Number & Title of Course (total credits awarded): ARC 101: Architecture Design I (6 credits)

Course Description (limit 25 words): An introduction to the study of architectural design as an intellectual and aesthetic discipline, this course is the first of a ten course sequence focusing on the development of architectural design skills.

Course Goals & Objectives (list):

- Students will acquire the ability to research, analyze, and understand architectural principles by the study of precedents
- Students will acquire the principles to guide the authorship of original compositions
- Students will develop architectural compositions imbued with meanings appropriate to the circumstances of each project

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A4 Architectural Design Skills (A)
- A6 Use of Precedents (A)

Topical Outline (include percentage of time in course spent in each subject area):

Knowledge of Ordering Systems and Design Thinking Skills (20%)
Typology (10%)
Architectural Precedents (20%)
Site Planning (20%)
Conceptualization and Composition of Architectural Form, Space, and Techniques (20%)
Site Visits (10%)

Prerequisites: None

Textbooks/Learning Resources:

- Alberti, Leoni Battista. *On the Art of Building in Ten Books.* Trans. Rykwert, Joseph. MIT Press, 1991. Print.
- Barragan, Luis. Acceptance Speech, Pritzker Prize, 1980.
- Scully, Vincent. *Architecture: The Natural and the Manmade.* St. Martin's Press, New York, 1991. Print.
- Scully, Vincent. *Between Two Towers: The Drawings of the School of Miami.* With Hernandez, J., Lynn C., and Victoria, T. The Monacelli Press, New York, 1996. Print.
- Scully, Vincent. *The Earth, the Temple, and the Gods; Greek Sacred Architecture.* New Haven: Yale, 1962. Print.

Offered (semester and year): Fall; Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Cristina Canton, Alice Cimring, Adib Cure, Jorge Hernandez, Teofilo Victoria
2015: Adib Cure, Jorge Hernandez, Oscar Machado, Jorge Trelles, Teofilo Victoria

Number & Title of Course (total credits awarded): ARC 102: Architecture Design II (6 credits)

Course Description (limit 25 words): Architectural response to shelter, space, and setting requirements. Programming, program analysis and design, anthropometrics, architecture psychology.

Course Goals & Objectives (list):

- Collaborate and cooperate by working as members of a design team
- Test theories and methods of inquiry
- Examine and comprehend the fundamental principles present in relevant precedents and make informed choices about the incorporation of such principles in architecture and urban design projects
- Endeavor to interpret and respond to natural and built site characteristics
- Raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards
- Develop a coherent rationale for the programmatic and formal precedents employed
- Prepare a comprehensive program for an architectural project
- Employ basic methods of data collection and analysis
- Address the diversity of needs, values, norms, abilities, and patterns
- Explore fundamentals of visual perception

Student Performance Criterion/a addressed (list number and title)

Primary:

- A2 Design Thinking Skills (A)
- A6 Use of Precedents (A)
- B1 Pre-Design (A)

Topical Outline (include percentage of time in course spent in each subject area):

Design, Drawing, and other representational techniques (60%)
Directed Research/Use of Precedents (20%)
Pre-design (20%)

Prerequisites: ARC 101, Co-requisite ARC 112 and ARC 122

Textbooks/Learning Resources: Refer to syllabus

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Frank Martinez, Cristina Canton, Alice Cimring, Cayetana de la Quadra-Salcedo, Oscar Machado
2015: Oscar Machado, Wyn Bradley, Alice Cimring, Jaime Correa

Number & Title of Course (total credits awarded): ARC 111: Drawing I (3 credits)

Course Description (limit 25 words): This course focused on the exploration and expression of ideas through increased awareness and acquisition of visual and graphic vocabulary, stressing orthographic, oblique and conical projections.

Course Goals & Objectives (list):

- Students will be provided with the tools to imagine and represent with precision, deftness, and virtuosity, architectural form
- Students will gain a general understanding of the subject of architectural drawing
- Students will understand figure and shape, as well as two-dimensional orthographic projections
- Students will be introduced to three-dimensional representations of architectural form by way of freehand sketching and parallel projections

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A5 Ordering Systems (A)

Secondary

- B4 Technical Documentation (A)

Topical Outline (include percentage of time in course spent in each subject area):

Project I (Drawing and Place) (20%)
Project II (Pacioli's Letter) (20%)
Project III (The Measured Drawing) (20%)
Project IV (Parallel Projections) (20%)
Sketching in-Situ (20%)

Prerequisites: Co-requisites: ARC 101, 121

Textbooks/Learning Resources:

- Morison, Stanley. Pacioli's Roman Classic Alphabet. New York: Dover Publications, 1994.
- References will also be distributed with individual assignments.

Offered (semester and year): Fall; Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Adib Cure (C), Victor Deupi, Steven Fett, Joachim Perez, Rafael Tapanes
2015: Adib Cure (C), Steven Fett, Joachim Perez, Rafael Tapanes

Number & Title of Course (total credits awarded): ARC 112: Drawing II (3 credits)

Course Description (limit 25 words): This course focuses on 3D representation, develops drawing and presentation skills (analogue and digital), and challenges the concept of 3D representation on 2D surfaces.

Course Goals & Objectives (list):

- To acquire graphic, artistic, and narrative communicative skills in regards to 3-D architectural representation.
- To employ a variety of analogue and digital drawing techniques, by engaging the student's artistic means, and by representing rational ideas and empirical experience in a concise manner.
- To celebrate, graphically, two important anniversaries: the 50th anniversary of Le Corbusier's passing and the 80th birthday of the introduction of Frank Lloyd Wright's Usonian Home in the landscape of America.

Student Performance Criterion/a addressed (list number and title)

Primary

- A5 Ordering Systems (A)

Secondary

- A1 Professional Communication Skills (A)

Topical Outline (include percentage of time in course spent in each subject area):

Drawing and other representational techniques (75%)
Communication Skills (15%)
Documentation Skills (10%)

Prerequisites: ARC111

Textbooks/Learning Resources: Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Jaime Correa (C), Oscar Machado, Edgar Sarli, Jorge Trelles, Germane Barnes
2015: Jaime Correa (C), Oscar Machado, Jorge Trelles, Victor Deupi

Number & Title of Course (total credits awarded): ARC121: Architecture and Culture (1 credit)

Course Description (limit 25 words): Introduction to architecture as a humanist discipline and its place in cultural history. Topics include education of the architect, architecture as civic art, and composition.

Course Goals & Objectives (list):

- Students will acquire knowledge of the relationship between architecture and culture
- Students will acquire knowledge of architecture in a global context
- Students will acquire knowledge of Global Cultural diversity and the social impact on societies
- Students will acquire knowledge of building placement, site design, urbanism and planning
- Architecture research; Use of Precedent
- Students will acquire knowledge of constructive and stylistic typological concerns

Student Performance Criterion/a addressed (list number and title)

Primary

- A7 History and Global Culture (U)
- A8 Cultural Diversity & Social Equity (U)

Topical Outline (include percentage of time in course spent in each subject area):

Architecture and Culture (20%)
Architecture as a Humanist Discipline (20%)
The Education of the Architect (20%)
Architecture as Civic Art and the Construction of the City (20%)
Culture, Composition and Style in Architecture (20%)

Prerequisites: None

Textbooks/Learning Resources: Architecture and Culture; Reader 2016

Offered (semester and year): Fall; Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Teofilo Victoria
2015: Teofilo Victoria

Number & Title of Course (total credits awarded): ARC 122: Architecture Theory II (1 credit)

Course Description (limit 25 words): Understanding the relationship between human needs, behavior, cultural diversity, social equity, and professional judgment and responsibility in design.

Course Goals & Objectives (list):

- Explore theories on the basic principles of human spatial behavior and motivation
- Understand the reasons for individual and cultural differences in human spatial behavior while comprehending people, place, and context
- Understand basic design principles for health, welfare and place making in the built environment and for the practice of architecture, including advocacy, and the need to act legally, ethically, and critically for the good of the client, society, and the public.
- Understand the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures
- Understand the ethical issues involved in the exercise of professional judgment in architectural design and practice
- Understand the role of the NCARB Rules of Conduct and the AIA
- Recognize the disparate needs of client, community, and society.
- Explore and Understand the application of the basic principles in the design of urban space: plazas, streets, greens and parks of various scales, campuses, and outdoor spaces

Student Performance Criterion/a addressed (list number and title)

Primary:

- A8: Cultural Diversity and Social Equity (U)

Secondary:

- D5: Professional Conduct (U)

Topical Outline (include percentage of time in course spent in each subject area):

Basic Principles (30%)
Design Praxis (20%)
Architecture (20%)
Urban Design (20%)
Tests (10%)

Prerequisites: ARC 121. Co-requisite: ARC 102 (Architecture Majors only)

Textbooks/Learning Resources: Refer to syllabus

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Frank Martinez
2015: Frank Martinez

Number & Title of Course (total credits awarded): ARC 203: Architecture Design III (3 credits)

Course Description (limit 25 words): Introductory urban design studio course stressing importance of design on issues of urban sustainability, resilience, adaptation, and the impact of climate change and sea-level rise on our communities.

Course Goals & Objectives (list):

- Students will be introduced to scientific facts regarding climate change and sea-level-rise.
- Students will familiarize themselves with current resilience best practices.
- Students will create a repository of endangered natural elements.
- Students will develop a repertoire of urban elements based on paradigmatic cultural precedents of American architecture and urbanism.
- Students will understand the relationship between cities and architecture.
- Students will witness and share experiences with stakeholders at some of the best New Urban communities in the State of Florida.
- Students will analyze a particular threatened area of Miami-Dade.
- Students will acquire fundamental urban design skills.
- Students will develop further their housing design skills.
- Students will test their verbal presentation techniques and visual communication skills.

Student Performance Criterion/a addressed (list number and title)

Primary

- A3 Investigative Design Skills (A)
- A6 Use of Precedents (A)
- B2 Site Design (A)
- D1 Stakeholder Roles in Architecture (U)

Topical Outline (include percentage of time in course spent in each subject area):

Documentation (10%)
Study of Precedents (10%)
Visits to Paradigmatic Sites (5%)
Site Master Planning (30%)
Preliminary Architecture Design (30%)
Presentation (5%)

Prerequisites: ARC 102

Textbooks/Learning Resources: Suggested readings found in syllabus.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Jaime Correa, Oscar Machado, Rick Lopez, Steve Fett, Jorge Trelles
2015: Oscar Machado

Number & Title of Course (total credits awarded): ARC 204: Architecture Design IV (6 credits)

Course Description (limit 25 words): Studio engages in two projects exploring three materials: wood, concrete and steel. The projects are designed to introduce thinking about design through construction and structure.

Course Goals & Objectives (list):

- Prepare for upper level studios and electives that are self-guided.
- Introduce materials and methods of construction in design.
- Develop sensitivity to form, texture of materials and techniques of construction.

Student Performance Criterion/a addressed (list number and title)

Primary

- A2 Design Thinking Skills (A)
- A4 Architectural Design skills (A)
- B8 Building Materials & assemblies (U)

Secondary

- B5 Structural Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Refer to syllabus.

Prerequisites: ARC 101, ARC 102, ARC 203.

Textbooks/Learning Resources: Refer to syllabus.

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Adib Cure, Richard John, Veruska Vasconez, Rocco Ceo

2015: Germane Barnes, Cristina Canton, Sonia Chao, Richard john, Joachim Perez

Number & Title of Course (total credits awarded): ARC 213: Drawing III (3 credits)

Course Description (limit 25 words): This course focuses on composition, color, and the ability to develop these ideas in both two and three-dimensional representations/models.

Course Goals & Objectives (list):

- Students will acquire fundamental visual communication skills
- Students will acquire a means to think by way of drawing
- Students will acquire architectural knowledge
- Students will gain the ability to gather, assess, record and comparatively evaluate relevant information to support conclusions related to a specific project
- Students will gain the ability to apply the fundamental of both natural and formal ordering systems and the capacity of each to inform two and three dimensional drawing and design

Student Performance Criterion/a addressed (list number and title)

Primary

- A5 Ordering Systems (A)

Secondary

- A6 Use of Precedents (A)

Topical Outline (include percentage of time in course spent in each subject area):

Design, Drawing, and other representational techniques (60%)
Presentation Skills (20%)
Analytical Skills (20%)

Prerequisites: None

Textbooks/Learning Resources: Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Carie Penabad (C), Germane Barnes, Tim Kelly, Edgar Sarli, Raphael Tapanes
2015: Carie Penabad (C), Germane Barnes, Joachim Perez, Edgar Sarli

Number & Title of Course (total credits awarded): ARC 223 Architecture & the Environment (1 credits)

Course Description (limit 25 words): Architectural response to natural environmental requirements. Focus on climate control, natural energy use, ecosystems, energy flow, environmental intervention, case studies of indigenous buildings.

Course Goals & Objectives (list):

- Introductions, through lecture and workshop applications, of topics that engage the principles of site and resilience with particular attention to soil, topography, ecology, climate, and building orientation.
- The manner in which a detailed understanding of these issues are evidenced in historic urban context, developmental patterning, and building fabric.
- Utilized in the development of resilient design thinking for the future.

Student Performance Criterion/a addressed (list number and title)

Primary

- B2 Site Design (A)
- B6 Environmental Systems (A)
- D5 Professional Conduct (U)

Topical Outline (include percentage of time in course spent in each subject area):

Design, drawing, and other representational techniques (60%)
Presentation Skills (20%)
Analytical Skills (20%)

Prerequisites: ARC 203 (co-requisite), cognate, or permission of instructor

Textbooks/Learning Resources: Readings, videos, and websites can be referred to on the course syllabus.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector
2015: Denis Hector

Number & Title of Course (total credits awarded): ARC 230_630 Building Technology: Materials and Methods (3 credits)

Course Description (limit 25 words): This course studies material characteristics of enclosure and structural systems, case studies in traditional and modern building construction.

Course Goals & Objectives (list):

- To develop an understanding of the essential characteristics of building materials and their places in the various systems of construction.
- To construct a working knowledge of the various references used in the course for application of standards, conventions, tradition, and invention in building design projects.
- Result in the general introduction of building materials and systems and awaken an appreciation for the particular opportunities presented by materials, building systems, and the culture of building in our endeavors as Architects and Engineers.

Student Performance Criterion/a addressed (list number and title)

Primary

- B4 Technical Documentation (A)
- B7 Building Envelope Systems and Assemblies (A)
- B8 Building Materials and Assemblies (A)

Secondary

- B10 Financial Considerations (U)

Topical Outline (include percentage of time in course spent in each subject area):

Sketchbook (15%)
Quizzes (45%)
Term Project (30%)
Class Participation (10%)

Prerequisites: None

Textbooks/Learning Resources: Edward Allen, *Fundamentals of Building Construction: Materials and Methods,* 6th Edition. New Jersey: John Wiley & Sons, 2014.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Edgar Sarli
2015: John Onyango

Number & Title of Course (total credits awarded): ARC 231 631: Building Technology II Structural Systems (3 credits)

Course Description (limit 25 words): Structural systems: the tectonics, patterns and behavior of the elements of building structures. Topics: Equilibrium, stability, vertical and lateral loads, building envelope and financial considerations.

Course Goals & Objectives (list):

- Students will learn the fundamentals of Statics and Strength of Materials.
- Students will learn principles of structural analysis.
- Students will learn to identify loads as applied to buildings and structures.
- Students will learn the fundamentals of elastic analysis applied to determinant structural elements and configurations.
- Students will explore patterns of structure and form through physical modeling and finite element software.
- Students will explore the financial considerations in selection andoptimization of a structural system

Student Performance Criterion/a addressed (list number and title)

Primary

- B3. Codes and Regulations (A)
- B4. Technical Documentation (A)
- B5. Structural Systems (A)

Secondary

- B10. Financial Considerations (U)

Topical Outline (include percentage of time in course spent in each subject area):

Regular Weekly Problem Assignments (Individual) (20%)
In-Class Participation with iClicker (Individual) (15%)
In-class Exercises (Individual) (15%)
Semester Projects (Group) (25%)
Final Examination (Individual) (25%)

Prerequisites: Physics 103 or an equivalent that includes Newtonian mechanics.

Textbooks/Learning Resources: Schodek, D & Bechthold, M. ***Structures*** 7e. (Pearson/ Prentice Hall 2014) (Required)
Ching, F. D. K., Onouye, B. and Zuberbuhler, D. ***Building Structures Illustrated*** (Wiley. 2009) (Recommended)

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector
2015: Denis Hector

Number & Title of Course (total credits awarded): CAE 213: Structural Systems II (3 credits)

Course Description (limit 25 words): Review of basic structural principles, analysis and design of simple axial loaded structural systems and members. Project based learning used to introduce statics with graphical and mathematical methods.

Course Goals & Objectives (list):

- Students will be able to define concurrent and non-concurrent structural systems.
- Students will apply code requirements for structural systems.
- Students will acquire knowledge of different structural systems including suspension structures, concrete shells, trusses, fanlike structures and membrane structures.
- Students will be asked to produce assignments that show ability to analyze structures both graphically and mathematically.
- Students will be asked to produce assignments with both technical detailing of a connection and a model of fabric structural system.

Student Performance Criterion/a addressed (list number and title)

Primary

- B4 Technical Documentation (A)
- B5 Structural Systems (A)

Secondary

- B3 Code and Regulations (A)

Topical Outline (include percentage of time in course spent in each subject area):

Exams (80%)
Homework and Participation (20%)

Prerequisites: ARC 231

Textbooks/Learning Resources: Forms and Forces, Edward Allen and Waclaw Zalewski, John Wiley & Sons, 2009.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Matthew Trussoni
2015: Matthew Trussoni

Number & Title of Course (total credits awarded): ARC 267 History of Architecture I (3 credits)

Course Description (limit 25 words): This survey covers the history of architecture from antiquity to the Baroque, primarily focusing on Europe and the Middle East.

Course Goals & Objectives (list):

- An understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.
- An understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals.
- Development of specific cognitive abilities relating to visual memory.
- A knowledge of the tools and methods of historical inquiry and critical analysis – including the gathering, assessment and evaluation of information – with regard to the built environment.
- An ability in both written and oral communication skills.

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A7 History and Global Culture (A)
- A8 Cultural Diversity and Social Equity (U)

Secondary

- A3 Investigative Skills (A)

Topical Outline (include percentage of time in course spent in each subject area):

Ancient Egypt, Bronze Age Mediterranean, and Greece (30%)
Etruscan, Roman, Early Christian, Islamic, Carolingian, and Romanesque (35%)
Gothic, Renaissance, and Early Baroque (35%)

Prerequisites: None

Textbooks/Learning Resources: David Watkin, *A History of Western Architecture*, 6th Edition, London 2015.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Richard John
2015: Richard John

Number & Title of Course (total credits awarded): ARC 268 History of Architecture II (3 credits)

Course Description (limit 25 words): ARC 268 introduces students to the history of architecture globally and across a variety of cultures with a particular focus on 1650 to the present.

Course Goals & Objectives (list):

- Students will gain an understanding of the architecture of global and traditional cultures
- Students will develop skills in the visual analysis of architecture
- Students will develop critical thinking and writing skills

Student Performance Criterion/a addressed (list number and title)

Primary

- A3 Investigative Skills (A)
- A7 History and Global Culture (A)

Secondary

- A1 Professional Communication Skills (A)
- A6 Use of Precedents (A)

Topical Outline (include percentage of time in course spent in each subject area): Refer to syllabus.

Prerequisites: ARC 276 or permission of instructor

Textbooks/Learning Resources: Marian Moffett, Michael Fazio, and Lawrence Wodehouse. Buildings Across Time: An Introduction to World Architecture. 4th edition. Boston: McGraw-Hill, 2008. ISBN-10: 007305304x

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Katherine Wheeler

2015: Katherine Wheeler

Number & Title of Course (total credits awarded): ARC 305: Architecture Design V (6 credits)

Course Description (limit 25 words): This course explores precedent research, programming, site documentation, analysis, and code review as components of a semester-long design effort of a project type in Miami.

Course Goals & Objectives (list):

- Students will acquire fundamental pre-design skills including precedent analysis, architecture programming and site analysis.
- Students will acquire knowledge and analytical skills of the fundamentals of zoning and building codes.
- Students will be asked to produce fully functional social housing project, addressing issues of building structure, building service systems and building skin, environmental adaptation and community building.
- Students will be challenged to develop projects that are sustainable, accessible, and code compliant with regard to life safety.
- Students will explore a range of visual and oral communication tools at every stage of the project.

Student Performance Criterion/a addressed (list number and title)

Primary

- B1 Pre-Design (A)
- C1 Research (U)
- C2 Integrated Evaluation & Decision-Making Design Process (A)

Secondary

- C3 Integrative Design (A)

Topical Outline (include percentage of time in course spent in each subject area):

Pre-Design 30%
Conceptual & Schematic Design 15%
Design Development 40%
Presentation 15%

Prerequisites: None

Textbooks/Learning Resources: Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Roberto Behar (C), Juan Calvo, Germane Barnes, Veruska Vasconez
2015: Jose Gelavert-Navia (C), Roberto Behar, Jacob Brillhart, Victor Deupi, Juan Mullerat

Number & Title of Course (total credits awarded): ARC 306 Integrated Design Studio (6 credits)

Course Description (limit 25 words): Students will understand that architecture in its physical manifestation is a result of an integrative process, given meaning by the intent of the Architect.

Course Goals & Objectives (list):

- Synthesize a wide range of variables into an integrated design solution
- Comprehend the importance of research pursuits to inform the design process
- Use creative and critical thinking skills to generate and evaluate design options across the different systems and scales in their project evaluate
- Synthesize variables from diverse and complex systems into an integrated architectural solution
- Responding to environmental stewardship goals across multiple systems for an integrated solution

Student Performance Criterion/a addressed (list number and title)

Primary

- C1 Research
- C2 Integrated Evaluations and Decision Making Process
- C3 Integrative Design

Secondary

- B3 Codes and Regulations

Topical Outline (include percentage of time in course spent in each subject area): Refer to syllabus

Prerequisites: ARC101, ARC102, ARC203, ARC204, ARC305

Textbooks/Learning Resources: Refer to syllabus

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Armando Montero, Steven Fett, Adam Krantz, Edgar Sarli, David Trautman

2015: Armando Montero, Jaya Kader, Adam Krantz, Edgar Sarli, David Trautman, Jorge Trelles

Number & Title of Course (total credits awarded): ARC 362 662 Environmental Building Systems I (3 credits)

Course Description (limit 25 words): This course in an introduction to sustainable design through building systems such as building envelopes, thermal properties, air conditioning systems, and life safety.

Course Goals & Objectives (list):

- Ability to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment, including active and passive heating and cooling, solar geometry, natural ventilation, and indoor air quality.
- Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to the fundamental performance, aesthetics, moisture transfer, durability, and energy performance.
- Understanding of the basic principles and appropriate application and performance of building service systems, including mechanical, plumbing, and fire protection systems.
- Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific assignment.
- Ability to design buildings and systems that are responsive to relevant codes and regulations, and include the principles of life-safety standards.

Student Performance Criterion/a addressed (list number and title)

Primary

- B6 Environmental Systems (A)
- B7 Building Envelope Systems and Assemblies (U)
- B9 Building Service Systems (U)

Topical Outline (include percentage of time in course spent in each subject area):

Written Examinations (50%)
Homework (10%)
Quizzes (15%)
Project (20%)
Class Participation & Attendance (5%)

Prerequisites: None

Textbooks/Learning Resources: W.T. Grondzik, A.G. Kwok, B. Stein, J.S. Reynolds, *Mechanical and Electrical Equipment for Buildings*, 11th Edition, 2000, Hoboken: John Wiley & Sons
N. Lechner, *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*, 4th Edition, 2008, John Wiley & Sons

Offered (semester and year): Fall and Summer, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Esber Andiroglu
2015: John Onyango

Number & Title of Course (total credits awarded): ARC 363: Environmental Building Systems II (3 credits)

Course Description (limit 25 words): This course explores the principles and applications of light and acoustics. Topics include light-planning for sunlight, interior and exterior illumination, and sound- properties.

Course Goals & Objectives (list):

- Students will acquire fundamental lighting and acoustics design skills
- Students will acquire knowledge of the fundamental elements of lighting and acoustic systems
- Students will be asked to produce fully functional lighting and acoustics design and their performance simulation and evaluation documents
- Students will be introduced to a variety of lighting and acoustics principles and will be encouraged to develop an awareness of their environmental impact

Student Performance Criterion/a addressed (list number and title)

Primary

- B6 Environmental Systems (A)
- B9 Building Service Systems (U)

Secondary

- B7 Building Envelope Systems and Assemblies (U)
- B8 Building Materials and Assemblies (U)

Topical Outline (include percentage of time in course spent in each subject area):

Lighting Fundamentals (20%)
Daylight Design (20%)
Electric Lighting Design (20%)
Acoustic Fundamentals (20%)
Acoustic System Design (20%)

Prerequisites: None

Textbooks/Learning Resources: There is no required textbooks for the semester. Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Juhong Park
2015: Juhong Park

Number & Title of Course (total credits awarded): CAE 313 Structural Systems II (3 credits)

Course Description (limit 25 words):
The students will learn application of fundamental methods of structural systems, the bending action of beams, and geotechnical conditions and foundation systems.

Course Goals & Objectives (list):

- Students will acquire knowledge regarding gravity and lateral loads on structural systems
- Students will apply code requirements for structural systems
- Students will acquire knowledge of different structural materials and systems (Steel, Wood, Concrete, and Masonry)
- Students will be asked to produce assignments that show ability to calculate loads, forces, and stresses within structural systems
- Students will be introduced to the detailing of structural connections

Student Performance Criterion/a addressed (list number and title)

Primary

- B3 Codes and Regulations (A)
- B5 Structural Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Exams (80%)
Homework and Participation (20%)

Prerequisites: CAE 213

Textbooks/Learning Resources: Forms and Forces, Edward Allen and Waclaw Salewski, John Wiley & Sons 2009

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Matthew Trussoni
2015: Matthew Trussoni

Number & Title of Course (total credits awarded): ARC 452 Management of Professional Practice (3 credits)

Course Description (limit 25 words): This course helps students develop an understanding of concepts related to entering the profession, the ethical practice of architecture, and delivery of architectural services.

Course Goals & Objectives (list):

- Understand the history of the profession and reason(s) for regulation.
- Know the requirements for initial and continued licensure.
- Understand the basics of professional and ethical conduct.
- Learn the fundamentals of architectural practice management skills.
- Understand the delivery of architectural services.
- Be aware of the role of codes, regulations, and other legal considerations in practice.
- Understand contracts, management of projects, and the administration of construction contracts.

Student Performance Criterion/a addressed (list number and title)

Primary

- B10 Financial Considerations (U)
- D2 Project Management (U)
- D3 Business Practices (U)
- D4 Legal Responsibilities (U)
- D5 Professional Conduct (U)

Secondary

- B4 Technical Documentation (A)
- D1 Stakeholder Roles in Architecture (U)

Topical Outline (include percentage of time in course spent in each subject area):

Lecture and Engaged Discussion (70%)
Analytical Skills (20%)
Presentation Skills (10%)

Prerequisites: ARC 306, graduate standing, or permission of the instructor.

Textbooks/Learning Resources: *The Architecture Student's Handbook of Professional Practice*. American Institute of Architects, Washington D.C., 20002; John Wiley & Sons, 2009, 14th edition

Offered (semester and year): Fall and Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Miguel Rodriguez
2015: Miguel Rodriguez

Number & Title of Course (total credits awarded): ARC 517 617 Construction Documents (3 credits)

Course Description (limit 25 words): This course is designed to help students, typically towards the end of their undergraduate or graduate architectural educations, develop skills in architectural detailing, composition, building and zoning code comprehension, and the role of drawing in the profession of architecture.

Course Goals & Objectives (list):

- Students will acquire knowledge in the regulatory documents (codes) that architects use.
- Students will develop an understanding what constitutes a set of construction documents.
- Students will research and study precedent examples.
- Students will be asked to produce a partial set of construction documents, focusing on a variety of topics, including, plans, sections, elevations, wall sections, details, and schedules.

Student Performance Criterion/a addressed (list number and title)

Primary

- B10 Financial Considerations (U)
- D1 Stakeholder Roles in Architecture (U)
- D2 Project Management (U)
- D3 Business Practice (U)
- D4 Legal Responsibilities (U)

Secondary

- D5 Professional Conduct (U)

Topical Outline (include percentage of time in course spent in each subject area):

Regulatory Documents (20%)
Architectural Contract Documents (10%)
Data Collection and Research Tactics (10%)
Construction Document Set Assembly and Notation (30%)
Architectural Detailing (30%)

Prerequisites: None

Textbooks/Learning Resources: Readings are assigned throughout to enhance the course. Lectures and Site Visits also supplement the course content.

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Steven Fett
2015: Steven Fett

Number & Title of Course (total credits awarded): ARC 584 RED 670 Construction Management (3 credits)

Course Description (limit 25 words): Investigation of significant architectural issues and study of construction project management, estimating, scheduling, and control.

Course Goals & Objectives (list):

- Introduce students to the complexities of managing construction projects.
- Students will become familiar with the techniques of cost and time estimating, management of resources in executing a project, and value engineering.
- By understanding the dynamics of Construction Management, students will have the tools necessary to make informed decisions that impact the success of a project.

Student Performance Criterion/a addressed (list number and title)

Primary

- D1 Stakeholder Roles in Architecture (U)
- B10 Financial Considerations (U)
- D2 Project Management (U)
- D3 Business Practices (U)
- D4 Legal Responsibilities (U)

Secondary

- D5 Professional Conduct (U)

Topical Outline (include percentage of time in course spent in each subject area):

Homework (15%)
Exam (40%)
Project (45%)

Prerequisites: None

Textbooks/Learning Resources: McCarthy, JF, *Construction Project Management, A Managerial Approach*, Pareto Publishing, Westchester, Illinois, 60154

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Victor Santana
2015: Victor Santana

Number & Title of Course (total credits awarded): ARC 604 Architecture Design and Theory I (6 credits)

Course Description (limit 25 words): An introduction to architectural design using research, analysis, and precedent as a means of developing a meaningful design process that creates evocative spatial experiences through architecture.

Course Goals & Objectives (list):

- Students will research through Drawing Natural Specimens.
- Students will draw the site in plan and organize all design elements.
- Students will develop an understanding of building materials and elemental structural logic through built examples.
- Students will draw, digitally model, and study wood joints and structural systems for both the bridge and the pavilion design.

Student Performance Criterion/a addressed (list number and title)

Primary

- A5 Ordering Systems (A)
- B2 Site Design (A)
- B8 Building Materials and Assemblies (U)

Secondary

- A1 Professional Communication Skills (A)
- C1 Research (U)

Topical Outline (include percentage of time in course spent in each subject area):

Design, Drawing, Representational Techniques (50%)
Presentation Skills (5%)
Analytical Skills (20%)
Research (25%)

Prerequisites: None

Textbooks/Learning Resources: There is no required textbook for the semester. Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Fall, annually.

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Jacob Brillhart
2015: Edgar Sarli

Number & Title of Course (total credits awarded): ARC 605 Architectural Design Studio II (6 credits)

Course Description (limit 25 words): Studio explores skills in design, composition, and architecture theory and precedent. It serves as an introduction to programming, zoning and codes, and building placement and siting.

Course Goals & Objectives (list):

- Ability to gather, assess, record, and comparatively evaluate relevant information in order to support conclusions related to the specific project or assignment
- Ability to effectively use basic formal, organization and environmental principles and the capacity of each to inform two- and three- dimensional design
- Ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into a project
- Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors
- Ability to respond to site characteristics, including urban context and developmental patterning, historic fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design

Student Performance Criterion/a addressed (list number and title)

Primary

- A4 Architectural Design Thinking Skills (A)
- A6 Use of Precedents (A)
- B2 Site Design (A)

Secondary

- B3 Codes and Regulations (A)
- B7 Building Envelope Systems and Assemblies (U)
- B9 Building Service Systems (U)
- C2 Integrated Evaluation and Decision-Making Design Process (A)

Topical Outline (include percentage of time in course spent in each subject area):

Attendance and Participation (20%)
Project I: Collective Project (20%)
Project II: Individual Project (30%)
Project I & II: Individual Presentation (30%)

Prerequisites: ARC 604

Textbooks/Learning Resources: Refer to course syllabus

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Teofilo Victoria
2015: Teofilo Victoria

Number & Title of Course (total credits awarded): ARC 606 Architectural Design and Theory III (6 credits)

Course Description (limit 25 words): This studio's architectural design project responds to the cities context, topography, and site requirements.

Course Goals & Objectives (list):

- Students write and develop the building program.
- Students acquire knowledge of site conventions along with the skills and tools to document, analyze, and design a building site and the building itself.
- In addition to familiarity with the key issues of topography, climate, and built context, students develop an awareness of structural systems and building envelope systems.
- Research and the use of precedent.
- Presentation methods include various forms of drawing, model-making, and public demeanor/presentation.

Student Performance Criterion/a addressed (list number and title)

Primary

- A4 Architectural Design skills (A)
- B1 Pre Design (A)
- B5 Structural Systems (A)

Secondary

- B6 Environmental Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Precedent Research (30%)
Design Development (70%)

Prerequisites: ARC 605

Textbooks/Learning Resources: There are no required readings for this course. A list of suggested texts can be found in the course syllabus.

Offered (semester and year): Summer, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector
2015: Denis Hector

Number & Title of Course (total credits awarded): ARC 611: Media I

Course Description (limit 25 words): The first in a two semester sequence of required core courses that introduces students to different architectural media and methods of representation.

Course Goals & Objectives (list):

- Students will acquire fundamental skills in digital software, including but not limited to Rhino, Adobe Illustrator, AutoCad, and other analog means of representation such model making and drafting.
- Students will acquire knowledge of the fundamental elements of using new digital fabrication tools such as laser cutters and 3D printers.
- Students will be asked to solve four design problems using through means of design thinking and using the various tools learned in the course.
- Students will be introduced to basic types of representation and layout techniques allowing them to communicate visually and effectively defend their design solutions.
- Students will further develop their verbal presentation in addition to their visual presentations.
- Students will engage in all design problems in an analytical and critical manner.

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A2 Design Thinking Skills (A)
- A5 Ordering Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Refer to syllabus.

Prerequisites: N/A

Textbooks/Learning Resources: Refer to syllabus. Suggested reading list is in the syllabus

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Joachim Perez

2015: Joachim Perez

Number & Title of Course (total credits awarded): ARC 613 Computing and Media II (3 credits)

Course Description (limit 25 words): Representation of built environment through lenses of Digital Media and Visual Communication skills. Applying principles of 3D Computer Modeling and Advanced Visualization techniques and tools.

Course Goals & Objectives (list):

- Students will develop a set of architectural drawings using the latest digital software while complimenting established methods of drawing such as freehand and mechanical drafting
- Students will utilize new tools and media instruments to visualize architecture with digital modeling and advanced rendering techniques
- Students will be exposed to topics which include principles of composition, perspective renderings, materials and methods of construction explored in the creation of 3D Digital Models
- Students will be introduced to other digital tools used including digital fabrication techniques and topics
- Students will be asked to include a production of a physical model using digital fabrication machines

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)

Topical Outline (include percentage of time in course spent in each subject area):

Research Component (25%)
Class Participation & Attendance (10%)
Growth Factor (15%)
Final Outcome (50%)

Prerequisites: ARC 612

Textbooks/Learning Resources: Refer to course syllabus

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Rafael Tapanes
2015: Rafael Tapanes and Steven Brooke

Number & Title of Course (total credits awarded): ARC 667 History of Architecture I (3 credits)

Course Description (limit 25 words): This survey covers the history of architecture from antiquity to the Baroque, primarily focusing on Europe and the Middle East.

Course Goals & Objectives (list):

- An understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.
- An understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals.
- Development of specific cognitive abilities relating to visual memory.
- A knowledge of the tools and methods of historical inquiry and critical analysis – including the gathering, assessment and evaluation of information – with regard to the built environment.
- An ability in both written and oral communication skills.

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A7 History and Global Culture (A)
- A8 Cultural Diversity and Social Equity (U)

Secondary

- A3 Investigative Skills (A)

Topical Outline (include percentage of time in course spent in each subject area):

Ancient Egypt, Bronze Age Mediterranean, and Greece (30%)
Etruscan, Roman, Early Christian, Islamic, Carolingian, and Romanesque (35%)
Gothic, Renaissance, and Early Baroque (35%)

Prerequisites: None

Textbooks/Learning Resources: David Watkin, *A History of Western Architecture*, 6th Edition, London 2015.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Richard John
2015: Richard John

Number & Title of Course (total credits awarded): ARC 668 History of Architecture II (3 credits)

Course Description (limit 25 words): Introduces students to the history of architecture globally and across various cultures with a focus on architecture and culture from 1650 to the present.

Course Goals & Objectives (list):

- Students will gain an understanding of the architecture of global and traditional cultures
- Students will develop skills in the visual analysis of architecture
- Students will develop critical thinking and writing skills

Student Performance Criterion/a addressed (list number and title)

Primary

- A3 Investigative Skills (A)
- A7 History and Global Culture (A)

Secondary

- A1 Professional Communication Skills (A)
- A6 Use of Precedents (A)

Topical Outline (include percentage of time in course spent in each subject area):

Critical Thinking (25%)
Writing (30%)
Reading (10%)
Lecture (25%)

Prerequisites: ARC 276 or permission of instructor

Textbooks/Learning Resources: Marian Moffett, Michael Fazio, and Lawrence Wodehouse. Buildings Across Time: An Introduction to World Architecture. 4th edition. Boston: McGraw-Hill, 2008. ISBN-10: 007305304x

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Katherine Wheeler
2015: Katherine Wheeler

Number & Title of Course (total credits awarded): ARC 662: Environmental Building Systems I (3 credits)

Course Description (limit 25 words): Introduction to Sustainable Design, understanding building envelope thermal properties and energy use, modes of heat transfer, moist air properties, psychometrics, and more building systems.

Course Goals & Objectives (list):

- Ability to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment, including active and passive heating and cooling, solar geometry, natural ventilation and indoor air quality.
- Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to the fundamental performance, aesthetics, moisture transfer, durability, and energy performance.
- Understanding of the basic principles and appropriate application and performance of building service systems, including mechanical, plumbing, and fire protection systems.
- Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific assignment.
- Ability to design buildings and systems that are responsive to relevant codes and regulations, and include the principles of life-safety standards.

Student Performance Criterion/a addressed (list number and title)

Primary

- B6 Environmental Systems (A)
- B7 Building Envelope Systems and Assembles (U)
- B9 Building Service Systems (U)

Secondary

- B4 Technical Documentation (A)

Topical Outline (include percentage of time in course spent in each subject area):

Theoretical Concepts and Investigation (40%)
Analytical Skills and Computations (30%)
Practical Applications and Design (30%)

Prerequisites: None

Textbooks/Learning Resources: Grondzik, W. T.; Kwok A. G.; Stein B. & Reynolds J. S. 200. Mechanical and Electrical Equipment for Buildings, 11th Edition, Hoboken; John Wiley & Sons Inc.
Lechner, N. 2008. Heating, Cooling, Lighting: Sustainable Design Methods for Architects, 4th Edition, John Wiley & Sons Inc.
International Plumbing Code, 2009. Florida Building Code: ASHRAE Handbook Fundamentals, 1985/1997/2009, Indoor Air Quality-ASHRAE 62, 2001: NEPA 13, 72, 96, & 101.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Esber Andiroglu
2015: John Onyango

Number & Title of Course (total credits awarded): ARC 632 Building Structural Systems I (3 credits

Course Description (limit 25 words): This course begins with a review of basic structural principles, followed by analysis and design of structural systems and members.

Course Goals & Objectives (list):

- Students are introduced to the principles of statics using both graphical and calculated methods.
- Concurrent and non-concurrent systems are defined and analysis of concurrent systems is covered.
- Structural systems based on concurrent forces are covered including cable suspension structures, concrete shells, trusses, fanlike structures, and membrane structures.
- Building code regulations are understood from lectures.
- Discussion of structural materials and failure modes accompanies a visit to the Civil/Architectural Engineering Laboratory.

Student Performance Criterion/a addressed (list number and title)

Primary

- B5 Structural Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Midterm Exams (40%)
Final Exam (40%)
Assignments and Participation (20%)

Prerequisites: ARC 631, graduate standing

Textbooks/Learning Resources: Edward Allen and Waclaw Zalewski, *Forms and Forces*, John Wiley & Sons 2009.

Offered (semester and year): Summer, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector and Matthew Trussoni
2015: Denis Hector

Number & Title of Course (total credits awarded): ARC 607 Integrated Design Studio (6 credits)

Course Description (limit 25 words): Architectural design studio focused on the total integration of all major building systems while simultaneously addressing, social, and environmental issues within a complex architectural project.

Course Goals & Objectives (list):

- Students will use different research methodologies to inform the design problem
- Students will use creative and critical thinking skills to generate and evaluate design options across the different systems and scales in their project
- Students will synthesize variables from diverse and complex systems into an integrated design solution
- Respond to environmental stewardship goals across multiple systems for an integrated solution
- Synthesize a wide range of variables into an integrated design solution

Student Performance Criterion/a addressed (list number and title)

Primary

- B3 Codes & Regulations
- C1 Research
- C2 Integrated Evaluations and Decision-Making Process
- C3 Integrative Design

Secondary

- A3: Investigative Skills
- A4: Architectural Design Skills
- B4: Technical Documentation
- B8: Building Materials & Assemblies

Topical Outline (include percentage of time in course spent in each subject area):

Part 1 Design Research and Concept Development (15%)
Part 2 Schematic Design (15%)
Part 3 Design Development (40%)
Part 4 Technical Synthesis (30%)

Prerequisites: ARC 606, 632, 662

Textbooks/Learning Resources: Readings and references are assigned throughout to enhance the course content and studio projects

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Armando Montero, David Trautman
2015: Armando Montero, David Trautman

Number & Title of Course: ARC 620 Theories of a Responsible Architecture (3 credits)

Course Description: This course covers theories of architecture, urbanism, and the environment both historically and across a range of cultures and geographies.

Course Goals & Objectives:

- Students will develop critical thinking and writing skills.
- Students will gain an understanding of the architecture of global and traditional cultures.

Student Performance Criterion/a addressed

Primary

- A5 Ordering Systems (A)
- A7 History and Global Culture (U)
- A8 Cultural Diversity and Social Equity (U)

Topical Outline (include percentage of time in course spent in each subject area):

Critical Thinking/Discussion (35%)
Writing (35%)
Reading (30%)

Prerequisites: None

Textbooks/Learning Resources: Readings are available on Blackboard or online through the University of Miami School of Architecture Library.

Offered: Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Katherine Wheeler
2015 : Katherine Wheeler

Number & Title of Course (total credits awarded): ARC 663: Environmental Building Systems II (3 credits)

Course Description (limit 25 words): This course explores the principles and applications of light and acoustics. Topics include light-planning for sunlight, interior and exterior illumination, and sound- properties.

Course Goals & Objectives (list):

- Students will acquire fundamental lighting and acoustics design skills
- Students will acquire knowledge of the fundamental elements of lighting and acoustic systems
- Students will be asked to produce fully functional lighting and acoustics design and their performance simulation and evaluation documents
- Students will be introduced to a variety of lighting and acoustics principles and will be encouraged to develop an awareness of their environmental impact

Student Performance Criterion/a addressed (list number and title)

Primary

- B6 Environmental Systems (A)
- B9 Building Service Systems (U)

Secondary

- B7 Building Envelope Systems and Assemblies (U)
- B8 Building Materials and Assemblies (U)

Topical Outline (include percentage of time in course spent in each subject area):

Lighting Fundamentals (20%)
Daylight Design (20%)
Electric Lighting Design (20%)
Acoustic Fundamentals (20%)
Acoustic System Design (20%)

Prerequisites: None

Textbooks/Learning Resources: Readings are assigned throughout to enhance the course content and studio projects.

Offered (semester and year): Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Juhong Park
2015: Juhong Park

Number & Title of Course (total credits awarded): ARC 633 Structural Systems II (3 credits)

Course Description (limit 25 words): The course teaches an understanding of fundamental methods of structural frame systems, bending action of beams, integration of basic elements into structural system, and geotechnical conditions and foundation systems.

Course Goals & Objectives (list):

- Students will acquire knowledge regarding gravity and lateral loads on structural systems.
- Students will apply code requirements for structural systems.
- Students will acquire knowledge of different structural materials and systems – steel, wood, concrete, and masonry.
- Students will be asked to produce assignments that show ability to calculate loads, forces, and stresses within structural systems.
- Students will be introduced to the detailing of structural connections.

Student Performance Criterion/a addressed (list number and title)

Primary

- B3 Codes and Regulations (A)
- B5 Structural Systems (A)
- Professional Conduct (U)

Topical Outline (include percentage of time in course spent in each subject area):

Exams (80%)
Homework (20%)

Prerequisites: ARC 632

Textbooks/Learning Resources: Forms and Forces, Edward Allen and Waclaw Zalewski, John Wiley & Sons 2009

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector and Youssef Hashem
2015: Gerald DeMarco

Number & Title of Course (total credits awarded): ARC 699 Directed Research and Design (3 credits)

Course Description (limit 25 words): This course addresses design as a tool for and expression of in-depth scholarly research. The topic of coastal resilience will be addressed this semester.

Course Goals & Objectives (list):

- Students will acquire advanced investigative skills.
- Students will learn how to elaborate a research question, transform it into a research statement, and address it in the form of a building program.
- Students will be asked to use drawing and modeling as design thinking tools.
- Students will be trained to communicate their findings and proposals as part of a semester-long and process-oriented rationale.
- Students will conduct text-based analysis, write a thesis statement, select pertinent case studies, prepare site documentation and site analysis, and develop a program for an individual architectural project.

Student Performance Criterion/a addressed (list number and title)

Primary

- A3 Investigative Skills (A)
- A6 Use of Precedent (A)
- B1 Pre Design (A)
- C1 Research (U)

Secondary

- A1 Professional Communication Skills (A)
- D1 Stakeholder Roles in Architecture (U)

Topical Outline (include percentage of time in course spent in each subject area):

Investigation and Research (50%)
Pre Design (25%)
Design Thinking (15%)
Communication (10%)

Prerequisites: Semester prior to ARC 610.

Textbooks/Learning Resources: There is no required text for the course; however, an integral part of the students' assignments and grading criteria is to update an annotated bibliography for their individual topic.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Jacob Brillhart and Eric Firley
2015: Eric Firley and Katherine Wheeler

Number & Title of Course: ARC 610 Architecture Design Degree Project (6 credits)

Course Description: This is course is a design project conceived of, developed, and defended independently; aimed at having an original component to the field of architecture.

Course Goals & Objectives:

- To increase the professional research-design maturity in students, allowing them to front design and research problems independently and with competence.
- To produce a coherent research grounded body of work capable to excite and illuminate the architectural discourse.
- To understand research not only as a speculative activity but as an operational force, a kind of "applied research mechanism" where the reciprocity between research, reality, and design is the way to reach innovation.
- To confront research and reality in a positive mutual feeding process essential for an Architect.
- To understand that limitations and restrictions are the best catalyst for creativity and innovation.
- To encourage students to operate simultaneously in different scales and out of disciplines niches, encouraging a cross-sectional thinking.
- To understand Architecture as an integrative profession that understands design not as a formal activity, but as an inclusive and holistic way to reread reality into new meanings and answers to problems.

Student Performance Criterion/a addressed

Primary

- A2 Design Thinking Skills (A)
- A8 Cultural Diversity and Social Equity (U)
- C2 Integrative Evaluation and Decision Making Design Process (A)

Secondary

- A3 Investigative Skills (A)
- B2 Site Design (A)
- C1 Research (U)

Topical Outline (include percentage of time in course spent in each subject area):

Research (30%)
Final Outcome (45%)
Attendance and Participation (10%)
Final Presentation (10%)
Growth/Change Factor (5%)

Prerequisites: ARC 699

Textbooks/Learning Resources: Refer to Syllabus for recommended readings.

Offered: Spring, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Jose Maria Churtichaga
2015 : Juhong Park

Number & Title of Course (total credits awarded): ARC 652 Management of Professional Practice (3 credits)

Course Description (limit 25 words): Overview of the practice and profession of architecture, ethics, business practices, contractual relationships, selected aspects of personnel and business management, and risk management.

Course Goals & Objectives (list):

- Students will have the opportunity to investigate and address issues pertinent to the management and practice of architecture.
- Students will learn teamwork, advocacy, and negotiation to prepare for participation on project teams and in public hearings.
- Students will gain an understanding of the relationships of all parties relevant to design, development, and construction projects in the public and private sectors.
- Students will gain an understanding of licensure expectations and will have direct experience in preparing for NCARB examination questions.
- Students will be presented with an understanding of architecture as an avenue to an array of career opportunities for future exploration.

Student Performance Criterion/a addressed (list number and title)

Primary

- B10 Financial Considerations (U)
- D2 Project Management (U)
- D3 Business Practices (U)
- D4 Legal Responsibilities (U)
- D5 Professional Conduct (U)

Secondary

- D1 Stakeholder Roles in Architecture (U)

Topical Outline (include percentage of time in course spent in each subject area):

Business and management considerations (40%)
Legal and risk considerations (40%)
Ethical considerations (20%)

Prerequisites: Graduate standing.

Textbooks/Learning Resources: AIA, *The Architects Handbook to Professional Practice*, student edition.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Mark T. Reeves
2015: Mark T. Reeves

Number & Title of Course (total credits awarded): ARC 681 Visual Representation I (3 credits)

Course Description (limit 25 words): The course will focus on the study and production of graphically effective and analytical architectural diagrams.

Course Goals & Objectives (list):

- Students will learn to carefully evaluate space, color, depth, hierarchy, balance, and scale in all architectural visual representation.
- The assignments will explore different media as it is used in the profession including but not limited to: diagrams, renderings, plans, elevations, sections, and axonometric.
- Students will work with several media including hand drawings, physical and digital models, photography, computer renderings, as well as the study of grid systems for final presentations.

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A2 Design Thinking Skills (A)
- A5 Ordering Systems (A)
- B6 Environmental Systems (A)

Secondary

- C1 Research (A)

Topical Outline (include percentage of time in course spent in each subject area):

Assignment 1 (30%)
Assignment 2 (30%)
Assignment 3 (25%)
Lectures (5%)
Attendance (10%)

Prerequisites: None

Textbooks/Learning Resources: Recommended readings can be found in the syllabus.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Veruska Vasconez and Juan Yactayo
2015: Veruska Vasconez

Number & Title of Course (total credits awarded): ARC 608 Architectural Design and Theory III (6 credits)

Course Description (limit 25 words): This studio's architectural design project responds to the cities context, topography, and site requirements.

Course Goals & Objectives (list):

- Students write and develop the building program.
- Students acquire knowledge of site conventions along with the skills and tools to document, analyze, and design a building site and the building itself.
- In addition to familiarity with the key issues of topography, climate, and built context, students develop an awareness of structural systems and building envelope systems.
- Research and the use of precedent.
- Presentation methods include various forms of drawing, model-making, and public demeanor/presentation.

Student Performance Criterion/a addressed (list number and title)

Primary

- A4 Architectural Design skills (A)
- B1 Pre Design (A)
- B5 Structural Systems (A)

Secondary

- B6 Environmental Systems (A)

Topical Outline (include percentage of time in course spent in each subject area):

Site Analysis and Programming (20%)
Design Development (70%)
Production (10%)

Prerequisites: None.

Textbooks/Learning Resources: There are no required readings for this course. A list of suggested texts can be found in the course syllabus.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Denis Hector
2015: Denis Hector

Number & Title of Course (total credits awarded): ARC 681 Visual Representation I (3 credits)

Course Description (limit 25 words): The course will focus on the study and production of graphically effective and analytical architectural diagrams.

Course Goals & Objectives (list):

- Students will learn to carefully evaluate space, color, depth, hierarchy, balance, and scale in all architectural visual representation.
- The assignments will explore different media as it is used in the profession including but not limited to: diagrams, renderings, plans, elevations, sections, and axonometric.
- Students will work with several media including hand drawings, physical and digital models, photography, computer renderings, as well as the study of grid systems for final presentations.

Student Performance Criterion/a addressed (list number and title)

Primary

- A1 Professional Communication Skills (A)
- A2 Design Thinking Skills (A)
- A5 Ordering Systems (A)
- B6 Environmental Systems (A)

Secondary

- C1 Research (A)

Topical Outline (include percentage of time in course spent in each subject area):

Assignment 1 (30%)
Assignment 2 (30%)
Assignment 3 (25%)
Lectures (5%)
Attendance (10%)

Prerequisites: None

Textbooks/Learning Resources: Recommended readings can be found in the syllabus.

Offered (semester and year): Fall, Annually

Faculty assigned (list all faculty assigned during the four semesters prior to the visit):

2016: Veruska Vasconez and Juan Yactayo
2015: Veruska Vasconez