<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Level</th>
<th>Prerequisite(s)</th>
<th>Course Fee</th>
<th>Description</th>
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<tr>
<td>ARCH 1184</td>
<td>Design Fundamentals 1, 4.00 Credits</td>
<td>4.00</td>
<td>Lower</td>
<td>( MATH 1033 with D or better &quot; or MATH 1034 with D or better &quot; or MATH 1054 with D or better &quot; or MATH 1063 with D or better &quot; )</td>
<td>$106.00</td>
<td>An introduction to fundamental design, architectural design drawing and applied drawing techniques. Students are introduced in lecture to design and drawing principles, techniques and conventions used to develop and communicate architectural ideas. Lab assignments emphasize the relationship between drawing and three-dimensional form and space, and include exercises in basic design and model-making. Topics include principles of design and architectural theory, observational sketching, depicting light, texture and depth, analytical drawing, orthographic and paraline projection systems, and professional standards for layout, lettering, use of line weights, and dimensioning of architectural drawings.</td>
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<tr>
<td>ARCH 2014</td>
<td>Computer Visualization, 4.00 Credits</td>
<td>4.00</td>
<td>Lower</td>
<td>Applied Learning Practicum</td>
<td>$106.00</td>
<td>This is an introductory course that examines the practical and theoretical issues of the computer as a tool for the production of architectural presentations. Technical skills in SketchUp, Revit and Photoshop are learned through tutorials and projects. Students learn to create and execute projects utilizing the computer as an architectural tool through the application of technical skills.</td>
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<tr>
<td>ARCH 2394</td>
<td>Design Fundamentals 2, 4.00 Credits</td>
<td>4.00</td>
<td>Lower</td>
<td>Applied Learning Practicum</td>
<td>$106.00</td>
<td>An introduction to fundamental design, architectural design drawing and applied drawing techniques. Students are introduced in lecture to design and drawing principles, techniques and conventions used to develop and communicate architectural ideas. Lab assignments emphasize the relationship between drawing and three-dimensional form and space, and include exercises in basic design and model-making. Topics include principles of design and architectural theory, observational sketching, depicting light, texture and depth, analytical drawing, orthographic and paraline projection systems, and professional standards for layout, lettering, use of line weights, and dimensioning of architectural drawings.</td>
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<tr>
<td>ARCH 3003</td>
<td>Environmental Controls 1, 3.00 Credits</td>
<td>3.00</td>
<td>Lower</td>
<td>MATH 1033 with C or better or MATH 1034 with C or better or MATH 1054 with C or better or MATH 1063 with C or better</td>
<td>$106.00</td>
<td>This course introduces the student to the fundamental principles of mechanical, electrical and plumbing (MEP) systems for small buildings. Students will explore passive design strategies and their effects on active MEP building systems. The course will emphasize holistic analyses of sites, buildings and small building systems with respect to geographic regions. Instruction will focus on impacts of the built environment on global resources. Tests, calculations and delineation of building systems will form the basis of instruction.</td>
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<tr>
<td>ARCH 3014</td>
<td>Construction Technology 1, 4.00 Credits</td>
<td>4.00</td>
<td>Lower</td>
<td>ARCH 2394 with C or better or CIAT 2394 with C or better</td>
<td>$106.00</td>
<td>This course builds on the construction topics begun in Construction Technology 1. The course is focused on construction techniques for commercial buildings. Topics covered include steel frame, reinforced concrete, pre-cast concrete and building envelope systems. Emphasis is placed on contemporary details and methods of construction. Student evaluations are based on Building Information Modeling (BIM) computer generated projects and periodic tests.</td>
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<tr>
<td>ARCH 3015</td>
<td>Municipal Codes &amp; Regulations, 3.00 Credits</td>
<td>3.00</td>
<td>Lower</td>
<td>MATH 1034 with D or better or CIAT 3014 with D or better</td>
<td>$106.00</td>
<td>An introduction to fundamental design, architectural design drawing and applied drawing techniques. Students are introduced in lecture to design and drawing principles, techniques and conventions used to develop and communicate architectural ideas. Lab assignments emphasize the relationship between drawing and three-dimensional form and space, and include exercises in basic design and model-making. Topics include principles of design and architectural theory, observational sketching, depicting light, texture and depth, analytical drawing, orthographic and paraline projection systems, and professional standards for layout, lettering, use of line weights, and dimensioning of architectural drawings.</td>
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<tr>
<td>ARCH 3016</td>
<td>Directed Study 1, 1.00 TO 4.00 Credits</td>
<td>1.00</td>
<td>Lower</td>
<td>Applied Learning Practicum</td>
<td>$106.00</td>
<td>A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.</td>
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<tr>
<td>ARCH 4014</td>
<td>Construction Technology 2, 4.00 Credits</td>
<td>4.00</td>
<td>Lower</td>
<td>ARCH 3014 with D or better</td>
<td>$106.00</td>
<td>This course is a multidisciplinary overview of redevelopment process. This course will be run as a seminar that will meet in a seminar and discussion format. Understanding of the course topics will equip students with the knowledge of community economic development and regeneration project development. It will impart valuable skills for staff and leadership in consulting firms, municipalities, agencies and non-profits that do community development and community regeneration.</td>
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ARCH - 6306 Design Studio 4, 6.00 Credits
Prerequisite(s): ARCH 5306 with C or better or CIAT 5306 with C or better
Level: Upper
Course Fee $159.00
This course focuses on developing the problem solving skills associated with the design of adaptive reuse and historic preservation building projects. Projects will involve the gathering of information about the historical evolution of the building, the documentation and analysis of the building's structural and material conditions, the understanding of the building's relationship to its wider physical and cultural environment and making appropriate design decisions in respect to new uses. Over the course of the semester, students will creatively synthesize their research, building and site with new program requirements into schematics and design development proposals. Sustainability, standards for documentation of as-built conditions, architectural styles, identifying architectural character, historic construction technology and materials will be addressed.

ARCH - 6406 Studio Sorrento, 6.00 Credits
Prerequisite(s): ARCH 5306 with C or better or CIAT 5306 with C or better
Level: Upper
Applied Learning-Creative Work
Studio Sorrento is intended solely for students enrolled in the Junior Year Study Abroad Program in Sorrento, Italy. The course will be structured around the experiences, field trips and other learning opportunities during the semester of study in Italy. Particular attention will focus on elements of traditional town design, sustainable building strategies, historic building analysis, and adaptive/ sustainable re-use of historic structures. Student work for the semester will include: the development of a journal of site visits and analyses, photographic and metric documentation, reflective writing, and small design projects within the Sorrento environment.

ARCH - 7003 Environmental Controls 2, 3.00 Credits
Prerequisite(s): ( ARCH 2123 with D or better or CIAT 2123 with D or better or ARCH 3303 with D or better ) and ( ARCH 3304 with D or better or CIAT 3304 with D or better or ARCH 4014 with D or better )
Level: Upper
This course reinforces advanced technical and design strategies to maximize sustainability in large building design, and their relationship to other building service systems. Emphasis will be placed on applications of photovoltaic, geothermal and wind systems in a sustainable environmental context. Qualitative and quantitative measures of building environments with a focus on efficient use of energy through integrated design practices will be employed. Other topics of discussion will include commercial building design practices related to MEP, acoustic, communication, vertical transportation, security, and fire protection systems. Case studies and projects will form the basis of instruction.

ARCH - 7005 Design Studio 5, 6.00 Credits
Prerequisite(s): ARCH 6306 with C or better or ARCH 6406 with C or better
Level: Upper
Course Fee $159.00
This course focuses on the design of buildings and places in an urban setting that require an intense concentration of support systems. The course exploration and study of architectural design technology and planning principles is designed to bridge the gap between architectural theory and practice through the design of structures and places for human use and inspiration. Students will be expected to progress through the schematic design and design development phases of short-term and extended design projects. Conventional medial and three-dimensional computer modeling will be used to define, analyze and present solutions to complex architectural problems. Assignments and in-class exercises related to design, theory, technology and criticism will also be used to reinforce topics discussed in class. Civic Engagement Intensive (CEI) sections exist.

ARCH - 8003 Professional Practice, 3.00 Credits
Prerequisite(s): ARCH 4014 with D or better
Level: Upper
The context within which buildings and spaces are created is rapidly evolving as is the way in which architecture and design is practiced. This advanced course is designed to provide the future practitioner with a comprehensive study of the business and practice of architecture and design. Emphasis will be placed on practical skills and usable information that will enhance the student's ability to function within the design professions and/or related disciplines.

ARCH - 8006 Design Studio 6, 6.00 Credits
Prerequisite(s): ARCH 7306 with C or better or CIAT 7306 with C or better
Level: Upper
Applied Learning-Creative Work, Course Fee $159.00
This course is the capstone of the six semester sequence of architectural design studios. Building upon the thesis research completed during the previous semester, students will finalize a design program for their chosen thesis project. They will carry out a comprehensive design development study, present their design solution to a jury of faculty and visiting professionals, and defend the decision making process that gave rise to their design. The student is expected to show competence and care in their technological solutions and in the creation of a livable, efficient, and contextually appropriate structure.

ARCH - 8716 Design Studio 7-Thesis Defntrn, 6.00 Credits
Prerequisite(s): ARCH 8306 with C or better
Level: Upper
Course Fee $159.00
This course will consist of lectures and associated projects intended to provide the student with a framework that will support and guide them through the beginning stage of their Bachelor of Architecture thesis project exploration. Emphasis will be placed on developing research and writing skills that will enhance the student's ability to define an acceptable thesis project, develop a program based on a given set of requirements, and select an appropriate project site. The student will complete the Schematic Design of the thesis project for review and approval by the department faculty.

ARCH - 8733 Modern Architectural Theory, 3.00 Credits
Prerequisite(s): FNAT 5303 with C or better and ( ARCH 8306 with B or better or CIAT 8306 with B or better )
Level: Upper
This seminar introduces the student to theories and criticisms of contemporary architecture from the beginnings of the Bauhaus to the issues of contemporary practice. The course is designed to be interactive and will consist of discussion, writing assignments, in class exercises and presentations. Students, singularly and in groups of two, will have the responsibility of initiating weekly discussion of the assigned readings. In class discourse includes discussion and analysis of the central arguments and conclusions of the theoretical constructs presented in the piece. Students will prepare a term paper from selected readings analyzing the author's position and prepare a response that either supports or opposes the stance. A brief oral presentation will accompany the term paper to engage classmates and invited guests in critical commentary.

ARCH - 8753 Advanced Structural Concepts, 3.00 Credits
Prerequisite(s): CIVL 5213 with C or better
Level: Upper
This course addresses advanced architectural structures, exterior building envelopes and production technologies. It explores structural elements and expands to include more complex determinant, indeterminate, long-span, thin shells and tensegrity systems. Materials covered are: reinforced concrete, steel and contemporary composites. Material performance and detailing of the exterior envelope are emphasized.

ARCH - 8776 Design Studio 8-Thesis Develop, 6.00 Credits
Prerequisite(s): ARCH 8716 with C or better
Level: Upper
Applied Learning-Creative Work, Course Fee $159.00
This course is the capstone of the eight semester sequence of architectural design studios. Building upon the thesis research completed during the previous semester in Design Studio 7 – Studio Definition, students will finalize a design program for their chosen thesis project. They will carry out a comprehensive design development study, present their design solution to a jury of faculty and visiting professionals, and defend the decision making process that gave rise to their design. The student is expected to show competence and care in their technological solutions and in the creation of a livable, efficient, and contextually appropriate structure.

ARCH - 8793 Professional Development, 3.00 Credits
Prerequisite(s): ARCH 8503 with C or better or CIAT 8003 with C or better
Level: Upper
This comprehensive course will enhance the student's exposure to the architect's professional role based on case studies of real-world experiences. It expands upon previously introduced architectural business practices such as marketing, responding to client requests for services, assembling project teams, working with the appropriate consultants, and delivering a project, all within financial constraints of both project and business management. The changing role of the architect in nontraditional practice types and project delivery methods will also be explored. Throughout the course, professional written, verbal and graphic communication skills will be emphasized in relation to their importance in the business setting.