

College of Architecture, Design and Construction

DAWN FINLEY, *Dean*

DAVID HINSON, *Associate Dean for Graduate Studies and Research*

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THE COLLEGE OF ARCHITECTURE, DESIGN AND CONSTRUCTION (CADC) is committed to preparing professionals in the design and construction industries through professional undergraduate programs in the academic areas of architecture, building science, environmental design, graphic design, industrial design, interior architecture, and landscape architecture and through graduate professional programs in building science, industrial design, architecture/public interest design option, landscape architecture, and real estate development. Collaboration, community engagement, innovation, global connection and critical practice are core values intertwined in all of the programs at the College of Architecture, Design and Construction. Whether working with nationally respected corporations in the School of Industrial and Graphic Design, associating with major construction companies in the McWhorter School of Building Science, or building facilities to accommodate the needs of some of the state's underserved citizens in the School of Architecture, Planning and Landscape Architecture's Rural Studio, CADC students learn in unique and flexible settings from innovative faculty and through progressive pedagogical models.

The College of Architecture, Design and Construction maintains the right to limit enrollment in all programs and may retain student work for exhibition or for records and accreditation purposes. CADC students in the professional programs are required to pay the CADC Professional Fee during each semester of the professional curriculum.

Minors

- Environmental Design (http://bulletin.auburn.edu/undergraduate/collegeofarchitecturedesignandconstruction/architecture/environmentaldesign_minor/)
- History of Architecture and the Built Environment (http://bulletin.auburn.edu/undergraduate/collegeofarchitecturedesignandconstruction/architecture/historyarchitectureandbuiltenvironment_minor/)
- Industrial and Graphic Design Processes (http://bulletin.auburn.edu/undergraduate/collegeofarchitecturedesignandconstruction/industrialandgraphicdesign/industrialandgraphicdesign_minor/)
- Real Estate Development (http://bulletin.auburn.edu/undergraduate/collegeofbusiness/departmentoffinancefinc/realestatedevelopment_minor/)

Graduate Programs

- Building Construction — Graduate Certificates, MBC, PhD (http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/buildingsciencembc_major/)
- Industrial Design — MID (http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/industrialdesignmid_major/)
- Landscape Architecture — MLA (http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/landscapearchitecturemla_major/)
- Real Estate Development — MRED (http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/realestatedevelopmentmred_major/)
- Architecture – Public Interest Design Option — MS (http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/masterarchitectureinterestdesign_major/)

Architecture Courses

ARCH 1000 CAREERS IN DESIGN AND CONSTRUCTION (1) LEC. 1, LST. 1. Introduction to the environmental design and construction professions and the curricula in the chosen field.

ARCH 1010 INTRODUCTION TO ARCHITECTURE DESIGN (6) LEC/STU. 12. Coreq. ARCH 1060. Principles of visual organization, research and design process skills, and the graphic communication of form and ideas.

ARCH 1020 INTRODUCTION TO ARCHITECTURE DESIGN II (6) LEC. 6, LST. 12. Pr. ARCH 1010 and ARCH 1000 and ARCH 1060. Coreq. ARCH 1420. Principles of visual organization, research and design process skills, and the graphic communication of form and ideas.

ARCH 1060 VISUAL COMMUNICATION (2) LEC/STU. 2. Coreq. ARCH 1010. Introduction to graphic communication. Focus on developing graphic skills for the purpose of explaining form and communicating ideas via exercises in drafting, sketching, and diagramming.

ARCH 1420 INTRODUCTION TO DIGITAL MEDIA (3) LEC. 3, LST. 0. Pr. ARCH 1060. Coreq. ARCH 1020. Introduction to the principles of 2-D and 3-D digital media and how these principles are utilized in architectural design.

ARCH 2010 STUDIO I (6) LEC. 2, LST. 10. Pr. ARCH 1020 and ARCH 1420. Basic issues of architectural design centered around the thoughtful creation of exterior and interior space. Studies of light, material, texture, proportion, scale, and site are integrated into each project.

ARCH 2020 STUDIO II (6) LEC. 2, LST. 10. Pr. ARCH 2010. Fundamental design process skills including observation, analysis, and synthesis.

ARCH 2110 HISTORY OF WORLD ARCHITECTURE I (3) LEC. 3. Pr. ARCH 1020. Examination of the social determinants that shape the public beliefs and practices that produce buildings.

ARCH 2210 ENVIRONMENTAL CONTROLS I (3) LEC. 3. Pr. ARCH 1020. This course provides the basic knowledge and skills requisite an architect in the design of environmentally responsive buildings.

ARCH 2220 ENVIRONMENTAL CONTROLS II (3) LEC. 3. Pr. ARCH 1020. This course provides the basic knowledge and skills requisite an architect in the design of environmentally responsive buildings.

ARCH 2600 THE ART OF ARCHITECTURE, PLACE, AND CULTURE (3) LEC. 3. The interrelationship of art, architecture, place, and culture with emphasis on the art of architecture from a global multicultural perspective. Illustrated lecture, readings, and essays.

ARCH 3010 STUDIO III (6) LEC. 2, LST. 10. Pr. ARCH 2020 and ARCH 3110. Builds on ARCH 2010 and 2020. The process of making architecture through critical inquiry and investigation. The physical, social, ethical contexts that inform the design of every building.

ARCH 3020 STUDIO IV (6) LEC. 2, AAB/LST. 10. Pr. ARCH 3010 or ARIA 3020. Builds on ARCH 3010 and adds an emphasis on the integration of construction tectonics in the development of architectural form.

ARCH 3110 HISTORY OF WORLD ARCHITECTURE II (3) LEC. 3. Pr. ARCH 2110 or ARCH 2117. Introduction to key European buildings and towns from the Bronze Age to the Enlightenment. Examines how societal beliefs and practices influence the making of architecture.

ARCH 3120 HISTORY OF MODERN ARCHITECTURE (3) LEC. 3. Pr. ARCH 3110. The history of architecture, 1850-present, with an emphasis on the rise of the modern movement in Europe and the U.S.

ARCH 3320 MATERIALS AND METHODS OF CONSTRUCTION I (3) LEC. 3. Pr. ARCH 1020. The properties and potential design function of materials used in contemporary construction, with an emphasis on foundation systems, wood, and masonry.

ARCH 3410 DESSEIN ELECTIVES (3) LEC. 3. Explorations in the art of representation. Complete descriptions of specific courses and their prerequisites are available from the School of Architecture, Planning and Landscape Architecture Course may be repeated for a maximum of 9 credit hours.

ARCH 3500 SEMINAR IN METHODS AND PROCESSES (3) LEC. 3. The tools and techniques available to the design professional including specific design specializations, and design methodologies. Descriptions of specific seminars are available from the School of Architecture. Course may be repeated for a maximum of 9 credit hours.

ARCH 3600 SEMINAR IN CONTEMPORARY ISSUES (3) LEC. 3. Pr. ARCH 2020. Investigation of significant topics that present opportunities and constraints to architectural thought and practice. Course may be repeated for a maximum of 9 credit hours.

ARCH 3700 SEMINAR IN HISTORY AND THEORY (3) LEC. 3. Pr. ARCH 2010. Investigation of theories, schools or periods to examine the potential and limitations of architecture. Descriptions of specific seminars available from School of Architecture. Course may be repeated for a maximum of 9 credit hours.

ARCH 3800 SEMINAR IN ASPECTS OF DESIGN (3) LEC. 3. Pr. ARCH 2020. Study of aspects of architectural design, such as form, space, style, meaning, perception, culture. Descriptions of specific seminars available from the School of Architecture. Course may be repeated for a maximum of 9 credit hours.

ARCH 4010 STUDIO V (6) LEC. 2, LST. 10. Pr. (ARCH 3010 or ARIA 3020) and BSCI 3440. The comprehensive design of buildings, building complexes, and spaces in an urban context. Lectures emphasize urban issues, research methods. Programming and analysis will parallel studio projects of increasing complexity.

ARCH 4020 STUDIO VI (6) LEC. 2, AAB/LST. 10. Pr. ARCH 4010 or ARIA 4020. The design of buildings, building complexes, and spaces with emphasis on the integration of building systems and tectonic development.

ARCH 4110 HISTORY OF URBAN ARCHITECTURE (3) LEC. 3. Pr. ARCH 2110 or ARCH 2117 and ARCH 3110. The course surveys the history of the physical and formal manifestations of the urban environment from its inception to our days.

ARCH 4320 MATERIALS AND METHODS OF CONSTRUCTION II (3) LEC. 3. Pr. ARCH 3320. Properties and potential design applications of materials used in contemporary construction, with an emphasis on steel and concrete, roofing, glass and glazing, cladding, and interior finishes.

ARCH 4500 PROFESSIONAL PRACTICE (3) LEC. 3. Pr. ARCH 3020 or ARIA 3020. Architects' legal responsibilities, frameworks of professional practice, office organization, business planning, marketing, project delivery, internship and professional ethics and leadership.

ARCH 4900 DIRECTED STUDIES (1-6) AAB. Development of an area of special interest through independent study. Evaluation of the work may be by faculty jury. School approval. Course may be repeated for a maximum of 6 credit hours.

ARCH 4910 RURAL STUDIO COMPLETION (0) DSL/LEC. Completion of construction project for ARCH 4120 Elective Studio. This studio is based in the School's remote facilities in Newbern, AL.

ARCH 4920 PROFESSIONAL INTERNSHIP (1-3) INT. Departmental approval. Application of principles and theories in a professional setting. Course may be repeated for a maximum of 9 credit hours.

ARCH 4960 SPECIAL PROBLEMS (1-6) LEC. Special problems Course may be repeated for a maximum of 6 credit hours.

ARCH 5010 STUDIO VII (6) LEC. 2, AAB/LST. 10. Pr. ARCH 4020 or ARIA 4020. Advanced problem-solving in the synthesis of previous design experiences. Development of a comprehensive design project.

ARCH 5020 THESIS STUDIO (6) LEC. 6, AAB/LST. 13. Pr. ARCH 5010 and ARCH 5990. Exploration and development of an architectural project under the direction of a faculty member.

ARCH 5100 TEACHING METHODS (1) LEC. 1.

ARCH 5240 BEING THERE (1) LEC. 1. Course may be repeated for a maximum of 2 credit hours.

ARCH 5340 METHODS IN COMMUNITY BASED LEARNING (3) LEC. 3.

ARCH 5990 THESIS RESEARCH (3) LEC. 3. Pr. ARCH 4020. Coreq. ARCH 5010. The tools, techniques, and strategies required to select, develop, refine, write, and present a thesis argument.

ARCH 5991 THESIS RESEARCH (1) LEC. 1. Pr. ARCH 5990. Expansion on the individual thesis argument and research begun in ARCH 5990 in parallel with the development of their thesis design project in ARCH 5020.

ARCH 7010 FALL STUDIO (6) STU. 12. This is one of three design studios in which the aspects of community need, context, technical systems, and building materials are explored to develop a schematic, client-driven architectural proposal.

ARCH 7020 SPRING STUDIO (6) STU. 12. This is one of three design studios in which the aspects of community need, context, technical systems, and building materials are explored to develop a client-driven architectural proposal.

ARCH 7030 SUMMER STUDIO (6) STU. 12. This is one of three design studios in which the aspects of community need, context, technical systems, and building materials are explored to develop a client-driven architectural proposal.

ARCH 7110 SEMINAR IN COLLABORATIVE DESIGN METHODS AND PROCESS (3) SEM. 3. Introduction to the core theories of collaboration within interdisciplinary design and construction project teams and community-based client groups. Students develop an understanding of the fundamentals of collaborative process design, principles negotiation, communication across disciplines, and conflict resolution.

ARCH 7120 SEMINAR IN DESIGN TECTONICS (3) SEM. 3. Taught as a series of workshops, this course provides the disciplinary framework necessary to apply technical research methods when evaluating options and reconciling the implications of design development decisions across systems and scales.

ARCH 7130 SEMINAR IN PROJECT COMMUNICATIONS (3) SEM. 3. This course provides the disciplinary framework necessary to develop all project documentation required for project construction, delivery, record keeping, as well as future research and analysis.

ARCH 7210 EXECUTIVE ISSUES: DISCIPLINARY FRAMEWORK (3) SEM. 3. Taught as a series "overlay" lectures and workshops. Provides the disciplinary framework to apply case study research methods when evaluating options and reconciling the implications of schematic design decisions across systems/scales.

ARCH 7220 EXECUTIVE ISSUES: RESEARCH METHODS (3) SEM. 3. Taught as a series "overlay" lectures and workshops. Provides the disciplinary framework necessary to apply case study research methods when evaluating options and reconciling the implications of design development decisions across systems/scales.

Building Science Courses

BSCI 1100 INTRODUCTION TO CONSTRUCTION (3) LEC. 3. Introduction to construction industry and education, current issues, and career opportunities.

BSCI 2200 CONSTRUCTION DOCUMENTS (3) LEC. 2. **LAB.** 3. Pr. BSCI 2300. Reading and interpreting working drawings, specifications, shop drawings, and digital 3D models for use in estimating and administering various types of construction projects.

BSCI 2300 CONSTRUCTION METHODS AND MATERIALS (3) LEC. 3. Materials, methods and construction equipment used in the construction of buildings.

BSCI 2400 STRUCTURE OF BUILDINGS I (3) LEC. 3. Pr. (PHYS 1500 or PHYS 1600) and (MATH 1610 or MATH 1150). Principles of mechanics and materials behavior related to building structures. Includes force systems, frame analysis, gravity load tracing, wind and seismic resistance for concrete and steel buildings.

BSCI 3200 CONSTRUCTION COMMUNICATION (3) LEC. 3. Overview of communication skills and tools required to succeed as a construction manager. Oral communication, written communication, ethics, visual literacy, and video capture in the context of construction risk management.

BSCI 3300 FIELD SURVEYING (2) LEC. 1. **LAB.** 6. Surveying techniques, construction layout, use of equipment, and dimensional controls for buildings. Surveying camp, a concentrated, 10 working day course held during breaks.

BSCI 3400 STRUCTURES FOR ARCHITECTS II (3) LEC. 3. Pr. BSCI 2400. Primary and secondary member design, connection design, temporary bracing/shoring, and steel shop drawing review.

BSCI 3440 STRUCTURE OF BUILDINGS II (3) LEC. 3. Pr. BSCI 2400. Principles of static equilibrium and materials behavior related to building structures. Includes force systems, frame analysis, section properties, stress, basic design of structural elements in buildings.

BSCI 3450 STRUCTURES FOR ARCHITECTS III (3) LEC. 3. Pr. BSCI 3400. Introduction to the design of reinforced concrete and related formwork including beams, columns, slabs, footings, retaining walls, and pre-stressed members.

BSCI 3500 CONSTRUCTION AND INFORMATION TECHNOLOGY I (3) LEC. 2. **LAB.** 2. To explore, discover and create applications of information communication technology (ICT) for Construction Processes.

BSCI 3600 ESTIMATING AND COSTING (4) LEC. 3. **LAB.** 3. BSCI Major. Introduction to construction estimating for CSI Divisions 1-33. Students perform quantity take-of (QTO), pricing, and preparation for a commercial construction project using computer-based techniques.

BSCI 3660 PRECONSTRUCTION AND PROJECT MANAGEMENT (3) LEC. 2. **LAB.** 2. Pr. BSCI 3600. Project(s) simulation as a context to discuss, negotiated procurement, pre-construction services in the alternative delivery environment and construction phase management procedures.

BSCI 3700 CONSTRUCTION SAFETY (3) LEC. 3. Construction safety, including OSHA guidelines, accident investigation, and the creating of construction safety plans and worker training program.

- BSCI 3800 CONTRACTING BUSINESS (4)** LEC. 4. Pr. BSCI 3600. Construction-specific look at the business functions associated with the industry; includes organizational structures, construction finance, risk analysis, construction contracts, project delivery, and associated documents with these functions.
- BSCI 4200 RESIDENTIAL CONSTRUCTION (3)** LEC. 3. Provides an overview of residential construction and development practices and professional issues including: local ordinances and codes, land use law, financing practices, architect-builder relationship, spec homes vs. custom homes, etc.
- BSCI 4300 PRINCIPLES OF CONSTRUCTION & DESIGN (3)** LEC. 3. Provides a basic overview of the design and construction process with a focus on project planning and management practices which relate to interactions between the architect, constructor, and project developer. Includes: aspects of the roles and responsibilities of the designer and contractor, design process, pre-construction and construction phase contractor activities.
- BSCI 4350 CONSTRUCTION PROJECT ANALYSIS (3)** LEC. 3. Pr. BSCI 3660. Analysis of methods, materials and equipment used to construct projects. Methods used to assure the quality of construction projects.
- BSCI 4360 SERVICE LEARNING IN CONSTRUCTION (2-3)** LEC. 2. LAB. 2. Pr. BSCI 3700 and BSCI 3660. Application of Construction Management-relevant knowledge to real-life situations through active participation in a directed community service experience. Course may be repeated for a maximum of 3 credit hours.
- BSCI 4410 PROBLEMS IN CONSTRUCTION MEANS AND METHODS (3)** LEC. 2. LAB. 2. Pr. BSCI 3660. Solving challenging problems encountered in construction processes, including form work, scaffolding, framing, steel erection, rigging, lifting, safety, and site management.
- BSCI 4420 MANAGEMENT FOR CONSTRUCTION SUPERINTENDENTS (3)** LEC. 1. LAB. 4. Pr. BSCI 3660. Senior Standing in Building Science. Development of expanded management strategies for construction superintendents including field conditions analysis, direction of tradesmen, communication skills, and project hoisting and equipment.
- BSCI 4500 INFORMATION AND COMMUNICATION TECHNOLOGY FOR CONSTRUCTION II (3)** LEC. 2. LAB. 2. To recognize, experiment and practice the applications of advanced information and communication technology (ICT) for Construction Processes.
- BSCI 4610 SCHEDULING AND FIELD OPERATIONS (4)** LEC. 4. Pr. BSCI 3660. The third of a sequence of three project controls classes; an in-depth study of construction project sequencing and scheduling, jobsite cost control measures, construction cash flow analysis, and a variety of leadership and management issues associated with field operations.
- BSCI 4700 MECHANICAL SYSTEMS IN BUILDINGS (3)** LEC. 2. LAB. 2. Pr. BSCI 3500 and BSCI 3600. Overview of the plumbing and mechanical systems of buildings. Basic design, sustainability concepts, systems, installation and testing are covered.
- BSCI 4710 MECHANICAL CONSTRUCTION ESTIMATING AND MANAGEMENT (3)** LEC. 2. LAB. 2. Pr. BSCI 4700. Advance study of mechanical construction industry. Study and application of design principles, estimating and management techniques used in the industry.
- BSCI 4750 ELECTRICAL SYSTEMS IN BUILDINGS (3)** LEC. 3. Pr. BSCI 3500. Electrical systems commonly used in buildings; basic theory and design concepts, with emphasis on lighting and electrical distribution equipment and its installation.
- BSCI 4850 CONSTRUCTION LAW AND RISK MANAGEMENT (3)** LEC. 3. Pr. BSCI 3660. Construction law, business law and risk management; the legal system and terminology, contracts, insurance, warranties, liens, environmental concerns, workplace issues, damages, and dispute resolution.
- BSCI 4860 ADVANCED CONSTRUCTION INFORMATION TECHNOLOGY (3)** LEC. 2. LAB. 2. Pr. BSCI 3660. Exploration and creation of advanced applications of Information and Communication Technology (ICT) for planning, decision making, projects monitoring, and controls.
- BSCI 4870 CONSTRUCTION HISTORY (3)** LEC. 3. Survey of historic construction projects to analyze how and why buildings and structures were constructed in the way they were.
- BSCI 4880 CONSTRUCTION EQUIPMENT MANAGEMENT (3)** LEC. 3. Pr. BSCI 3660. Construction equipment management and ownership. Equipment acquisition and disposition options, production costs and productivity, cost analysis and control, management staffing and responsibilities.

BSCI 4890 LEAN CONSTRUCTION PRINCIPLES AND PRACTICES (3) LEC. 3. Pr. BSCI 3660. This course provides an understanding of lean construction principles involving lean design, assembly, supply, production and work processes.

BSCI 4960 SPECIAL PROBLEMS (1-6) IND. Special problems in construction topics. Course may be repeated for a maximum of 6 credit hours.

BSCI 4990 BUILDING SCIENCE THESIS (4) LAB. 12. Individual project demonstrating mastery of curriculum content through the application of skills/knowledge to a theoretical construction company and project. Requires a written thesis and oral defense of work.

BSCI 5430 SITE & EARTHWORK CONSTRUCTION (3) LEC. 3. Pr. BSCI 3660. This course provides a general overview of means and methods associated with sitework-related construction through evaluation of Earthwork Operations, Equipment Selection and Productivity, Optimizing crew and productivity, Cost Estimating, Risks related Sitework-Related Projects, Concrete Construction, Erosion and Sediment Control, and an overview of Bridge and Highway Construction.

BSCI 5450 BUILDING GREAT STRUCTURES (3) LEC. 3. Departmental approval. Conceptual Analysis of a variety of structural systems using observation and modeling of the world's greatest structures. Emphasis on construction innovations necessary to build these structures. May count either BSCI 5450 or BSCI 6450.

BSCI 5460 PLANNING AND DECISION MAKING IN CONSTRUCTION (3) LEC. 3. Pr. BSCI 3660. Departmental approval. Applications of quantitative methods in various phases of project life cycle to assist project stakeholders in making effective planning and informed decision making. May count either BSCI 5460 or BSCI 6460.

BSCI 5470 SMALL UNMANNED AIRCRAFT SYSTEMS IN CONSTRUCTION (3) LEC. 3. Departmental consent. Overview of FAA requirements including hands on training with small unmanned aerial systems and associated software focused on applications in construction.

BSCI 5810 SERVICE LEARNING IN CONSTRUCTION MANAGEMENT - STUDY ABROAD OR STUDY AWAY (3) LEC. 1. LAB. 4. Pr. BSCI 3700. Departmental approval. Application of Construction Management-relevant knowledge to real-life situations through active participation in a directed community service experience at an international or domestic location. Repeatable with instructor permission.

BSCI 5830 GLOBAL CONSTRUCTION MANAGEMENT (3) LEC. 3. This course will discuss global construction issues and related project management practices. Departmental approval. May count either BSCI 5830 or BSCI 6830.

BSCI 5840 MULTI-CULTURAL ISSUES IN CONSTRUCTION (3) LEC. 3.

BSCI 5920 INTERNSHIP IN CONSTRUCTION MANAGEMENT (0) INT. SU. Professional work experience in a construction management position. Students participating in BSCI 5920/6920 are expected to work in a full-time, 40 hour/week, construction management job. Course may be repeated for a maximum of 10 credit hours.

BSCI 5960 SPECIAL PROBLEMS (1-6) AAB. Departmental approval. Special problems in construction topics. Offered only at the discretion of the department head. Course may be repeated for a maximum of 6 credit hours.

BSCI 5970 SPECIAL TOPICS IN CONSTRUCTION (1-3) AAB. 1-3. Departmental approval. Special topics in construction focuses on topics in Building Science that are in addition to the regular curriculum. Offered only at the discretion of the department head. Course may be repeated for a maximum of 6 credit hours.

BSCI 6430 SITE & EARTHWORK CONSTRUCTION (3) LEC. 3. Pr. BSCI 7020. This course provides an overview of sitework-related construction through evaluation of Earthwork Operations, Equipment Selection and Productivity, Optimizing crew and productivity, Cost Estimating, Risks related Sitework-Related Projects, Concrete Construction, Erosion and Sediment Control, and an overview of Bridge and Highway Construction.

BSCI 6450 BUILDING GREAT STRUCTURES (3) LEC. 3. Conceptual Analysis of a variety of structural systems using observation and modeling of the world's greatest structures. Emphasis on construction innovations necessary to build these structures. May count either BSCI 5450 or BSCI 6450.

BSCI 6460 PLANNING AND DECISION MAKING IN CONSTRUCTION (3) LEC. 3. Departmental approval. Applications of quantitative methods in various phases of project life cycle to assist project stakeholders in making effective planning and informed decision making. May count either BSCI 5460 or BSCI 6460.

BSCI 6470 SMALL UNMANNED AIRCRAFT SYSTEMS IN CONSTRUCTION (3) LEC. 3. Overview of FAA requirements including hands on training with small unmanned aerial systems and associated software focused on applications in construction.

BSCI 6810 SERVICE LEARNING IN CONSTRUCTION MANAGEMENT - STUDY ABROAD OR STUDY AWAY (3) LEC. 1. LAB. 4. Pr. BSCI 7020. Departmental approval. Application of Construction Management-relevant knowledge to real-life situations through active participation in a directed community service experience at an international or domestic location. Repeatable with instructor approval. Must complete Construction Safety elective course prior to taking this course. Course may be repeated for a maximum of 6 credit hours.

BSCI 6830 GLOBAL CONSTRUCTION MANAGEMENT (3) LEC. 3. This course will discuss global construction issues and related project management practices. Departmental approval. May count either BSCI 5830 or BSCI 6830.

BSCI 6840 MULTI-CULTURAL ISSUES IN CONSTRUCTION LABOR (3) LEC. 3.

BSCI 6920 INTERNSHIP IN CONSTRUCTION MANAGEMENT (0) INT. SU. Professional work experience in a construction management position. Students participating in BSCI 5920/6920 are expected to work in a full-time, 40 hour/week, construction management job. Course may be repeated for a maximum of 10 credit hours.

BSCI 6960 SPECIAL PROBLEMS IN CONSTRUCTION (1-5) AAB. Departmental approval. Individually proposed problems or projects related to the construction industry. Students must prepare a written proposal with defined deliverables. Course may be repeated for a maximum of 5 credit hours.

BSCI 6970 SPECIAL TOPICS IN CONSTRUCTION (1-3) AAB. Departmental approval. Special topics in construction focuses on topics in Building Science that are in addition to the regular curriculum. Course may be repeated for a maximum of 3 credit hours.

BSCI 7010 CONSTRUCTION LABOR AND PRODUCTIVITY (3) LEC. 3. Departmental approval. Construction labor issues, productivity measurement, and productivity improvement in the construction industry. Includes reading, research, and an out of class project.

BSCI 7020 INTEGRATED BUILDING PROCESSES I (3) LEC. 3. Departmental approval. Project manifestation and development preceding design and construction phases with emphasis on the project owner's perspective, the financial parameters, and the speculative demand driving project viability.

BSCI 7030 CONSTRUCTION INFORMATION MANAGEMENT (3) LEC. 3. Applications of advanced information technology in construction.

BSCI 7040 INTEGRATED BUILDING PROCESSES II (3) LEC. 3. Departmental approval. Construction project delivery, from pre-construction service through ownership. Topics include project management, pre-construction services, pre-planning, procurement, site utilization, subcontracts, commissioning, closeout, building operation, and long-term ownership.

BSCI 7050 EXECUTIVE ISSUES IN CONSTRUCTION (3) LEC. 3. Construction industry executives will present 6 to 10 topics that represent a cross-section of significant management issues.

BSCI 7060 RESEARCH METHODS IN BUILDING SCIENCE (3) LEC. 3. A study of the academic research process, with an emphasis on defining research problems in construction and the development of a research proposal.

BSCI 7100 GRADUATE ELECTIVE IN PROJECT MANAGEMENT: PROJECT MANAGEMENT AND SCHEDULING (3) LEC. 3. This course develops advanced student knowledge and skills in construction business facets such as delivery, contracts and financial management; and develops tactile skills in producing advanced construction schedules in current software applications. Credit will not be given for both BSCI 7100 and BSCI 7106. Course may be repeated with change in topics.

BSCI 7110 CONSTRUCTION CONTRACTING BUSINESS (3) LEC. 3. Business functions associated with construction industry; organizational structure, construction finance; risk analysis, construction contracts, project delivery, and associated documents. Admission to Certificate in Construction Management.

BSCI 7120 CONSTRUCTION LAW AND RISK MANAGEMENT (3) LEC. 3. Construction law, business law and risk management; the legal system and terminology, contracts, insurance, warranties, liens, environmental concerns, workplace issues, damages and dispute resolution. Admission to Certificate in Construction Management.

BSCI 7130 BUILDING CONSTRUCTION SUSTAINABILITY (3) DSL. Students must be admitted to the Executive Technical Certificate in Construction Management. The role of sustainable practices & processes in the construction industry. Role of built environment in consuming resources. Minimizing construction waste. Standards for sustainable construction.

BSCI 7140 STRUCTURAL SYSTEMS OF BUILDINGS (3) LEC. 3. Students must be admitted to the Executive Technical Certificate in Construction Management. Role of structural systems of buildings. Forces in buildings. Temporary structures in construction. Common failure models of structures.

BSCI 7150 HEAVY CIVIL CONSTRUCTION (3) LEC. 3. Students must be admitted to the Executive Integrated Processes Certificate in Construction Management. Principles of heavy civil construction including budget, planning, excavation, haul, equipment, temporary structures and types of projects involved.

BSCI 7200 ELECTIVES IN CONSTRUCTION LABOR (3) LEC. 3. Departmental approval. Special course offerings related to construction labor topics. Course may be repeated with change in topic.

BSCI 7300 ELECTIVES IN INFORMATION TECHNOLOGY AND INNOVATION (3) LEC. 3. Departmental approval. Special course offerings related to information technology, innovation, and robotics in construction. Course may be repeated with change in topic.

BSCI 7900 DIRECTED READING IN CONST (1-3) IND. Departmental approval. Individually proposed exploration of a construction industry related topic not covered in existing course offerings. Students must prepare a written proposal of the topic. Course may be repeated for a maximum of 3 credit hours.

BSCI 7950 GRADUATE SEMINAR (1) SEM. 1. Departmental approval. Project manifestation and development preceding design and construction phases with emphasis on the project owner's perspective, the financial parameters, and the speculative demand driving project viability. Course may be repeated for a maximum of 3 credit hours.

BSCI 7980 CAPSTONE PROJECT (3) LAB. 6. Departmental approval. Independent exploration of an approved topic with final written report of findings and an oral defense of the work. Specific capstone project requirements are established by the supervising committee and vary based on the chosen topic.

BSCI 8060 ADVANCED RESEARCH METHODS IN BUILDING SCIENCE-I (3) LEC. 3. Current areas and topics of research in building construction, study of academic research process, defining a research problem, develop effective search and analytical evaluation skills of published literature, analyze research products and write a comprehensive review of literature, and understand ethical principles and methods to successfully carry out research projects. The course is designed to provide a comprehensive introduction to the doctoral research process and methods used in building construction research.

BSCI 8070 ADVANCED RESEARCH METHODS IN BUILDING SCIENCE-II (3) LEC. 3. A study of the practical skills necessary to produce and disseminate doctoral level research in Building Construction. The course is designed to provide comprehensive knowledge about research design and selecting an appropriate methodology, qualitative, quantitative and mixed data collection and analysis methods appropriate for Building Construction research, research validation techniques, and technical writing strategies appropriate for a PhD dissertation.

BSCI 8950 DISSERTATION SEMINAR (1) LEC. 1. Professional and social integration into doctoral program; enhancement of professional knowledge through structured inquiry, professional dialogue, and reflective thinking; and preparation of students to develop pedagogical skills. Departmental Permission Required. Course may be repeated for a maximum of 6 credit hours.

BSCI 8990 RESEARCH AND DISSERTATION (1-10) LEC. 1-10. Individual doctoral dissertation research. May be repeated for credit. Course may be repeated with change in topics.

Environmental Design Courses

ENVD 2000 ENVIRONMENTAL DESIGN CONCEPTS AND PRACTICES I (3) LEC. 3. Core knowledge of design and construction disciplines and business practices related to human-designed environments. Includes national and global perspectives and focus on interdisciplinary studies.

ENVD 2007 HONORS ENVIRONMENTAL DESIGN CONCEPTS AND PRACTICES I (3) LEC. 3. Core knowledge of design and construction disciplines and business practices related to human-designed environments. Includes national and global perspectives and focus on interdisciplinary studies.

ENVD 2010 INTRODUCTION TO DESIGN AND DESIGN METHODS (3) LEC. 3. Introduces students to the importance of design and basic design methods.

ENVD 2040 DESIGN, INVENTION AND SOCIETY (3) LEC. 3. Role of design and invention in society from the ancient to the contemporary world.

ENVD 2100 ENVIRONMENTAL DESIGN WORKSHOP I (6) LAB. 6. Pr. ENVD 2000. Departmental approval. Focus on general technical skill set for environmental design foundations. Digital media introduction, structure and fabrication techniques, design communication development.

ENVD 2200 READINGS IN LANDSCAPE ARCHITECTURE (3) SEM. 3. Investigates the idea of landscape through a range of texts, images, and built works that have helped form, and continue to shape, our understanding of the landscape. First year of B.ENVD.

ENVD 3000 ENVIRONMENTAL DESIGN CONCEPTS AND PRACTICES II (3) LEC. 3. Pr. ENVD 2100. Departmental approval. Advanced knowledge of design, construction and planning disciplines and practice. National/global environmental design issues, focus on interdisciplinary concepts, hybrid practices, & sustainability.

ENVD 3100 CIVIC ENGAGEMENT AND RESEARCH METHODS (3) LEC. 3. Pr. ENVD 3000. Departmental approval. Civic engagement and research methods for environmental design. This is a research prep course to develop research methods, projects, and community partnerships for summer ENVD 4100 workshop capstone.

ENVD 3200 SYSTEMS IN BUILT ENVIRONMENT I (3) SEM. 2.5. Pr. ENVD 2100. Focus on research of different systems in built environments, and different research methods that can be used in design in order to understand and represent them.

ENVD 3300 SYSTEMS IN BUILT ENVIRONMENT II (3) SEM. 2.5. Pr. ENVD 2100. Focuses on application of research from design and construction disciplines in built environment through testing and prototyping, thus exploring potential for application in a larger context.

ENVD 4000 ELEMENTS OF URBAN DESIGN (3) LEC. 3. Pr. ENVD 2100 or ARCH 2010 or LAND 2110. ENVD 4000 provides environmental design students with an introduction to urban design theories, methods and processes through combination of lectures and on-site instruction.

ENVD 4010 ELEMENTS OF DESIGN THINKING AND COMMUNICATION (3) LEC. 3. This is a 3-credit hour class that builds design communication skills through a series of projects that utilize both hand-rendering and digital media.

ENVD 4017 HONORS ELEMENTS OF DESIGN THINKING AND COMMUNICATION (3) LEC. 3. This is a 3-credit hour class that builds design communication skills through a series of projects that utilize both hand-rendering and digital media.

ENVD 4100 ENVIRONMENTAL DESIGN WORKSHOP II - CAPSTONE (6) LEC. 6. Pr. ENVD 3100. Environmental design knowledge & technical skill set using principles of collaboration, leadership & effectiveness training, hands-on experience, civic engagement & design communication skills.

ENVD 4500 PROFESSIONAL PRACTICE (3) SEM. 3. Pr. ENVD 3000. Enable students to learn elements of professional communication; create persuasive portfolio of their work; and to seek, and prepare for, internship and job opportunities.

ENVD 4900 DIRECTED STUDIES (3) IND. 3. Pr. ENVD 2100. Highly focused study (design research, design research application) in an area of interest to student that is approved by, and supervised by, a faculty member with such expertise. Must be in Junior or Senior status. Course may be repeated for a maximum of 6 credit hours.

ENVD 4920 INTERNSHIP IN ENVIRONMENTAL DESIGN (1) INT. 1. SU. Faculty Approval. Internship in the areas of environmental design, as approved by faculty supervisor.

ENVD 4970 SPECIAL TOPICS IN ENVIRONMENTAL DESIGN (3) LEC. 3. Topics include: digital production, portfolio making and design thinking. Course may be repeated for a maximum of 9 credit hours.

ENVD 4977 HONORS SPECIAL TOPICS IN ENVIRONMENTAL DESIGN (3) LEC. 3. Topics include: digital production, portfolio making and design thinking. Course may be repeated for a maximum of 9 credit hours.

ENVD 5030 STUDIES IN DESIGN THINKING AND ENTREPRENEURSHIP (3) SEM. 3. Study and application of design and innovation thinking in entrepreneurship, with a special emphasis on social entrepreneurship. May count either ENVD 5030 or ENVD 6030.

ENVD 5037 HONORS STUDIES IN DESIGN THINKING AND ENTREPRENEURSHIP (3) LEC. 3. Study and application of design and innovation thinking in entrepreneurship, with a special emphasis on social entrepreneurship. May count either ENVD 5030 or ENVD 6030.

Graphic Design Courses

GDES 1110 FOUNDATION DRAWING (4) STU. 8. Coreq. GDES 1210. PGDE majors only; school approval. Representational drawing with various media. Emphasis on accurate observation, pictorial organization, depiction of space as well as on concept development and creativity.

GDES 1210 FOUNDATION DESIGN I (4) LEC. 1, STU. 6. Coreq. GDES 1110. PGDE majors only; school approval. Elements and principles of basic two-dimensional design. Emphasis on composition, color theory, and craftsmanship.

GDES 1220 FOUNDATION DESIGN II (4) LEC. 1, STU. 6. Pr. GDES 1210. Elements and principles of design with emphasis on basic three dimensional design. Emphasis on spatial organization, color, and media exploration, planning and craft.

GDES 2210 GRAPHIC PROCESSES (4) LEC. 1, STU. 6. Pr. GDES 1110 and GDES 1220 and (ARTS 2100 and ARTS 2150). Coreq. GDES 2220. Design and production processes, preparation of design for printing, paper, copyright, electronic techniques, and related subjects. School approval.

GDES 2220 TYPOGRAPHICS I (4) LEC. 1, STU. 6. Pr. GDES 1110 and GDES 1220 and (ARTS 2100 and ARTS 2150). Coreq. GDES 2210. Historical development and practical applications of typography for design, layout, and other contemporary formats. School approval.

GDES 2230 INTRODUCTION TO GRAPHIC DESIGN (4) STU. 8. Pr. GDES 2210 and GDES 2220. Design, layout, and image-making procedures for creative problem-solving in graphic design, with emphasis on presentation, creativity, and visualization. School approval. Portfolio review required.

GDES 3110 ELEMENTS & PRINCIPLES OF DESIGN I: FORM AND COMPOSITION (3) LEC. 3. Pr. INDD 1120. This course will expose students to a variety of design methods, and their applicability to non-design disciplines, highlighting the parallel between critical thinking and design thinking.

GDES 3120 ELEMENTS & PRINCIPLES OF DESIGN II: TYPOGRAPHY AND IMAGE (3) LEC. 3. Pr. INDD 1120. This course will teach the basic concepts and vocabulary of typography with an emphasis on the expressive potential of typography when combined with imagery in layout form.

GDES 3130 GRAPHIC DESIGN LITERACY: MESSAGE, CONTEXT, MEANING (3) LEC. 3. Pr. INDD 1120. This course is a seminar that prepares students to participate actively and confidently in conversations about visual communications. Students investigate the historical bases of graphic design as well as examine contemporary issues informing the practice of graphic design. Seminar members read and discuss case studies and design criticism, and apply analytical approaches to examples of contemporary design through oral presentations and written arguments.

GDES 3140 DESIGN THINKING: INTRODUCTION TO DIGITAL SCREEN MEDIA (3) LEC. 3. Application of design thinking (focus on experience of the user) in the context of screen-based (computers, web applications, phones) design. Projects may include the redesign of an existing website, design concept for a new mobile application, and a new video game concept.

GDES 3147 HONORS DESIGN THINKING: INTRODUCTION TO DIGITAL SCREEN MEDIA (3) LEC. 3. Application of design thinking (focus on experience of the user) in the context of screen-based (computers, web applications, phones) design. Projects may include the redesign of an existing website, design concept for a new mobile application, and a new video game concept.

GDES 3210 PHOTO DESIGN (4) STU. 8. Pr. GDES 2210 and GDES 2220. Traditional black and white film photography that covers covers technical aspects of the 35mm camera and film and basic darkroom procedures for black and white film and and basic darkroom procedures for black and white film and an awareness of the aesthetics and semantics associated with photographic imagery.

GDES 3220 PHOTO COMMUNICATIONS (4) STU. 8. Photography as applied communication such as advertising, editorial photography, and annual report photography. Emphasis on advanced technological and studio techniques.

GDES 3240 INTERACTIVE MEDIA (4) STU. 8. Pr. GDES 2230. Exploration of the technical and conceptual aspects of Web site design and motion graphics through a series of problem-solving processes. Emphasis on the research and development of effective graphic interfaces and information architecture.

GDES 3250 TYPOGRAPHICS II (4) STU. 8. Pr. GDES 2230. Experimental application of typography for design and layout, exploring contemporary techniques. Historical understanding expected. Emphasis on presentation and visualization of concepts.

GDES 3260 KINETIC TYPOGRAPHY (4) LEC. 4. Pr. GDES 2230. Focuses on how motion affects meaning and how new meaning can be developed through time, space, and sound.

GDES 3710 GRAPHIC DESIGN HISTORY (4) LEC. 4. Pr. GDES 2210 and GDES 2220. History of graphic design, with emphasis on social and cultural contexts, symbolic application, formal characteristics, and significant movements.

GDES 3910 GRAPHIC DESIGN INTERNSHIP PRACTICUM (2) LEC. 2. Pr. GDES 2210 and GDES 2220. Acceptance into the GDES program. Focuses on the professional practices of Graphic Design through portfolio creation and presentation, resume and cover letter writing and the tactics of searching for an internship.

GDES 3920 GRAPHIC DESIGN INTERNSHIP (4) INT. 4. Pr. GDES 2230. a fifteen-week period working full time as a staff member with an approved internship sponsor under the direction of a supervising art director.

GDES 4240 GRAPHIC DESIGN I (4) STU. 8. Pr. GDES 3240. Application of communicative procedures and skills necessary to convey messages by means of graphic presentation: problem solving in corporate identity, advertising design, self promotion, etc. Development of student's individual style.

GDES 4250 GRAPHIC DESIGN II (4) STU. 8. Pr. GDES 4240. Development of individual style in communication via graphic graphic presentation, with emphasis on problem-solving in publication design, self-promotion, large-format design, and layout.

GDES 4270 ADVANCED INTERACTIVE MEDIA (4) STU. 8. Pr. GDES 3240. Focuses on the principles and methodologies used throughout the interactive design industry for creating screen-based dynamic media. Students develop a conceptual framework for real world applications, exploring industrial, social and cultural issues.

GDES 4640 IMAGE I (4) STU. 8. Pr. GDES 2230. Application of illustration techniques and concepts to various graphic formats. Development of personal skills and individual style.

GDES 4650 IMAGE II (4) STU. 8. Pr. GDES 2230. Exploration of two dimensional and three dimensional imaging techniques and concepts. Development of personal skills and an individual style.

GDES 4900 DIRECTED STUDIES FOR GRAPHIC DESIGN (2-3) AAB. Pr. GDES 2210 and GDES 2220. Directed Studies in Graphic Design focuses on individualized study in Graphic Design. Student must have a 3.0 average in GDES course curriculum and departmental approval. Topics may include Graphic Design, Imaging, Web Design. Course may be repeated for a maximum of 9 credit hours.

GDES 4970 SPECIAL TOPICS FOR GRAPHIC DESIGN (4) LEC. 1. Pr. GDES 2230 and GDES 3710. Special Topics in Graphic Design focuses on topics in graphic design that are additional to the regular curriculum. Specific course topics are developed by the instructor. Student must have a 3.0 average in GDES GDES course curriculum. Course may be repeated for a maximum of 12 credit hours.

GDES 4990 SENIOR PROJECT FOR GRAPHIC DES (5) STU. 10. Pr. GDES 4250. Coreq. GDES 4991. A directed terminal studio project with choice of subject and medium. Project will be exhibited and a faculty committee will award a letter grade. Must be taken in student's final semester.

GDES 4991 RESEARCH, WRITING AND PRESENTATION (1) LEC. 1. Pr. GDES 4250. Coreq. GDES 4990. Addresses research, writing and presentation requirement associated with the student's terminal studio project. Must be taken in student's final semester.

Industrial Design Courses

INDD 1120 INDUSTRIAL DESIGN IN MODERN SOCIETY (3) LEC. 3. Survey of design and its impact upon modern society. Review of methods, products, marketing, patents, education, and career opportunities.

INDD 1310 SYNTHESIS OF DRAWING (10) LEC. 3, LST. 12. Developing mechanical and production design drawings, with in-depth study of perspective systems. Product design communication with emphasis on drawing, development, and presentation.

INDD 1320 PROTOTYPE FABRICATION (3) LEC. 2. LAB. 2. Coreq. INDD 1310. Fabrication of three-dimensional models utilizing various materials and machineries. Includes model making, creative modeling, study models, presentation models, mock-ups and prototypes.

INDD 1400 CAREERS IN INDUSTRIAL DESIGN (2) LEC. 2. Survey of careers in the field of industrial design demonstrated through case studies, product examples and biographies.

INDD 2110 TWO DIMENSIONAL INDUSTRIAL DESIGN PRINCIPLES (6) LEC. 2, LST. 10. Transference of abstract principles of design to fabrication of simple tools. Emphasis on expression of functional objects.

INDD 2120 COMPUTER AND DESIGN COMMUNICATIONS (3) LEC. 2. LAB. 2. Alternative modes of communicating design ideas via computer. Executing design ideas for two-dimensional design fundamentals and mechanical design drawings.

INDD 2130 PRESENTATION RENDERING (3) LEC. 2. LAB. 2. Concept development using drawing and rendering skills with different media for ideas communication and presentation.

INDD 2210 THREE DIMENSIONAL INDUSTRIAL DESIGN PRINCIPLES (6) LEC. 2, AAB/LST. 10. Pr. INDD 2110. Analysis of design fundamentals through three dimensional form. Analyzing function, utility, convenience, safety, maintenance and sustainable design.

INDD 2220 ANTHROPOMETRY (3) LEC. 3. Pr. INDD 2110. Body measurements, movements and human capacity in relation to design with introduction to ergonomics and human physiology as it relates to design. School approval.

INDD 2230 HISTORY OF INDUSTRIAL DESIGN (3) LEC. 3. Pr. INDD 2110. Survey humankind's production of artifacts, from prehistory to present. Emphasis on ideas that mass produced artifacts mirror history and everyday culture.

INDD 3110 EXHIBIT AND PACKAGING (6) LEC. 1, LST. 8. Pr. INDD 2210. Display systems using models, concepts development, rendering, packaging, identity programs and professional presentations.

INDD 3120 INDUSTRIAL DESIGN METHODS (3) LEC. 3. Pr. INDD 2210. Introduction to design management. Design methods and organizational procedures in analysis and solutions of design problems. Surveying philosophies and theories of design.

INDD 3130 BASIC PHOTOGRAPHY FOR INDUSTRIAL DESIGN (3) LEC. 2. LAB. 2. Pr. INDD 2210. Photography in design and art environments. Techniques of developing, printing and enlarging. Lighting techniques for portfolio photography, including lighting, studio photography, composition.

INDD 3150 DESIGN THINKING: INTRODUCTION TO PRODUCT SOLUTIONS (3) LEC. 2. LAB. 1. Application of design thinking (focus on experience of the user) in the context of product design. Students will deconstruct a design of an existing product and create a design concept for a new product. Introduces innovation in physical products and services through collaborative and creative approaches to critical and strategic thinking with focus on the user. Course may be repeated for a maximum of 6 credit hours.

INDD 3157 HONORS DESIGN THINKING: INTRODUCTION TO PRODUCT SOLUTIONS (3) LST. Application of design thinking (focus on experience of the user) in the context of product design. Students will deconstruct a design of an existing product and create a design concept for a new product. Introduces innovation in physical products and services through collaborative and creative approaches to critical and strategic thinking with focus on the user. Course may be repeated for a maximum of 6 credit hours.

INDD 3210 PRODUCT DESIGN (6) LEC. 2, LST. 10. Pr. INDD 3110. Product design utilizing design methodology from proposal to working pre-prototype, including planning, research, development, model-making, manufacturing and documentation.

INDD 3220 MATERIALS AND TECHNOLOGY (3) LEC. 3. Pr. INDD 3120. Characteristics and utility of materials such as plastic, metal, and ceramics in manufacture and the study of machine/tool processes used by industry.

INDD 3230 ADVANCED COMPUTER AIDED DESIGN (3) LEC. 2. LAB. 2. Pr. INDD 2120. Introduction to CAD software emphasizing three-dimensional modeling. Students will learn drawing functions. Concepts of three-dimensional relationship of objects discussed.

INDD 4110 ADVANCED PRODUCT DESIGN (6) LEC. 2, AAB/LST. 10. Pr. INDD 3120 and INDD 3210. Design or redesign of products and systems of advanced complexity.

INDD 4210 INDUSTRIAL DESIGN THESIS (6) LEC. 2, AAB/LST. 10. Pr. INDD 4110. Product design projects involving all design phases; including planning, research, development, finalization, specification, and documentation.

INDD 4220 PROFESSIONAL PRACTICE (3) LEC. 3. Pr. INDD 3110 and INDD 3210. Business aspects of industrial design, including property, design contract, letters of agreement, business planning and design marketing.

INDD 4907 HONORS READING (1-3) LEC. Course may be repeated for a maximum of 3 credit hours.

INDD 4997 HONORS THESIS (1-3) LEC. Pr. Honors College. Departmental approval.. Course may be repeated for a maximum of 3 credit hours.

INDD 5120 PROFESSIONAL PORTFOLIO (3) LEC. 3. Pr. INDD 3110 and INDD 3210. Design and development of a portfolio and promotional material presenting the student's work to entry-level professional standards.

INDD 5960 SPECIAL PROBLEMS (1-5) AAB. Development of individual projects. Research, design and reports on approved topics. Course may be repeated for a maximum of 15 credit hours.

INDD 6010 HISTORY OF INDUSTRIAL DESIGN II (3) LEC. 3. A survey of humankind's production of artifacts, from prehistory to contemporary times, with an emphasis on the idea that mass produced artifacts mirror the meanings of historical events and everyday culture.

INDD 6030 CASE STUDIES IN DESIGN (3) LEC. 3. Design projects undertaken by industry studied by examination of artifacts and records, and by class discussions. Focus on the socio-cultural relevancy of the artifacts.

INDD 6120 PORTFOLIO (3) LEC. 3. Preparation of professional portfolio for graduation and employment.

INDD 6960 SPECIAL PROBLEMS (1-5) AAB. Development of individual projects. Research, design and reports on approved topics. Course may be repeated for a maximum of 15 credit hours.

INDD 7010 DESIGN ORIENTATION (3) LEC. 3. Introduction to the Industrial Design graduate program: degree options, study directions, research methods, and areas. Students are required to develop a research/project proposal.

INDD 7020 COMPUTER/INDUSTRIAL DESIGN (3) LEC. 3. Synthesizing studies in research, analysis, and application based on interdisciplinary concept. Emphasis on the relation of products and systems to those who use them.

INDD 7610 PRINCIPLES OF INDUSTRIAL DESIGN (3) LEC. 3. Detailed study of the communication principles of form qualities with emphasis of these aesthetic principles to the technical and human factors of artifacts.

INDD 7620 DESIGN MANAGEMENT (3) LEC. 3. Detailed study of the industrial design project management and development with emphasis on the interrelational management concepts of research, product planning, production and marketing.

INDD 7630 HUMAN FACTORS IN DESIGN (3) LEC. 3. Theoretical and empirical examination of human factors (Anthropometrics, Biotechnology, Engineering Psychology, Behavioral Cybernetics, Ergonomics) as applied to man-machine environmental systems.

INDD 7640 AESTHETICS IN DESIGN (3) LEC. 3. Aesthetics in the context of the designed environment encompassing: non-verbal communication; object language semiotics; gestalt and perception systems; information aesthetics, and consumer product safety.

INDD 7650 DESIGN THEORIES (3) LEC. 3. Examination of design theories and philosophies related to technical artifacts in man-machine systems. Comparative studies of unifying theories in art, science, design, technology and the humanities.

INDD 7660 INDUSTRIAL DESIGN METHODOLOGY (3) LEC. 3. Industrial design methodologies and specific methods employed in research, analysis, synthesis, and evaluation in comprehensive design problems.

INDD 7670 SYSTEMS DESIGN (3) LEC. 3. Systems approach and interdisciplinary team work to design problems inquires into details of sub-systems, components and parts, with emphasis on the relation of the performance of technical systems to optional human factor effects.

INDD 7910 INDUSTRY PRACTICUM (5) AAB/STU. 5. This course will demand the application of acquired skill to the resolution of product design based issues within an industry collaboration studio over the period of one semester.

INDD 7980 NON-THESIS DESIGN (3) STU. 3. Synthesizing studies in research, analysis and application based on interdisciplinary concept. Emphasis on the relation of products and systems to those who use them.

INDD 7990 DESIGN THESIS (1-5) AAB/RES. Credit to be arranged. Course may be repeated with a change in topic.

Interior Architecture Courses

ARIA 2150 ELEMENTS OF INTERIOR ARCH I (3) LEC. 3. The theory of design principles, aesthetics and concepts. Graphic drawings and models of interior spaces explored. Projects outside of class.

ARIA 2160 ELEMENTS OF INTERIOR ARCHITECTURE II (3) LEC. 3. The theory of design principles, aesthetics and concepts. Graphic drawings and models of interior spaces explored. Projects outside of class.

ARIA 3020 STUDIO 4A INTERIOR ARCHITECTURE (6) LEC. 2, LST. 10. Pr. ARCH 2020. Parallels Architecture Studio 4, but with an emphasis on interior architecture with exploration of detail and accommodation.

ARIA 4020 STUDIO 6A INTERIOR ARCHITECTURE (6) LEC. 2, LST. 10. Pr. ARCH 3020 and ARCH 3320 and (ARCH 2110 or ARCH 2117) and BSCI 3440. Parallels Architecture Studio 6, with emphasis on the development of interior architecture and spaces within an urban context. Consideration will be given to adaptive reuse.

ARIA 4030 INTERIOR ARCHITECTURE THESIS (6) LEC. 3, LST. 10. Pr. ARIA 4020. Coreq. ARIA 4080. Interior design project of the student's choice, under the direction of a faculty member.

ARIA 4080 INTERIOR ARCHITECTURE THESIS RESEARCH (2) LEC. 2. Pr. ARIA 4020. Research and writing of thesis documents, to include programming, site, and case studies.

ARIA 4450 INTERIOR ARCHITECTURE PROFESSIONAL PRACTICE (2) LEC. 2. Pr. ARIA 4020. Prepares student to enter professional office with an understanding of the skills, concepts and technical knowledge expected.

ARIA 4680 HISTORY AND THEORY OF INTERIOR ARCHITECTURE (3) LEC. 3. Pr. ARIA 4020. The theory and history of interior spaces, their social, material, and aesthetic development and their artifacts.

Landscape Architecture Courses

LAND 1110 STUDIO I (4) LEC. 3. LAB. 1. Foundation course introduces studio culture, principles and processes of visual design, and the tools and techniques of landscape architectural design.

LAND 1160 GRAPHIC STUDIES I (2) LEC. 1. LAB. 1. Coreq. LAND 1110. Focuses on basic tools and techniques for interpreting and representing landscapes: photography, field sketching, technical drawing, and mixed-media montage.

LAND 1210 STUDIO II (4) LEC. 3. LAB. 1. Pr. LAND 1110. Foundation course builds fundamental design process skills by exploring terrain and ecology through design exercises on small sites.

LAND 1260 GRAPHIC STUDIES II (2) LEC. 1. LAB. 1. Pr. LAND 1160. Introduces integrated analog-digital workflows. Focus on digital methods and tools: photomontage, diagramming, and presentation assembly; digital modeling, analysis, and rendering.

LAND 2110 PLANTS AND CONSTRUCTION WORKSHOP I (5) LEC. 4. LAB. 1. Pr. LAND 1210. Uses a field- and project- based approach to engage the medium of landscape architecture (plants, land, soils, and materials).

LAND 2120 FIELDWORK I (1) FLD. 1. Pr. LAND 1210. Coreq. LAND 2110. Advances program focus on landscape experience. Introduces techniques and tools for site reconnaissance: direct measurement, observation, evaluation, and synthesis.

LAND 2140 HISTORY, THEORY, AND PRACTICE I (3) LEC. 3. The historical development of American urban landscapes, theoretical concepts for understanding them, and survey of related landscape architectural practice.

LAND 2210 PLANTS AND CONSTRUCTION WORKSHOP II (5) LEC. 4. LAB. 1. Pr. LAND 2110. Focuses on landscape expression, experience, and cycles, including plant ephemerality, material assemblies, maintenance, performance, and choreography of landscape experience.

LAND 2220 FIELDWORK II (1) FLD. 1. Coreq. LAND 2210. Considers phenological and environmental cycles, expression of plants, materials, and atmospheres to strengthen relationships between design intention and physical expression.

LAND 2240 HISTORY, THEORY, AND PRACTICE II (3) LEC. 3. Pr. LAND 2140. Survey of the history of and theory for landscape architectural practice as it relates to contemporary American culture.

LAND 3110 STUDIO III (5) LEC. 4. LAB. 1. Pr. LAND 2210. Advanced studio introduces design research processes to investigate eco-cultural relationships between regional and urban scales with emphasis on landscape networks.

LAND 3120 FIELDWORK III (1) FLD. 1. Pr. LAND 2220. Coreq. LAND 3110. Expand techniques and tools for site reconnaissance: multiple site visits to develop skills, deepen inventories, and contextualize design projects.

LAND 3160 DYNAMIC SYSTEMS I (3) LEC. 3. Pr. LAND 2240. Establishes ecological theories as a framework for analysis of urban conditions and as a tool for decision-making and design.

LAND 3210 STUDIO IV (5) LEC. 4. LAB. 1. Pr. LAND 3110. Junior studio focused on processes to support design at multiple scales for resilient landscapes that integrate aesthetics, program, and performance.

LAND 3220 FIELDWORK IV (1) FLD. 1. Pr. LAND 3120. Coreq. LAND 3210. Expand techniques and tools for mapping large scale landscape systems. Develop documentation skills using aerial photogrammetry and advanced site visualization.

LAND 4110 STUDIO V (5) LEC. 4, LST. 1. Pr. LAND 3210. Comprehensive studio synthesizes skills toward landscape activism and engagement in cultural contexts of urban, ex-urban, or rural sites and systems.

LAND 4120 FIELDWORK V (1) FLD. 1. Pr. LAND 3220. Coreq. LAND 4110. Apply comprehensive site reconnaissance skills to gather landscape intelligence. Engage community representatives to contextualize studio work.

LAND 4210 STUDIO VI (5) LEC. 4, LST. 1. Pr. LAND 4110. Comprehensive studio helps students develop sophisticated design research. Students create new work and critically evaluate its theoretical context.

LAND 4220 FIELDWORK VI (1) FLD. 1. Coreq. LAND 4210. Use broad skills, techniques, and thinking about site reconnaissance to frame design projects. Gather and synthesize comprehensive landscape intelligence.

LAND 4240 PROFESSIONAL PRACTICE (3) SEM. 3. Surveys development and ethics of the landscape architecture profession, businesses, and practices, to help students plot their futures.

LAND 4410 SEMINAR ON LANDSCAPE MATTER (3) SEM. Departmental approval. Seminar which explores material considerations in landscape, such as material selection and performance, material assemblies, landform and grading, or designing with plants and ecological communities, as they relate to the discipline of landscape architecture and are not covered in the current curriculum. Course may be repeated for a maximum of 9 credit hours.

LAND 4420 SEMINAR ON LANDSCAPE ADVOCACY (3) SEM. Departmental approval. Seminar which explores a focused, advanced component of landscape advocacy, such as public interest design, community outreach, and public engagement, as they relate to the discipline of landscape architecture and are not covered in the current curriculum. Course may be repeated for a maximum of 9 credit hours.

LAND 4430 SEMINAR ON LANDSCAPE THOUGHT (3) SEM. Departmental approval. Seminar which explores a focused, advanced component of landscape history, landscape theory, critique, or associated discourse as it relates to the discipline of Landscape Architecture and is not covered in the current curriculum. Course may be repeated for a maximum of 9 credit hours.

LAND 4440 SEMINAR ON LANDSCAPE REPRESENTATION (3) SEM. Departmental approval. Seminar which explores a focused, advanced component of Landscape Representation, Graphic Communication, and/or Drawing as it relates to the discipline of Landscape Architecture and is not covered in the current curriculum. Course may be repeated for a maximum of 9 credit hours.

LAND 4450 SEMINAR ON LANDSCAPE RESEARCH (3) SEM. Departmental approval. Seminar which explores a focused, advanced component of Landscape Research as it relates to the discipline of Landscape Architecture and is not covered in the current curriculum. Course may be repeated for a maximum of 9 credit hours.

LAND 4900 DIRECTED STUDIES (1-3) IND. Departmental approval. Opportunity for students to work with a specific faculty on a special topic in an area of interest. Course may be repeated for a maximum of 9 credit hours.

LAND 4920 PROFESSIONAL INTERNSHIP (1-3) INT. SU. Departmental approval. Opportunity for students to develop expertise in professional practice under the guidance of professionals. This includes but is not limited to site design, construction documentation, client/community presentations, and project management. Course may be repeated for a maximum of 3 credit hours.

LAND 4970 SPECIAL TOPICS IN LANDSCAPE ARCHITECTURE (3) LEC/SEM. Departmental approval. Study of a topic of special interest in landscape architecture beyond current program course offerings. Course may be repeated for a maximum of 9 credit hours.

LAND 5030 LANDSCAPE DESIGN METHODS (3) LEC. 9. Introduces students to skills, techniques, and ways of thinking fundamental to landscape architectural design, preparing students for future studio courses by emphasizing making, precision, experimentation, iteration, and judgment.

LAND 5040 LANDSCAPE ISSUES & PRACTICES (3) LEC. 9. Introduces students to both a selection of key issues relevant to contemporary landscape architecture and practices employed by landscape architects engaging in those issues.

LAND 5130 STUDIO I: FOUNDATION STUDIO (5) STU. 5. Teaches foundational skills (drawing, modeling, and multiple representational skills) that are necessary to progress into future design studios.

LAND 5131 FIELDWORK I (1) FLD. 1. Field studies and travel related to studio. May count either LAND 5131 or LAND 6131.

LAND 5140 HISTORY, THEORY, AND PRACTICE I: LANDSCAPE ARCHITECTURE AND CONTEMPORARY URBANISM (3)

SEM. 3. The historical development of American urban landscapes, theoretical concepts for understanding them, and survey of related landscape architectural practice.

LAND 5147 HONORS HISTORY, THEORY, AND PRACTICE I: LANDSCAPE ARCHITECTURE AND CONTEMPORARY URBANISM (3)

SEM. 3. The historical development of American urban landscapes, theoretical concepts for understanding them, and survey of related landscape architectural practice.

LAND 5150 CONSTRUCTION I: LANDFORM & HYDROLOGY (3) LEC. 3. Departmental approval. Fundamental skills needed to analyze, understand, and manipulate landform with respect to form, grading, drainage, and stormwater management.

LAND 5160 GRAPHIC STUDIES I (2-3) LEC. Focus on basic tools and techniques for interpreting and representing landscapes: photography, field sketching, technical drawing, and mixed-media montage. Introduction to vector and raster-based software and integrated analog-digital workflows. Course may be repeated for a maximum of 3 credit hours.

LAND 5230 STUDIO II (5) STU. 5. Iterative design processes that project and test design scenarios, refining propositions based on multiple performance criteria in relation to site specificity and community context. Departmental approval. May count either LAND 5230 or 6230.

LAND 5231 FIELDWORK II (1) FLD. 1. Field studies and travel related to studio. Departmental approval. May count either LAND 5231 or LAND 6231.

LAND 5240 HISTORY, THEORY, AND PRACTICE II: LANDSCAPE ARCHITECTURE AND CONTEMPORARY CULTURE (3) LEC. 3. Survey of the history of and theory for landscape architectural practice as it relates to contemporary American culture.

LAND 5250 CONSTRUCTION II: MATERIALS & DETAILING (3) LEC. 3. Departmental approval. Fundamentals of design detailing of site assemblies, with emphasis on material research and construction methods.

LAND 5260 GRAPHIC STUDIES III (3) SEM. 3. Pr. LAND 5150. Departmental approval. Fundamental concepts of Geographic Information Systems are used to create visual frameworks for gathering, interpreting, and sharing spatial data in landscape architecture practice.

LAND 5270 PLANT SPATIALITY (2) LEC. 2. Studies of innovative design with plants, exploring issues plant association, strata, and spatiality. Departmental approval. May count either LAND 5270 or 6270.

LAND 5290 GRAPHIC STUDIES II (3) LEC. 3. Focus on advanced digital methods and tools: mapping with GIS software; modeling, analysis, and rendering with Rhino and associated plugins; and photomontage, diagramming, and presentation assembly with Adobe software.

LAND 5330 STUDIO III (5) LEC. 5. Pr. (LAND 5230 or LAND 6230) or (P/C LAND 5331 or P/C LAND 6331). Departmental approval. Investigates eco-cultural relationships between regional, metropolitan and urban scales with emphasis on physical and social flows.

LAND 5331 FIELDWORK III (1) FLD. 1. SU. Pr. (LAND 6230 or LAND 5230) or (P/C LAND 5330 or P/C LAND 6330). Departmental approval. Field studies and travel related to studio.

LAND 5340 HISTORY, THEORY, AND PRACTICE III: PRE-MODERN LANDSCAPES (3) LEC. 3. Pr. LAND 5240. Departmental approval. Global history of landscape-making, particularly in relationship to urbanization and culture, from prehistory to the inception of modern landscape architecture.

LAND 5350 CONSTRUCTION III: HYDROLOGIES (2) LEC. 1. LAB. 2. Pr. LAND 5230. Departmental approval. This course emphasizes stormwater research, planning and design. Students learn technical skills and design techniques needed to construct projects with environmental integrity and aesthetic appeal.

LAND 5360 DYNAMIC SYSTEMS I: URBAN ECOLOGIES (3) LEC. 3. Pr. LAND 5230. Departmental approval. This course provides an overview of natural ecological systems and how they can be preserved or restored to enhance human and ecological health through sustainable design.

LAND 5367 HONORS DYNAMIC SYSTEMS I: URBAN ECOLOGIES (3) LEC. 3. Pr. LAND 5230. Departmental approval. This course provides an overview of natural ecological systems and how they can be preserved or restored to enhance human and ecological health through sustainable design.

LAND 5370 PLANT EPHEMERALITY (2) LEC. 2. Pr. LAND 5230. Departmental approval. Studies of innovative design with plants, exploring issues of plant phenology and dynamic lifecycle conditions.

LAND 5380 PLANTS I (2-3) LEC. Departmental approval. Introduces strategies for innovative design with plants, exploring issues of plant association, starts, form, and function. Course may be repeated for a maximum of 3 credit hours.

LAND 5410 SEMINAR ON REAL ESTATE DEVELOPMENT (3) SEM. 3. Opportunity for students to further develop expertise through supervised, independent course study related to real estate development or pursue an area of interest that may not be covered in the current curriculum.

LAND 5940 FIELDWORK ABROAD (3-6) AAB. Landscape architectural fieldwork conducted in locations outside the United States. Course may be repeated for a maximum of 9 credit hours.

LAND 6030 LANDSCAPE DESIGN METHODS (3) LEC. 3. Introduces students to skills, techniques, and ways of thinking fundamental to landscape architectural design, preparing students for future studio courses by emphasizing making, precision, experimentation, iteration, and judgment.

LAND 6040 LANDSCAPE ISSUES & PRACTICES (3) LEC. 3. Introduces students to both a selection of key issues relevant to contemporary landscape architecture and practices employed by landscape architects engaging in those issues.

LAND 6130 STUDIO I: FOUNDATION STUDIO (5) AAB/STU. 5. Teaches foundational skills (drawing, modeling, and multiple representational skills) that are necessary to progress into future design studios.

LAND 6131 FIELDWORK I (1) AAB/FLD. 1. Departmental approval. Field studies and travel related to studio.

LAND 6140 HISTORY, THEORY, AND PRACTICE I: LANDSCAPE ARCHITECTURE AND CONTEMPORARY URBANISM (3) AAB/SEM. 3. Pr. LAND 5230 or LAND 6230. The historical development of American urban landscapes, theoretical concepts for understanding them, and survey of related landscape architectural practice.

LAND 6150 CONSTRUCTION I: LANDFORM & HYDROLOGY (3) LEC. 3. Departmental approval. Fundamental skills needed to analyze, understand, and manipulate landform with respect to form, grading, drainage, and stormwater management.

LAND 6160 GRAPHIC STUDIES I (2-3) AAB/LEC. Focus on basic tools and techniques for interpreting and representing landscapes: photography, field sketching, technical drawing, and mixed-media montage. Introduction to vector and raster-based software and integrated analog-digital workflows. Course may be repeated for a maximum of 3 credit hours.

LAND 6170 GRAPHIC STUDIES II (3) LEC. 3. Departmental approval. Graphic and communication theories and skills in a variety of media. Photoshop, Illustrator, Indesign and AutoCAD.

LAND 6230 STUDIO II (5) STU. 5. Iterative design processes that project and test design scenarios, refining propositions based on multiple performance criteria in relation to site specificity and community context. Departmental approval. May either LAND 5230 or 6230.

LAND 6231 FIELDWORK II (1) FLD. 1. Departmental approval. Field studies and travel related to studio.

LAND 6240 HISTORY, THEORY, AND PRACTICE II: LANDSCAPE ARCHITECTURE AND CONTEMPORARY CULTURE (3) LEC. 3. Survey of the history of and theory for landscape architectural practice as it relates to contemporary American culture.

LAND 6250 CONSTRUCTION II: MATERIALS & DETAILING (3) LEC. 3. Departmental approval. Fundamentals of design detailing of site assemblies, with emphasis on material research and construction methods.

LAND 6270 PLANT SPATIALITY (2) LEC. 2. Studies of innovative design with plants, exploring issues plant association, strata, and spatiality. Departmental approval. May count either LAND 5270 or 6270.

LAND 6290 GRAPHIC STUDIES II (3) LEC. 3. Focus on advanced digital methods and tools: mapping with GIS software; modeling, analysis, and rendering with Rhino and associated plugins; and photomontage, diagramming, and presentation assembly with Adobe software.

LAND 6330 STUDIO III (5) LEC. 5. Pr. LAND 5230 or LAND 6230. Departmental approval. Coreq. LAND 5331 and LAND 6331. Investigates eco-cultural relationships between regional, metropolitan and urban scales with emphasis on physical and social flows.

LAND 6331 FIELD STUDIES III (1) FLD. 1. Pr. LAND 5230 or LAND 6230. Departmental approval. Coreq. LAND 5330 and LAND 6330. Field studies and travel related to studio.

LAND 6340 HISTORY, THEORY, AND PRACTICE III: PRE-MODERN LANDSCAPES (3) LEC. 3. Pr. LAND 6240. Global history of landscape-making, particularly in relationship to urbanization and culture, from prehistory to the inception of modern landscape architecture. Departmental approval

LAND 6350 CONSTRUCTION III: HYDROLOGIES (2) LEC. 1. LAB. 2. Pr. LAND 5230 or LAND 6230. Departmental approval. This course emphasizes stormwater research, planning and design. Students learn technical skills and design techniques needed to construct projects with environmental integrity and aesthetic appeal.

LAND 6360 DYNAMIC SYSTEMS I: URBAN ECOLOGIES (3) LEC. 3. Pr. LAND 5230 or LAND 6230. Departmental approval. This course provides an overview of natural ecological systems and how they can be preserved or restored to enhance human and ecological health through sustainable design.

LAND 6370 PLANT EPHEMERALITY (2) LEC. 2. Pr. LAND 5230 or LAND 6230. Departmental approval. Studies of innovative design with plants, exploring issues of plant phenology and dynamic lifecycle conditions.

LAND 6380 PLANTS I (2-3) LEC. Departmental approval. Introduces strategies for innovative design with plants, exploring issues of plant association, strata, form, and function. Course may be repeated for a maximum of 3 credit hours.

LAND 6410 SEMINAR ON REAL ESTATE DEVELOPMENT (3) SEM. 3. Opportunity for students to further develop expertise through supervised, independent course study related to real estate development or pursue an area of interest that may not be covered in the current curriculum.

LAND 6940 FIELDWORK ABROAD (3-6) AAB. Landscape architectural fieldwork conducted in locations outside the United States. Course may be repeated for a maximum of 9 credit hours.

LAND 7130 STUDIO IV (5) AAB/STU. 5. Departmental approval. Investigates design strategies and techniques for generating new resilient cultural and environmental practices within complex dynamic conditions.

LAND 7131 FIELDWORK IV (1) AAB/FLD. 1. Pr. P/C LAND 5230. Departmental approval. Coreq. LAND 7130. Field studies and travel related to studio.

LAND 7140 URBAN STUDIES II: GLOBAL URBANISM (3) LEC. 3. Departmental approval. Examines the major global drivers of urban change, contemporary theories of international urban design, geography and cultural theory.

LAND 7170 PLANTS II (2-3) AAB/LEC. Departmental approval. Introduces strategies for innovative design with plants, exploring issues of plant ephemerality, functionality, and phenology. Course may be repeated for a maximum of 3 credit hours.

LAND 7190 RESEARCH BY DESIGN: FRAMEWORKS, METHODS, AND STRATEGIES (3) SEM. 3. Design is not just about solving problems, but figuring out which questions to ask in the first place. This course guides students through the iterative process of situating, identifying, framing, and testing a student-chosen trend, topic, or question.

LAND 7230 STUDIO V: COMPREHENSIVE STUDIO (5) STU. 5. Pr. LAND 5230. The first part of a two-semester research studio which involves creating a new body of work within a theoretical context and then critically appraising this work and its theoretical framework.

LAND 7231 FIELDWORK V (1) FLD. 1. Coreq. LAND 7230. Course is directly linked to the Landscape Design Studio and offers students opportunity to travel to relevant locations to advance, contextualize, and frame the design studio. Emphasizes first-hand experiences of the landscape where careful observation and analysis occur; and introduces students to skills, techniques, and ways of thinking about site reconnaissance and gathering landscape intelligence.

LAND 7240 THEORIES AND PRACTICES (3) SEM. 3. Departmental approval. This is a reading, writing, and discussion seminar that examines the idea that the development of a democratic, civic, diverse social ecology can create more resilient and sustainable communities.

LAND 7250 CONTEMPORARY ISSUES IN LANDSCAPE ARCHITECTURE (2) LEC. 2. Pr. LAND 5230. Departmental approval. Investigation of landscape architectural issues and topics that can be undertaken by means of design, and the development of methodologies and techniques appropriate to such investigation.

LAND 7270 CONSTRUCTION III: REGENERATIVE TECHNOLOGIES (2-3) LEC. Introduces issues of land contamination and explores remediative and regenerative technologies as design strategies towards new productive futures. Course may be repeated for a maximum of 3 credit hours.

LAND 7280 DYNAMIC SYSTEMS II: REGIONAL ECOLOGIES (3) LEC. 3. This lecture/field laboratory course examines conditions of regional ecologies at multiple scales and explores possible public and private responses to these issues.

LAND 7290 GRAPHIC STUDIES III (3) SEM. 3. Fundamental concepts of Geographic Information Systems are used to create visual frameworks for gathering, interpreting, and sharing spatial data in landscape architecture practice.

LAND 7330 STUDIO VI: COMPREHENSIVE STUDIO (5) STU. 12. Pr. LAND 5230 or LAND 6230. A culmination of a design research project that ends in a public review and exhibition.

LAND 7331 FIELDWORK VI (1) FLD. 15. Coreq. LAND 7330. Directly linked to the Landscape Design Studio and offers students opportunity to travel to relevant locations to advance, contextualize, and frame the design studio. Gets students out of the classroom and emphasizes first-hand experiences of the landscape where careful observation and analysis occur. Introduces students to skills, techniques, and ways of thinking about site reconnaissance and gathering landscape intelligence.

LAND 7340 PROFESSIONAL PRACTICE (3) LEC. 3. Pr. LAND 5230 or LAND 6230. Departmental approval. This course surveys the development and ethics of the profession of landscape architecture and presents an overview of the business and practice of the profession.

LAND 7410 SEMINAR ON HISTORY AND THEORY (3) LEC. 3. Departmental approval. Opportunity for students to further develop expertise through supervised, independent course study or pursue an area of interest that may not be covered in the current curriculum.

LAND 7420 SEMINAR ON COMMUNITY OUTREACH (3) SEM. 3. Pr. LAND 5230. Departmental approval. Opportunity for students to further develop expertise through supervised, independent course study or pursue an area of interest that may not be covered in the current curriculum.

LAND 7430 SEMINAR ON HYDROLOGY (2-3) SEM. Pr. LAND 5230. Departmental approval. Opportunity for students to further develop expertise through supervised, independent course study or pursue an area of interest that may not be covered in the current curriculum. Course may be repeated for a maximum of 3 credit hours.

LAND 7440 SEMINAR ON LANDSCAPE COMMUNICATION (3) SEM. 3. Pr. LAND 5230. Departmental approval. Opportunity for students to further develop expertise through supervised, independent course study or pursue an area of interest that may not be covered in the current curriculum.

LAND 7450 SEMINAR ON LANDSCAPE RESEARCH (2-3) SEM. Pr. LAND 5230. Departmental approval. Opportunity for students to further develop expertise through supervised, independent course study or pursue an area of interest that may not be covered in the current curriculum. Course may be repeated for a maximum of 3 credit hours.

LAND 7470 LANDSCAPE ARCHITECTURE INTERNSHIP (3) PRA. 3. By approval of Chair of Landscape Architecture. A practical, professional, full-time, curriculum-related work experience in the industry of landscape architecture. Under joint supervision of employer and university. Course may be repeated for a maximum of 9 credit hours.

LAND 7900 DIRECTED STUDIES (1-3) AAB. An individual student can pursue an area of research beyond the required curriculum. Departmental approval; MLA II standing. Course may be repeated for a maximum of 9 credit hours.

LAND 7960 SPECIAL PROBLEMS IN LANDSCAPE ARCHITECTURE (2) LEC. 2. Departmental approval. Investigation of landscape architectural issues and topics that can be undertaken by means of design, and the development of methodologies and techniques appropriate to such investigation.

LAND 7970 SPECIAL TOPICS (1-6) AAB. Groups of student work with a specific faculty on a special topic in an area of interest. Course may be repeated for a maximum of 9 credit hours. ADDITIONAL PREREQUISITES: Departmental approval; MLA I standing.

LAND 7992 RESEARCH SUMMARY (1) LEC. 1.

Real Estate Development Courses

RDEV 7120 FIELD STUDIES (1-3) LEC. 1-3. This course provides students with the opportunity to visit real estate development firms and ongoing projects. Course may be repeated for a maximum of 6 credit hours.

RDEV 7130 PRINCIPLES OF REAL ESTATE DEVELOPMENT (3) LEC. 3. An introduction to theory and practice as applied to fundamental topics in real property law, real estate markets, valuation, investment analysis and property financing as they effect various topics in real estate development.

RDEV 7140 REAL PROPERTY ANALYSIS (3) LEC. 3. This is a case study course, providing an overview of key concepts in real estate development and real property analysis.

RDEV 7230 REAL ESTATE MARKET ANALYSIS (3) LEC. 3. This class will provide concentrated study in real estate markets. Critical components of the course will include the study of the link between the Property and Asset Markets.

RDEV 7240 BUILDING DESIGN AND CONSTRUCTION PRINCIPLES (3) LEC. 3. This course will illustrate some of the building design and construction principles that real estate development professions engage in their practice every day.

RDEV 7340 SITE PLANNING AND INFRASTRUCTURE DEVELOPMENT (3) LEC. 3. This course examines the role that site selection and infrastructure development play in the sustainable conceptualization, feasibility, and implementation of a real estate development project.

RDEV 7350 REAL ESTATE INVESTMENT ANALYSIS (3) LEC. 3. This class will provide concentration study in real estate investment.

RDEV 7430 REAL ESTATE PROJECT MANAGEMENT (3) LEC. 3. This course examines the real estate development process from conceptualization to actualization.

RDEV 7440 REAL ESTATE CONTRACT NEGOTIATIONS (1) LEC. 1. This course will teach the basic skills necessary to become an effective negotiator. The course will include planning and preparing necessary elements for contract negotiation. Additionally, the communications skills necessary to forward the negotiation agenda will be addressed.

RDEV 7530 REAL ESTATE CAPITAL MARKETS (3) LEC. 3. This class will provide an in-depth look at the fundamental principles and practices as applied to the financing of residential and commercial real estate.

RDEV 7540 REAL ESTATE DEVELOPMENT LAW (3) LEC. 3. This course examines the legal issues related to acquisition, planning, design, entitlement, construction, development financing, property management, accounting, taxation, reversion, and estate planning.

RDEV 7630 REAL ESTATE DEVELOPMENT CAPSTONE PROJECT (5) DSL. 5. This Capstone Project seeks to develop an appreciation of real estate development process and the critical roles played by the design, planning, and construction industries