## **Architectural Studies (undergraduate)**

Charles A. Dana Professor Woolf; Professor Temkin; Associate Professors Cox, Hoffman, Lutz, Sagan, and Schaller; Assistant Professors D'Aponte, Parker, and Stonorov, Lecturer Armstrong; Adjunct Instructors Arnold, Dworsky, Facciolo, Gossens, Keller, Kredell, and Wolfstein

With fewer than 200 students, the School of Architecture + Art is one of the smallest programs of its kind in the country, fostering a natural and effective mentoring relationship between faculty and students. Courses take a balanced approach to both the art and science of architecture and we embrace environmental sustainability as part of Vermont's ethos, offering opportunities for experiential learning and reflection. The School explores in many dimensions the meaning of making and the making of meaning to reinforce the student's ability to think creatively and independently and become educated and motivated to be leaders in service to the community while reflecting the University's ideals to develop citizens with integrity, conviction, and self-respect.

The school offers the following architecture degrees:

- A four-year bachelor's degree in Architectural Studies (http://catalog.norwich.edu/residentialprogramscatalog/ collegeofprofessionalschools/schoolofarchitectureandart/ architecturestudies/#majortext)
- A one-and-a-half-year Master of Architecture degree (http://catalog.norwich.edu/archives/2014-15/residentialprogramscatalog/collegeofprofessionalschools/schoolofarchitectureandart/architecture/#majortext)

 A minor in Architectural Studies (http://catalog.norwich.edu/ archives/2014-15/residentialprogramscatalog/ collegeofprofessionalschools/schoolofarchitectureandart/ architecturestudies/#minortext)

Combined, the bachelor and master programs form a five-year professional degree accredited by the National Architectural Accrediting Board (NAAB), a prerequisite for licensure in most states.

See examples of student work (http://profschools.norwich.edu/architectureart/student-work) .

Contact our Program Director (http://profschools.norwich.edu/architectureart/contact-us), Danny Sagan.

A Bachelor's Degree in Architectural Studies is a student's introduction to the profession, where they learn vital technical, artistic, and communication skills.

Architectural Studies offers both a semester-long and academic year-long study-abroad opportunity in Berlin, Germany.

In our unique Design: Build architecture studios, students collaboratively design, plan and build a structure, which have included a town library, a house for Habitat for Humanity, an outdoor high-school classroom, a mobile energy research laboratory, and a solar house.

A bachelor's degree offers students the chance to pursue a minor in other fields, including studio art, construction management, business, and art history.

# **B.S. in Architectural Studies - Curriculum Map**

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First Year					
Fall	Credits	Spring	Credits		
AP 111 Fundamentals of Architecture	4	AP 118 Fundamentals of Architecture II	4		
MA 107 Precalculus Mathematics	4	MA 108 Applied Calculus	4		
EN 101 Composition and Literature I	3	EN 102 Composition and Literature II	3		
HI 107 The History of Civilization I	3	HI 108 The History of Civilization II	3		
SA 103 Introduction to Drawing	3	SA 104 Introduction to Visual Design	3		
	17		17		
Second Year			,		
Fall	Credits	Spring	Credits		
AP 211 Architectural Design I	5	AP 212 Architectural Design II	5		
FA 201 History/Theory of Architecture I	3	AP 325 Materials, Construction, and Design	3		
AP 225 Introduction to Passive Environmental Systems	3	FA 202 History/Theory of Architecture II	3		
PS 201 General Physics I	4	Lab Science	4		
General Education Elective	3	General Education Elective	3		
	18		18		

Third Year			
Fall	Credits	Spring	Credits
AP 311 Architectural Design III	5	AP 312 Architectural Design IV	5
AP 221 Site Development and Design	3	AP 222 Human Issues in Design	3
AP 327 Active Building Systems I	3	AP 328 Active Building Systems II	3
CE 351 Statics and Mechanics of Materials	4	CE 457 Wood, Steel, and Concrete Structures	4
FA 308 History/Theory of Artchitectural III	3	FA 309 History/Theory of Architectural IV	3
	18		18
Fourth Year			
Fall	Credits	Spring	Credits
AP 411 Architectural Design V	5	AP 412 Architectural Design VI	5
Free Elective	3	AP 436 Project Delivery and Documentation	4
Architecture Elective Architecture Elective (May substitute required course for a minor for 4th year AP Elective.)	3	Free Elective	3
Free Elective	3	Architecture Elective (May substitute required course for a minor for 4th year AP Elective.)	3
Free Elective	3	Free Elective	3
	17		18
Total Credits: 141	'	,	

## **Architectural Studies Minor**

Norwich offers a minor degree in Architectural Studies for students in other majors who are interested in studying the use and design of space for human work and habitation.

A minor in Architectural Studies requires 18 credit hours, involving four designated courses and at least three others, all completed with a grade of "C" or better. Enrollment into courses is subject to availability of space.

AP 111	Fundamentals of Architecture	4
AP 118	Fundamentals of Architecture II	4
FA 201	History/Theory of Architecture I	3
FA 202	History/Theory of Architecture II	3
Architectural Elective		3
Architectural Elective		3
Architectural Elective		2

## **Courses**

## AP 106 Architectural Drafting 3 Credits

Techniques of architectural drafting are introduced as basic skills used to describe architectural form. The various graphic tools, techniques, and conventions are presented and the rationale behind their use is explained. In addition to the basic graphic constructions and multi-view projections, the methods of developing architectural plans, elevations, and sections are addressed. This course is primarily intended for students who have had little or no prior introduction to mechanical and architectural drafting. One hour of lecture and three 3-hours of studio per week. 1 lecture hour and 3 studio hours.

#### AP 111 Fundamentals of Architecture 4 Credits

An introduction to the basic principles and skills that constitute the discipline of architecture. A series of two and three dimensional graphic exercises is used to cultivate an understanding of architectonics, the intentional arrangement of space and enclosure to communicate human values while also introducing graphic techniques for communicating concepts and solutions. One hour of lecture and three 9-hour studios per week.

#### AP 118 Fundamentals of Architecture II 4 Credits

A continuation of the introduction to the fundamental processes and technologies that constitute the discipline of architecture. This course investigates the design process, explores interactive computer graphics (CAD) as a design tool, and culminates with the application of these principles, processes, and skills to an architectural design problem. One hour of lecture and 9 hours of studio per week. Prerequisite: AP 111.

## AP 211 Architectural Design I 5 Credits

The first in a sequence of design studio courses introducing the processes, judgment, and communications involved in the synthesis of architectural form. Through a focused series of individual and group projects, the influences of the human and physical contexts on form are explored. One hour of lecture and three 4-hour studios per week. Prerequisite: AP 118. 1 lecture hour and 12 studio hours.

## AP 212 Architectural Design II 5 Credits

Second in a sequence of design studio courses emphasizing the processes, judgment, and communications involved in the synthesis of architectural form. Through a focused series of individual and/or group projects, the influences of functional requirements on form are explored. One hour of lecture and three 4-hour studios per week. Prerequisite: AP 211. 1 lecture hour and 0 to 12 studio hours.

## AP 221 Site Development and Design 3 Credits

A course that deals with engineering principles and design considerations involved with site design. Earth shaping, drainage, roadway alignment, parking lot layouts, code requirements and environmental factors are studied prior to and after design changes. Two hours of lecture and one 2-hour studio per week. 2 lecture hours and 2 studio hours.

## AP 222 Human Issues in Design 3 Credits

An introduction to the psychological, sociological, and physical factors that influence the design of architectural space. The fields of anthropometrics, ergonomics, and proxemics are addressed, as well as considerations for barrier-free environments. Three hours of lecture/discussion per week. 3 lecture hours.

## AP 225 Introduction to Passive Environmental Systems 3 Credits

Through coordinated lectures and demonstrations, the impacts of environmental energies on architectural form are introduced and explored. Emphasis is given to the processes by which the architect orders light, climate, gravity, and sound responses to achieve building geometry. The course also addresses concepts and strategies for responding to environmental hazards, and designing healthy buildings and green architecture. Three hours of lecture. Prerequisite: AP 118, EG 110 or instructor's permission. 3 lecture hours.

## **AP 241 Architectural Delineation 3 Credits**

A studio course in advanced graphic methods. Various rendering techniques, definitive design development, and the principles of construction drawings and architectural detailing are presented and explored through individual projects. One hour of lecture and two 2-hour studios per week. 1 lecture hour and 4 studio hours.

## AP 311 Architectural Design III 5 Credits

The development of the comprehensive building process as a synthesis of spatial, functional, and contextual concerns with emphases on building systems and materials. Individual and group problems are of a limited and defined scope. One hour of lecture and three 4-hour studios per week. Prerequisites: AP 212 and AP 325. Corequisites: AP 327.

## AP 312 Architectural Design IV 5 Credits

This fourth course in the design studio sequence continues the development of a comprehensive building design process with problems of complex but limited scope. The synthesis of spatial, functional, and contextual concerns, as directly linked to the understanding and employment of building systems, continues to provide a framework. One 1-hour lecture and three 4-hour studios per week. Prerequisite: AP 311.1 lecture hour and 12 studio hours.

## AP 325 Materials, Construction, and Design 3 Credits

An introduction to the processes by which construction materials and systems are evaluated, selected, incorporated, and detailed in building design. Both measurable and immeasurable design responses to environmental energies are explored in soils, concrete, masonry, wood, and metals. Three hours of lecture per week. Prerequisite: AP 225. 3 lecture hours.

## AP 327 Active Building Systems I 3 Credits

A survey of contemporary mechanical building equipment and systems, including heating, ventilation and air conditioning. Emphasis is placed on comparisons of design parameters, interfaces, and impacts on overall building form. Energy efficiency is addressed. Prerequisites: AP 225 and MA 107. 3 lecture hours.

## AP 328 Active Building Systems II 3 Credits

A continuation of AP 327, surveying contemporary electrical, lighting, and plumbing equipment and systems. Emphasis is placed on comparisons of design parameters, interfaces, and impacts on overall building form. Energy efficiency and building codes are addressed. Prerequisite: AP 327. 3 lecture hours.

## AP 403 Architectural Seminar in History and Theory 3 Credits

As both an art and a science, the profession of architecture is continually undergoing change and reassessment. This elective seminar focuses on one or more specific issues and topics regarding the historic and philosophical contexts that influence architecture today. Typically these topics range from the study of specific historic periods or schools of thought regarding design to the diverse trends in current architectural thinking. AP 504 shall require a graduate-level paper or project. This course may be repeated for credit. Three hours of lecture/discussion per week. 3 lecture hours.

## AP 406 Architectural Theory 3 Credits

## AP 411 Architectural Design V 5 Credits

Comprehensive problem-oriented design studio offered to fourth year students by various faculty members. The extension of the comprehensive design proves to include problems of an expanded scope and large scale, including building complexes and urban design. Individual and group problems emphasize the complex relationships of environmental factors, human concerns, and architectural form. This studio is considered the undergraduate capstone course in the undergraduate portion of the Architecture Program. A design portfolio, covering all seven semesters of studio work and including a written paper, is required to be submitted at the completion of this course. Prerequisite: AP 312. 1 lecture hour and 12 studio hours.

## AP 412 Architectural Design VI 5 Credits

Elective problem-oriented studios offered to fourth year students by various faculty members. The extension of the comprehensive design process to include problems of expanded scope and large scale, including building complexes and urban design. Individual and group problems emphasize the complex interrelationships of environmental factors, human concerns, and architectural form. One hour of lecture and three 4-hour studios per week. Prerequisite: AP 312. 1 lecture hour and 12 studio hours.

## AP 414 Architectural Seminar In Design 3 Credits

This elective seminar investigates in a non-studio setting one or more specific concepts, issues, or topics related to architectural design and its associated disciplines, such as urban, landscape, interior, and visual design. AP 514 shall require a graduate level paper or project. This course may be repeated for credit. Three hours of lecture/discussion per week. Prerequisite: approval of instructor. Cross listed with AP 520.

## AP 424 Architectural Seminar in Technology 3 Credits

As both an art and science, the profession of architecture is continually undergoing change and reassessment. This elective seminar focuses on one or more of the specific issues, topics, or skills related to technologies in architecture today. Typically, these specific semester topics range from advanced materials and construction systems to energy-conserving design; from environmental issues to hands-on building experiences. AP520 shall require a graduate-level paper or project. This course may be repeated for credit. Three hours of lecture/discussion per week. Prerequisites: AP114, AP325, or approval of instructor. Cross listed with AP520.

## AP 434 Architectural Seminar in Process 3 Credits

As both an art and science, the profession of architecture is continually undergoing change and reassessment. This elective seminar focuses on one or more specific topics regarding the current and future practice of architecture: what architects do, and how they do it. Typically, these topics range from design techniques to office management and from specialties within the practice, to the legal environmental, and social forces that influence it. AP 534 seminar shall require a graduate-level paper or project. This course may be repeated for credit. Three hours of lecture/discussion per week. Prerequisite: instructor's approval. Cross listed with AP 534.

## AP 436 Project Delivery and Documentation 4 Credits

Relationships between the formal methods of project delivery and the architectural office form the basic investigation of this course. The project delivery process and the methods of communication and the documentation involved provide a detail study of typical office procedures. The studio component of this course provides practical experience of the typical project delivery process. Documentation is approached as the fundamental means of architectural communication. This communication is multi-layered acting as a foundation for the means of production of contemporary architecture. Various tools will be utilized ranging from computer aided design to conceptual organization schema in both the practice of typical architectural project delivery and the development of new means of communication and production. Two hours of lecture and four hours of studio per week. 2 lecture and 4 studio hours.

## AP 455 Special Projects in Architecture 1-3 Credit

An execution of a singular project related to architectural design, history/ theory, process, or technology selected by the individual student. The course focuses on in-depth independent research, development, and a formal written and/or graphic presentation of an architecturally-related topic not otherwise covered in course offerings. The student must secure a faculty member who will agree to serve as advisor/evaluator for the project. Limited to Architecture majors who have completed at least the first two years of the curriculum. Hours and credits to be arranged. 1 to 3 lecture hours.

AP 456 Senior Project 4 Credits

AP 499 Sketching School 3 Credits

AP 499L Advanced Seminar: Sketching 0 Credits