

Architecture

Offering the Bachelor of Architecture 2007-08



Architecture

Offering the Bachelor of Architecture Degree

The mission of the Architecture Program at Southern Polytechnic State University is to expand and extend the university mission into the realm of architecture. The program prepares students for professional practice in the design, planning, development, and stewardship of the built environment.

An architect tackles many issues: people's needs, building needs, a building site, and environmental concerns. Because creativity is the greatest source of solutions that fit all these issues, students find that a background in art proves helpful. The best ideas are bigger than a computer mouse or a drafting instrument, so we've structured a program that puts your imagination and your hands to work from Day One.

Known as a 2+3 program, our School begins with two years of Design Foundation. Students analyze the organization of space, building designs by noted Architects, and contextual issues. They evaluate each building's successes and failures, and discuss how they might make changes to improve the designs. This preparation introduces you to the issues, processes, and the spirit of experimentation that characterizes the professional design of built environments. This experience forms a foundation of skills that you develop more fully during the last three years of the program. Because our courses must be taken in sequence, Architecture students typically attend year-round. We augment class work with field trips to Savannah, Las Vegas, New Orleans, and other architectural destinations.

Many students elect to take our Furniture Design Studio, following in the footsteps of great architects who design and create furniture — and learning much from the process of choosing materials, creating joints, and fitting together materials. Next to this studio, a spacious workshop provides tools for use in modeling and construction projects.

Laptops and drafting instruments come in handy, but the most important piece of equipment for an architect is imagination. Initially, SPSU's award-winning faculty stimulate ideas through freehand drawing, which helps you reach into your creative "well" and channel those images onto paper.

Next, you'll learn a lot about scale and materials by putting models together. After you master these two skills, you're ready for computer use. Each studio space comes equipped with tack-, cutting-, and drawing boards. During the first two years, you will share space, and in the Professional Program (years 3, 4, and 5), we give you a dedicated space that resembles that of a working architect in professional practice.

Throughout this program of study, you work with outstanding educator practitioners. Our faculty includes several Fellows of the American Institute of Architects, as well as faculty who have earned their Ph.D. — an unusual distinction in our profession.

Why study Architecture at SPSU?

In their review of our program, the National Architectural Accrediting Board cited Southern Polytechnic's Architecture program as unique in every way from other programs. The difference lies in our approach -- in our mission to foster invention, creativity and craft through hands-on exploration of architecture.

About the program

SPSU is the only public state institution in Georgia to offer the Bachelor of Architecture degree. Our membership in the School of Architecture, Civil Engineering Technology, and Construction affords our students the opportunity to take classes in Construction and Civil Engineering for a multi-disciplinary degree. We also offer classes in furniture design, applied architectural research and designing/building.

The faculty

The majority of our faculty members are licensed architects, some with active architectural offices. Their fields of expertise encompass the areas of architectural design, environmental design, environmental psychology, cultural anthropology, urban design, urban planning, cultural diversity, structural design, methods of construction sustainability, architectural history and criticism,

professional practice, and computer application... to name a few. The depth and breadth of our faculty's backgrounds is reflected in the choices available to Architecture students at Southern Polytechnic.

Faculty:

Ameen Farooq	Professor and Department Chair
C. Richard Cole	Professor
Howard F. Itzkowitz	Professor
William J. Carpenter	Professor
M. Saleh Uddin	Professor
Harry F. Kaufman,	Professor [Emeritus]
Kenneth L. Sargent, Jr.	Assistant Professor [Emeritus]
Richard Becherer	Associate Professor
Anthony Rizzuto	Associate Professor
Ermal Shpuza	Assistant Professor
Christopher Welty,	Assistant Professor
Robert Tango	Assistant Professor
Kathryn L. Bedette,	Assistant Professor
Elizabeth Martin	Assistant Professor
Hazem Ziada	Assistant Professor
Mine Hashas	Assistant Professor
Manole Voroneanu	Assistant Professor

The Design Foundation

The Design Foundation sequence is an introduction to the issues and processes used by professional designers of the built environment. Students demonstrate their understanding of course material through exercises and simulated design projects. A basic understanding of these factors is provided in the Design Foundation, which constitutes the first two years of the Bachelor of Architecture degree program.

Computer Requirements

All students in the School of Architecture must have a lap top computer for their individual use by the beginning of the second semester of first year. Published requirements for the computer and software are available in the reception office of the Architecture Department.

Transfer Students

Transfer students may apply for admission to the program. All transfer students coming from an NAAB accredited program must submit a portfolio for approval by the Architecture Faculty no later than 5:00 PM on the second Friday of May for possible advanced standing in the Architecture program. Any transfer student who is accepted and chooses not to submit a portfolio will be placed in the first DFN studio. Transfer students must have a minimal transferring GPA. They must also have current, formal acceptance to Southern Polytechnic State University and meet the University requirements regarding transfer status. Prospective transferring students may receive further specific information regarding the application process and applicable dates directly from the Architecture Department. All decisions regarding acceptance into the Architecture Program are final.

Bachelor of Architecture

The Bachelor of Architecture program is a fully accredited program by the National Architectural Accrediting Board. It is a 2 plus 3 program consisting of the Design Foundation, the first two years, and the Professional Program for the last three years. The study of architecture involves good detailing and translating abstract thought. The entire program is based on integration of foremost students into an enthusiastic, practical program of study. The professional program places emphasis on enhancing the understanding of the relationship of people and their physical environment, and the synthesis of this complex information into relevant design solutions. The program is a combination of building and environmental technology, professional practice, architectural electives and a rigorous sequence of design studios geared to exceptional students.

Accreditation

The following statement is required by the National Architectural Accrediting Board to be included in all catalogs and promotional materials of accredited program.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. 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.

Masters 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 pre-professional degree is not, by itself, recognized as an accredited degree.

Professional Program

The Professional Program is comprehensive and rigorous. The Professional Program includes students who have successfully completed the two-year sequence of Design Foundation and who demonstrate exceptional professional promise.

To be admitted to the Professional Program from the Design Foundation, a student must have a minimum grade point average (GPA) of 2.5 in all course work.

Pre-requisite Requirements and Grading Standard

All Design Foundation and Architecture studio and lecture courses must be taken in sequence.

Architecture students within the Professional sequence must maintain passing grades in all classes within any given semester in order to advance into the following semester. This is in addition to maintaining a GPA of 2.00.

Student Work

All student work executed in the Architecture Department becomes the property of the Department and will be returned at the discretion of the faculty. The faculty also reserves the right to refuse credit for any work that was executed outside the precincts of the Department or otherwise executed without coordination with the faculty.

Portfolio Review for the Professional Program

Requirements for the Bachelor of Architecture

ENGL	1101	Composition I	3
ENGL	1102	Composition II	3
SPCH	2400	Public Speaking	2
STS	2400	Science, Technology, and Society	2
Area C1		Take One Course from the Literature Group	3
Area C2		Take One Course from the Art and Culture Group	3
MATH	1113	Pre-calculus	4
MATH	2253	Calculus I	4
Area D		Lab Sciences (Two courses) – Physics is Recommended	8
Area E	Group 1	American Context, one course	3
Area E	Group 2	World History, one course	3
Area E	Group 3	Behavioral Science, one course	3
Area E	Group 4	Cultures and Societies, one course	3
DFN	1000	Orientation to Architecture	2
DFN	1001	Design Foundation I	4
DFN	1002	Design Foundation II	4
DFN	2003	Design Foundation III	4
DFN	2004	Design Foundation IV	4
DFN	2111	Architecture Culture I	3
DFN	2211	Architecture Structures I: Introduction to Structures	3
DFN	2241	Design Communication I	2
DFN	2242	Design Communication II	2
ARCH	3011	Architecture Studio I	4
ARCH	3012	Architecture Studio II	4
ARCH	3112	Architecture Culture II	3
ARCH	3113	Architecture Culture III	3
ARCH	3211	Architecture Structures I	4
ARCH	3212	Architecture Structures II	3
ARCH	3311	Environmental Tech I System Selection & Finishes	3
ARCH	3222	Environmental Technology II: Codes and Technical Documentation	3
ARCH	4013	Architecture Studio III	4
ARCH	4014	Architecture Studio IV	4
ARCH	4114	Architectural Cultures IV	3
ARCH	4222	Environmental Technology III: Human Comfort and: HVAC Systems	3
ARCH	4223	Environmental Technology IV: Lighting and Vertical Circulation	3
ARCH	4116	Urban Planning and Design Theory	3
ARCH	4411	Design Cost Control	2
ARCH	5313	Professional Practice and Ethics	3
ARCH	5593	Thesis Project Research	2
ARCH	5998	Architecture Thesis Studio I	4
ARCH	5999	Architectural Thesis Studio II	5
Free Electives			17
Degree Program Total			152

* Orientation to Architecture course is required but does not count towards the Professional Program

Design Foundation

DFN 1000
Orientation to Architecture
2-0-2
Prerequisite: MATTH 1111

This course provides entry students with the educational requirements and the licensing procedures for design professionals. Development of the built environment, the study of professional architectural practice and associated disciplines are also introduced.

DFN 1001
Design Foundation I
0-12-4
Prerequisite: MATTH 1111

DFN 1001 is the first design studio. Through exercises and projects, it introduces a variety of skills and subjects for the beginning student in architecture including but not limited to the following: drawings, model building, verbal communication, design, and building language.

DFN 1002
Design Foundation II
Prerequisites: DFN 1000, DFN 1001
0-12-4

DFN 1002 builds and elaborates upon the skills and subjects introduced in DFN 1001. It culminates with a capstone design project that summarizes and measures the learning of the first year, and prepares students for the second year.

DFN 2003
Design Foundation III
Prerequisite: DFN 1002
0-12-4

This course concentrates on shaping, organizing, and designing architectural space using spatial and compositional strategies derived from precedent and architectural case studies.

DFN 2004
Design Foundation IV
Prerequisite: DFN 2003
0-12-4

The culmination of the Design Foundation incorporates and builds upon all previous course work. It adds the fundamental concept of typology to previous experiences with architectural space, composition, and program. Students investigate layers of functional zoning, geometric organization, three dimensional configuration, openings, physical texture, color, character, and symbolic meaning.

DFN 2111
Architecture Culture I: Prehistory through Gothic with an Introduction to Non-Western Traditions
3-0-3

The history of architecture is presented as a collection of buildings, each of which is seen as a concrete solution to a given set of culturally derived problems and issues. These buildings, as precedents, are not to be analyzed based on composition or aesthetic image, but rather as design solutions to complex socio-cultural problems. History is used as a didactic device to aid the design student in problem solving by presenting examples of how architects have successfully transformed the intellectual concerns of their day into built form.

DFN 2211

Introduction to Structures

Prerequisite: MATH 1113 and PHYS 1111 [Calculus based]

3-0-3

This course is an introduction to architectural structures with an emphasis on statics and strength of materials concepts. Focus is on force systems, shear and moment diagrams and determination of section properties.

DFN 2241

Design Communication I

Prerequisite: DFN 1000 and 1001 or Approval of the Instructor

1-3-2

Design Communication I course provides fundamentals of design communication through principles of drawing conventions and related techniques including orthographic projections, axonometrics, and perspective construction systems to represent design ideas and built forms. This involves use of traditional manual media and introduction to basic 2D image manipulation in digital media. The intention of the course is to develop visual literacy through visual thinking and to develop skills to represent objects and simple structures in both two and three-dimensions.

DFN 2242

Design Communication II

Prerequisite: DFN 1000 and 1001 or Approval of the Instructor

1-3-2

This is an advanced studio course in techniques and conventions of graphic communication as an aid for architectural design process and is seen as a continuation of Design Communication I. Techniques include hand drawing, 3D computer modeling, and computer 3D architectural animation. This course advances levels of visualization and representation of architectural building and related design ideas. The goal is to link digital modeling and animation techniques to various studio works both at process level and final presentation level. Variety of representation techniques include hand drawings, rendered drawings, hand constructed models, electronic 3D models, and computer animations. Highlighting design vocabulary through a series of projects ranging from page layout to building. Both small scale objects and moderate scale structures/buildings can be used as base information to represent concepts of design and techniques of representation

Portfolio Review: A mandatory condition to enter Professional Program

Entrance to the Professional Program is subject to the successful completion of all Design Foundation Courses and Georgia Core Courses. A cumulative GPA of 2.5 must be earned for admission into the Professional Program

A design portfolio review and approval by the Faculty is an essential requirement to enter the Professional Program. Students must follow the established guidelines to prepare their portfolios. All four DFN studio works and other design/art work must elaborate critical design process articulated with good graphics relevant to design projects.

A five-member team evaluates student's Portfolio following design criteria approved by the Architecture Faculty. Students who not get their portfolios approved are encouraged to improve their design by repeating DFN 2004 and compete by resubmitting their portfolios with the current class.

Professional Program: Architecture

ARCH 3011

Architecture Studio I

Prerequisite: Acceptance into the professional program upon portfolio review

0-12-4

This course builds on the previous studio course's emphasis on space making and introduces the integration of building technology into the design process. Assignments focus on the expressive use of wood and steel within rural and light urban site contexts.

ARCH 3012

Architecture Studio II

Prerequisite: ARCH 3011

0-12-4

This course is a continuation of ARCH 3011 and the integration of technology. Students design a small scale project usually in a dense urban setting. Emphasis is placed on site context and systems and materials research in support of design intent. The first half of the semester is devoted to project design and the latter half is spent examining the construct of the design through large scale models.

ARCH 3112

Architecture Culture II - The Renaissance through 1850

3-0-3

A continuation of Architecture Culture to examining the relationship between architecture and other cultural discourses such as philosophy, aesthetics, science, religion, politics and technology. While continuing in the aim of developing an understanding of how architecture manifests the socio-cultural conditions of a given moment in aesthetic form, simultaneously examines the development of an autonomous architecture culture, one that we refer to as theory.

ARCH 3113

Architecture Culture III - 1850 through 1945

3-0-3

A continuation of the Architecture Culture series, additionally examining the relationship between architecture and other cultural discourses such as philosophy, aesthetics, science, religion, politics and technology. While continuing in the aim of developing an understanding of how architecture manifests the socio-cultural conditions of a given moment in aesthetic form, it takes as its central concern the search for a definition of 'Modernity', and how it might be translated into a style. Particular attention is paid to the various 'isms' of the Modern Movement and the key historical figures that shaped them.

ARCH 3211

Architecture Structures II: Steel and Wood

Prerequisite: MATH 1113, PHYS 1111 [Calculus based] and DFN 2211

3-3-4

This course is a continuation of DFN 2211, with emphasis on gravity loads and basic design of wood structural components including beams, columns, and trusses. Engineered wood products, glue-laminated, and connections are also covered.

ARCH 39X1-39X4*

Special Topics

Prerequisite: Admission to the professional program

1 to 4 hours

This course provides an opportunity for a group of students to undertake in-depth study under the direction of a member of the full-time faculty or visiting faculty. Areas of study may include extension and enhancement of material offered in required architecture courses or exploration in an area of professional interest not covered by, but directly related to, material covered in third year architecture courses.

ARCH 3212

Architecture Structures III: Concrete and Lateral Loads

Prerequisite: ARCH 3211

3-0-3

This course is a continuation of ARCH 3211 with the design of steel structural members, connections and statically determinate structural steel systems. Approximate analysis of rigid frames is introduced and the student learns to use “pre-packaged” computer programs to input data and evaluate results.

ARCH 3311

Environmental Technology I: Systems Selection and Finishes

2-3-3

This course introduces basic structural and enclosure systems which includes selection criteria. Emphasis is placed on wood, steel, masonry, and concrete structural systems. Enclosure Systems are explored in relation to various applications of existing and new finishes building systems within the context of sustainability.

ARCH 3312

Environmental Technology II: Codes and Technical Documentation

Prerequisite: ARCH 3311

2-3-3

This course is an introduction to the Standard Building Code, N.F.P.A. 101 and A.D.A and / or International Building Code. Emphasis is placed on theory of building safety, code document organization and the application of codes to actual buildings. The learning of codes is further extended by applying the code knowledge to producing an actual set of technical [contract] documentation of an assigned architectural project.

ARCH 4013

Architecture Studio III

Prerequisite: ARCH 3012

0-12-4

This course focuses on the design of multi-use projects with emphasis on the integration of construction technology and the application of knowledge acquired in the concurrent history theory course sequence. It emphasizes urban revitalization and mixed use design and development as an underlying studio thematic. The studio uses a three tier strategy.

ARCH 4014
Architecture Studio IV
Prerequisite: ARCH 4013
0-12-4

This course continues with the students undertaking a studio problem in architectural design of multi-use project with emphasis on the integration of technology and the application of knowledge acquired in the concurrent Architectural Theory course.

ARCH 4114
Architecture Cultures IV: 1945-Current
Pre-Requisite: ARCH 3112, ARCH 3113, Co-requisite: ARCH 4013
3-0-3

A continuation of the Architecture Culture sequence, this course examines through lectures and projects, the development of issues and questions that began to undo the dogma of the Modern movement, exploring topical issues raised by architects, historians and critics alike that help to formulate alternative strains of Modernism, Post-Modernism leading to the Current underpinnings of Production of Architecture.

ARCH 4222
Environmental Technology III: Human Comfort, Sustainability and HVAC Systems:
Prerequisite: ARCH 3311 and ARCH 3312
2-3-3

A study of the connection between basic human comfort and sustainable design mechanisms: Building Orientation, sustainable mechanisms relative to envelope materials shaping building form,. Energy conservation and energy code compliance is examined. Selection and configuration of major mechanical systems is examined in the contexts of building typology, sustainability, spatial configuration, and life cycle cost.

ARCH 4223
Environmental Technology IV: Natural & Artificial Lighting, Electrical Systems & Vertical Circulation:
Prerequisite: ARCH 3311 and ARCH 3312
2-3-3

This course further builds on the technology sequence. This course further elaborates the connection between the Building Orientation and the role of natural and artificial lighting with an emphasis on the sustainable mechanisms shaping building form,. Energy conservation and energy code compliance is examined. Selection and configuration and distribution of artificial lighting and natural lighting and vertical circulation [escalators, elevators and other mechanical devices of vertical circulation].fostering sustainable mechanisms in diverse contexts of spatial configurations, building typologies while exploring means to defray life cycle costs.

ARCH 4116
Urban Planning and Design Theory
Pre-requisite: ARCH 4013
2-3-3

This course critically examines the evolution and current trends in the development of modern cities. Diverse socio-economic-political and spatial issues are explored that shape and continuously transform the physical fabric of cities, metropolitan centers, regions and global facets of architecture and urbanism. Class exercises range from actual urban design project to critical and applied assignments to explore and understand theoretical and applied underpinnings of varied and diverse urban forms.

ARCH 4411
Design Cost Control
Pre-requisite: ARCH 3311, ARCH 3212
2-0-2

The primary intent of this course is to help future architect's methods to create realistic Estimates of Probable Costs for construction projects. It is not the intent of this course to focus on becoming a construction cost estimator, but rather to enable the architectural student to effectively create realistic Estimates of Probable Cost for their clients and thereby work as a team member with the Owner and General Contractor to establish and maintain a project budget throughout the process of project design and construction.

The course will introduce methods commonly used to create budgets for the construction cost of commercial building projects from conceptual discussions with the Owner and the early stage of development of the drawings and specifications. The methods that will be reviewed are typically used by architects and general contractors for feasibility and value engineering studies.

ARCH 49X1-49X4*
Special Topics
Prerequisite: Admission to the professional program
1 to 4 hours

This course provides an opportunity for a group of students to undertake in-depth study under the direction of a member of the full-time faculty or visiting faculty. Areas of study may include extension and enhancement of material offered in required architecture courses or exploration in an area of professional interest not covered by, but directly related to, material covered in fourth year architecture courses.

ARCH 5313
Professional Practice and Ethics
Prerequisite: ARCH 4014,
Co-requisite: ARCH 3232
3-0-3

Study of professional ethics, laws governing the practice of architecture, and contractual relationships are undertaken in this course.

ARCH 5593
Prerequisite: ARCH 4014
Thesis Prep Research
2-0-2

The course prepares students to develop their Thesis Proposal. A Thesis Proposal must have a clear design premise.. The proposal should offer a clear methodology supported with research to execute a Thesis Project.

Thesis Proposal must be approved by students' Design Advisory Committee (two internal and one external design advisors) before pursuing the Design Project.

Design Projects developed based on approved design proposal [ARCH 5593] must be properly documented according the approved layout, table of contents and structure. Thesis Project Book must be approved by the Thesis Coordinator to be acceptable for publication.

Thesis requirements will be considered incomplete without the submission of the Project Book according to the approved guidelines.

ARCH 5998
Thesis Design I
0-12-4
Prerequisite: ARCH 4014, ARCH 5593

Students are required to pursue their thesis explorations upon approval of their thesis proposals by their thesis committee. Student can choose from diverse range of multipurpose architectural environments for their thesis projects. Design solutions must demonstrate an investigation, application and ability to demonstrate evidence that suffices at least the minimum SPC Student Performance Criteria as set by the NAAB [National Architectural Accrediting Board] and the Faculty of Architecture.

Students must demonstrate the ability to show all potential sequence of architectural inquires, design process. They must fulfill and satisfy all Thesis requirements as established by the Architecture Faculty. Thesis Coordinator (s) facilitates thesis mechanics, procedures, process and pedagogical structure for thesis committees and students to maintain standards consistent with NAAB student performance criteria, and values, principles and expectations of the Architecture Faculty in line the vision and mission of the university

ARCH 5999
Thesis Design II
1-12-5
Prerequisite: ARCH 5593, ARCH 5998

A continuum of Arch 5998 that requires a successful completion of their Thesis Design Project that must demonstrate ability to demonstrate with design evidence that suffices at least the minimum student performance criteria as set by the NAAB [National Architectural Accrediting Board] and the Faculty of Architecture for achieving a Comprehensive Design solution..

Students must demonstrate the ability to show all potential sequence of architectural inquires, design process. They must fulfill and satisfy all Thesis requirements as established by the Architecture Faculty. Thesis Coordinator (s) facilitates thesis mechanics, procedures, process and pedagogical structure for thesis committees and students to maintain standards consistent with NAAB student performance criteria, and values, principles and expectations of the Architecture Faculty in line the vision and mission of the university