Planning. (3) Energy resource issues in urban planning. Strategies for incorporating energy efficiency into housing, land use, transportation, social services, and community development. Analysis of energy policy, with emphasis on innovative public and private sector initiatives at the community level.

538 Regional Land-Use Planning. (3) Planning the uses of land at the regional, area, and state levels; interface between social, environmental, and land-use plans at the regional level; and land-use policies for critical-area management including the coastal zone.

539 Public Facilities Planning. (3) An introduction to the planning of public facilities systems including street and highway systems, water systems, wastewater, and solid waste management.

540 Building Performance. (3) A scientific approach to understanding how energy and moisture move in buildings and how buildings fail with respect to health and safety, durability, comfort, and affordability. While the focus is on housing, the fundamentals are applicable to all buildings.

541 Sustainable Housing. (3) Methods for bringing sustainable design and construction practices into the housing industry, with an emphasis on increasing durability, comfort, and energy efficiency while reducing costs. Use of computer software for economic analysis of design improvements, ensuring code compliance, and determining HERS and Energy Star ratings.

Prerequisite recommended: PLAN 540.

550 Neighborhood Planning. (3) Planning strategies for the revitalization of older residential neighborhoods and neighborhood commercial areas. Includes community organization and the role of public and private neighborhood organizations.

553 Planning Practice Workshop. (3) An eclectic practice course intended to sharpen the planning student's skills in report preparation, oral and visual presentation of complex issues, preparation of grant applications, and agency budgeting procedures.

554 Community Development Policy Planning. (3) Strategies of community development to achieve policy goals and objectives. Emphasizes interorganizational coordination of public and private interests in revitalizing urban communities.

555 Women and Urban Environments. (3) Examines the linkages between women and urban environments by focusing on the role played by the urban environment in

facilitating or hindering women's access to economic, social, and political opportunities. Domestic and international examples are used to illustrate concepts.

558 Introduction to Multiculturalism as a Planning Context. (3) Anthropological analysis of culturalism for planning within a cross- and multi-cultural context. Subordination/exclusions based on age, gender, sexual preference, bureaucratic/economic status, religion, and race are historically reviewed through socio-cultural forces: fear of the other, immigration, unresolved post-colonialism, resurgence of indigenous peoples/displaced cultures, and emergence of modern metropolitan society.

559 International Planning. (3) An exploration of the nature of the urban and regional planning process in other countries. Topics include development policies, planning strategies, institutional structures, implementation strategies, and accomplishments. Attention also will be paid to the usefulness of these experiences to American cities.

560 Alternative and Sustainable Community Planning. (3) Seminar examining nontraditional approaches to community planning and design. Focuses on concepts associated with the design of sustainable communities. Historical precedent, case study, and utopian alternatives are synthesized to project alternative futures for present community planning and design issues.

577 History of Urban Form. (3) An examination of the historical transformation of the urban form and its elements. Focuses on the physical organization of the city in relation to social, economic, political, and cultural forces that have shaped it. Special attention will also be paid to nonWestern urban forms and histories.

580 Policy Impact Analysis and Techniques of Project Control. (1) Program scheduling techniques of Program Evaluation Review Techniques (PERT) and Critical Path Method (CPM). Decision-diagramming aids in the rational choice and sequencing of actions toward public objectives.

581 Public Participation: Issues, Methods, and Techniques for Knowing the Public Interest. (3) Issues and qualitative methods/techniques useful to the

planner's paramount responsibility: understanding/integrating local knowledge and values into the public decision-making process. Issues and theories of public participation. Methods and skill techniques of being informed by the public, of informing the public, and of advancing planner/constituency collaboration.

582 Grant Procurement and Administration for Planners. (1) Techniques of proposal writing, including RFP and RFQ responses, and grant procurement, including intergovernmental, foundation and corporate giving, contract negotiation and administration, and lobbying strategies.

583 Site Analysis and Planning. (3) Range of practical approaches in evaluating and planning sites within the contexts of natural, economic, and cultural systems. Site inventory, analysis, and planning. Introduction of computerized platforms, integrating digital and physical representations to enhance planning and communication with the public. Required core course in the physical planning area of concentrated study (ACS).

584 Visual Modeling. (3) Graphic design representation and presentation techniques. Introduction to "data mining" and computer-based applications in remote sensing, mapping, perspective drawing, and database graphics. Visual urban simulation using advanced digital applications, such as GIS. Introduction to terrain engines, VRML, and other rendering environments for the display of urban planning alternatives.

585 Introduction to Community Development and Enterprise Planning. (3) Historical/comparative review of the real estate/community development practices, and emergence of enterprise planning. Development process attendant to each of the three economic sectors and to contrasting venues of economically/politically impacted areas ranging from inner cities to rural towns seeking revival. Methods of formulating action plans.

586 Methods of Public Interest Development. (3) From an enterprise planning perspective, the rationale and methods of development. Finance: proforma, break-even cash flow, equity investment, lender underwriting, and gap

financing analyses; public-private partnerships incorporating range of development inducements. Strategies for creating markets given disinvestment pattern. Managing community development organization and projects through development process.

590 Independent Study in Planning.

(1-9) Relevant research or a project under the direction of the planning faculty.

Prerequisite: approval of a written project or research proposal.

A total of 9 hours of credit may be earned.

598 Special Projects in Urban and Regional Planning.

(3-9) Special projects in urban and regional planning undertaken by groups of students under faculty direction.

A total of 9 hours of credit may be earned.

601 Planning Theory. (3) Introduction to the theory of urban and regional planning. Planning as a method of decision making and strategic choice, including setting goals, exploring alternatives, and implementing solutions. Evolution of planning theories in twentieth-century urban planning.

604 Advanced Planning Issues, Theory, and Practice. (3) Advanced seminar to explore the application of planning theory to planning practice and management. Issues of planning ethics, roles, styles, and strategies, including citizen participation, for effective plan making and implementation. Accelerated track.

605 Design and Presentation

Techniques. (1-3) Introduction to graphic techniques and design processes. Lecture and studio exercises on problem solving and public presentation of findings. For planning and preservation students without undergraduate training in design.

A total of 3 hours of credit may be earned.

610 Planning Analysis Studio.

(3) Analysis and design principles at regional, urban, and local scale, including environmental suitability, land-use location criteria, and site-planning criteria for greenfield or redevelopment sites. Students defend proposals based on analytical and design criteria.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

611 Comprehensive Planning Studio.

(3) Application of substantive skills in a comprehensive planning exercise for an urban area, involving field work and a real location. Emphasizes the process by which comprehensive planning decisions are reached.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

612 Community Development Studio.

(3) Community development scale planning, such as neighborhood revitalization, housing, or industrial renewal, with a real-world setting and sometimes a real-world client.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

615 Introduction to Quantitative

Analysis. (1) Developing the analysis and problem-solving skills useful for practicing planners; the use of spreadsheets for problem-solving, data analysis, and presentation graphics; policy evaluation techniques of benefit/cost and cost/effectiveness analysis as the basis for understanding analytic planning thought.

Parallel: PLAN 616, 617.

616 Demographic/Socio-Economic

Forecasting Methods. (1) Demographic, economic, and socio-economic projection techniques; use of cohort survival, regression, and other techniques in the analysis of trends for the purpose of forecasting the components and location of population, housing, jobs, income, consumption, investment, etc.

Parallel: PLAN 615, 617.

617 Introduction to Planning Research

Methods. (1) Descriptive and introductory inferential statistical techniques, as per measures of central tendency and dispersion; calculation of need gaps; data tabulation and graphic presentation; sampling and survey research methods; hypothesis testing through analysis of variance, chi-square, and other significance testing of sampling data.

Parallel: PLAN 615, 616.

618 Advanced Planning Research

Methods. (2) Advanced inferential statistics; correlation and regression analysis progressing from linear and bivariate to quadratic and multivariate models; introductory Boolean algebra. Data

reduction techniques of factor analysis and Q-methodology. Classification techniques of cluster analysis.

Prerequisite: PLAN 615, 617 or competency by examination.

Parallel: PLAN 619.

619 Quantitative Models of Location Theory and Spatial Analysis.

(1) Quantitative modeling of urban spatial analysis (analysis and forecasting of uses and forms); land use and transportation forecasting; public facility, basic sector, residential distribution and retail/local service sector modeling; and trip generation and distribution modeling.

Parallel: PLAN 618.

620 Human Impact Analysis. (2) Fiscal, macroeconomic, social, and political impact analyses of development decisions and distributive consequences through incidence analysis. Consequences: public budgets, household income/consumption/investment, jobs, and community health/welfare. Shifting electoral consequences of new/displaced residential populations on political agendas of decision-makers. Urban indicators as measures of community well-being and distress.

Parallel: PLAN 621.

621 Environmental Impact Analysis.

(1) Techniques for assessing environmental impacts, including environmental inventory, rapid assessment, environmental impact analysis, land suitability analysis, risk assessment, build-out analysis, modeling for environmental sustainability, and the review of environmental regulations at all levels of government.

Parallel: PLAN 620.

625 Planning Law. (3) Historical/jurisprudential analysis of planning/land-use law within public agencies and the private sector of development. Zoning, subdivision, and other land use regulations. A study of the legislative, regulatory, and administrative law adjudicatory process within the context of planning and land use as well as comparisons of selective states and localities' processes.

626 Human Settlements. (1) Analytical and comparative history of urban form by way of its human, economic, and cultural influences. Elementary and essential principles of urban design.

627 Ecology of Planning. (1) Overview of principles of ecology essential to sustainable growth, habitat for human and nonhuman life, and the qualitative assessment of development impacts. Fundamental principles of environmental analysis and management in the formulation, implementation, and evaluation of plans.

628 Economics of Planning. (1) Neoclassical microeconomics applicable to analysis/evaluation of private/public development and urban form. Theories of marginal analysis, present value, and applied optimization explain urban/environmental/international economics; public choice; location theory; and development economics. Macroeconomic general equilibrium paradigm explains suboptimal resource allocations, or market failures, leading to variety of market interventions.

629 Planning Analysis Studio.

(3) Analysis and design principles at regional, urban, and local scale, including environmental suitability, land-use locational criteria, and site planning criteria for greenfield or redevelopment sites. Students defend proposals based on analytical and design techniques. Six contact hours.

630 Comprehensive Planning Studio.

(3) Application of substantive skills and knowledge in a comprehensive planning exercise for an urban area, involving fieldwork and a real location. Emphasizes the process by which comprehensive planning decisions are reached. Six contact hours.

Prerequisite: PLAN 521.

631 Studio in Physical Planning.

(3) Application of substantive skills and knowledge in physical planning through the creation of a site plan utilizing fieldwork and a real location. Emphasizes the processes of site planning and analysis. Six contact hours.

Prerequisite: PLAN 583.

632 Studio in Community Development and Enterprise Planning.

(3) Application of substantive skills and knowledge in an enterprise planning exercise for an urban area, involving fieldwork and a real location. Emphasizes the processes of action plans, land development/redevelopment, and community development. Six contact hours.

Prerequisite: PLAN 585 or 586.

636 Theory of Urban Spatial Planning.

(3) Seminar in theories of location and development of principal urban activities including transportation, housing, industry, commercial centers, and public facilities. Implications for urban planning policies.

652 Legal Aspects of Planning Practice.

(3) Introduction for nonlawyers to the legal principles and practices related to planning in public agencies. Includes zoning, subdivision, and other land-use regulations as well as consideration of private-property rights versus community objectives.

661 Planning Issues, Theory, and Practice.

(3) Capstone seminar to explore application of theory to planning practice and management. Issues of planning ethics, citizen participation, styles of planning, and strategies for effective implementation of planning.

Prerequisite: PLAN 691 or 692 or permission of the department chairperson.

690 Planning Portfolio Review. (0)

During the second semester of study and upon selection of ACS each student assembles a professional resume, examples of work, strategic plans for both career and internship, and an outline of a capstone project for review before a panel of faculty and for the purpose of self-assessment and faculty critique and guidance.

691 Planning Paid Internship. (0)

Paid professional work experience of at least 200 hours in approved planning or development organization; employer supervision/evaluation. Four seminars and coordinated with the faculty review of student portfolios. For accelerated-track students completing all other degree requirements during one year; a paper substitutes for the second-year fall semester seminar.

Prerequisite: PLAN 690 and completion of half the required credit hours (24 for standard track; 18 for accelerated-track) or permission of the department chairperson.

692 Planning Internship. (0)

Unpaid professional work experience of at least 200 hours in an approved planning or development organization; employer supervision/evaluation. Four seminars and coordinated with the faculty review of student portfolios. For accelerated-track

students completing all other degree requirements during one year, a paper substitutes for the second-year fall semester seminar.

Prerequisite: PLAN 690 and completion of half the credit hours (24 for standard track; 18 for accelerated track) or permission of the department chairperson.

693 Customized Area of Study in Urban Planning. (1–9)

Student-customized area of concentrated study (ACS) under the approval and supervision of the faculty. The area may include independent study (PLAN 590 Independent Study in Planning), several courses within the department, and the completion of courses of study in disciplines other than urban planning. (Includes study courses in one of the program's three areas of concentrated study, completing the required 12 credit hours of study in the selected, customized ACS.)

695 Planning Capstone Research

Methods. (1) Problem identification; selection of topical area of interest; formulation of specific research/professional report topic and outline; and development of an annotated syllabus.

696 Planning Capstone Research

Methods 2. (1) Selection and application of research methods to topic; collection and preliminary analysis of data.

Prerequisite: PLAN 695.

697 Planning Capstone Research

Methods 3. (1) Rigorous analysis of data and formulation of the paper/report, demonstrating topic definition, research methods, preliminary conclusions, and implications of the same.

Prerequisite: PLAN 696.

699 Planning Comprehensive

Examination. (0) Passing grade required for graduation. The exit examination evaluates three areas: (1) student competencies across a knowledge range most significant to, and integrative of, planning; (2) student progress consequent to the MURP course of study and relative to PLAN 500; and (3) the learning effectiveness of the MURP program.

Prerequisite: all other degree requirements.