

Course Description

DESIGN COURSES

FND231 – Design Studio I-A, 3 credits [2-2]

Course Description: This studio will emphasize visual perception through an initiation into the different modes of representation, and formal analysis of the elements of visual language [line, volume, texture, color, and shape] as well as studying the effects of light on forms, which constitutes the basics of two-dimensional studies. Exercises in this module are intended to sharpen and focus the students' perception of forms, to train the eye and the hand in the process of interpretation and representation of forms.

Course Goals & Objectives:

1. To develop the ability to represent forms and objects in 2d studies [drawings] with emphasis on attributes such as shape, pattern, texture, color and chiaroscuro
2. To develop analytical studies of the elements of visual language [line. surface. shape. volume. pattern. texture. color]
3. To initiate students into rendering techniques [colored pencil. pastels. gouache. watercolor]
4. To introduce the basics of conceptual layout and visual presentation [wall-mounted presentation]
5. To explore principles of aesthetics such as, proportion, scale, balance, contrast, harmony, unity and complementarily, as well as the modes of the compositional and operational orders /visual iterations such as order, disorder, and chaos, and their forms of incidence such as rhythm, repetition, sequence, movement, variety, focus, symmetry, rotation, axially, layering, as well as the various types of organization or operation such as linear, central cluster, hierarchical grid and complex
6. To develop each student's critical interpretation, conceptual and analytical skills

Student Performance Criterion/a addressed:

A.2 Design Thinking Skills: Ability to 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.

Topical Outline:

Design Principles 35%

Drawing and other representation Skills 35%

Critical analysis and Interpretation 30%

Prerequisites: None

Textbooks/Learning Resources:

Ocvirk, Otto G. (Ed). Art Fundamentals: Theory and Praticce, Mcgraw-Hill College,1997

Pipes, Alan. Foundations of Art and Design. Laurence King Publishing, 2004

Design Principles and Problems – Paul Zelanski

Color Fundamentals – Maitland Graves

Basic Visual Concepts and Principles – C Wallschlaeger

Offered: Fall only, annually

Faculty assigned: Rached Bohsali, Arwa Seifeddine, Hanibal Srouji, Melissa Sinclair Khoury, Bassam Geitani, Hayla Saab

FND232 – Design Studio I-B, 3 credits [2-2]

Course Description: Study of structural characteristics as foundational to an understanding of the manifestation of different forms, natural or artificial. A variety of concepts and processes will be explored with considerable emphasis placed on learning by making, stressing different forms of plastic modeling from wood to metals, and requiring an active use of the workshop. A shop orientation session will be included in this module as a required introduction to the basic tools and safety procedures for using the wood and metal shop.

Course Goals & Objectives:

1. To develop 3d studies of forms, with an emphasis on process in design, involving analytical and conceptual thinking
2. To develop manual craftsmanship in design, using the shop as a laboratory for the development of formal elements in wood
3. To motivate the student to develop personal critical interpretation and analytical skills within a clear methodological framework

Student Performance Criterion/a addressed:

A.2 Design Thinking Skills: Ability to 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.

Topical Outline:

3D Apprehension 35%

Craftsmanship Skills 35%

Critical analysis and Interpretation 30%

Prerequisites: None

Textbooks/Learning Resources:

Wm.C.Brown Publishers

Art Fundamentals; Ocvirck, Wigg, Bone, Cayton; Mc Graw - Hill

Shaping Space; P.Zelanski; M.P.Fisher; Wadsworth

Elements of Design; Rowena Reed Kostellow and the structure of visual relationships by Gail

Greet Hannah

Principles of Form and Design by Wucius Wong

Offered: Fall only, annually

Faculty assigned: Charbel Abi Azar, Silia Abou Arbid, Chahid Akoury, Rached Bohsali, Youssef El-Helou, Lee Frederix, Raffi Tchakerian, Karma Dabaghi, Kamal Aoun, Soulaf Aburas, Tamara Barrage.

Design Studio II is a required course that can be fulfilled through a choice of one of the 3 electives

FND236A – Design Studio II – Visual Dynamics, 6 credits [3-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This studio investigates the conceptual dimensions of visual representation, expanding on the perceptual manifestations of two-dimensional forms. Projects focus on composition, semantics, aesthetics, and image making leading to the formulation of visual language. Projects also address the conceptualization and representation of ideas in different media. Visual expression is explored through the assimilation of a broad spectrum of pictorial imagery, and a mature engagement in drawing, painting, experimental photography and new media. The studio intends to enhance the students' aptitude to synthesize ideas and produce two-dimensional representations that lead to the development of a personal identity.

Course Goals & Objectives:

1. Expand students' understanding of how representation embodies conceptual and emotional content.
2. Motivate the students to develop critical and analytical skills within a clear methodological framework while encouraging personal analytical, critical and conceptual thinking and interpretation.
3. Use representation as both a means and an end in generating ideas.

Student Performance Criterion/a addressed:

A.2 Design Thinking Skills: Ability to 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.

Topical Outline:

Genesis and Evolution of a Concept 30%
Visual Rhetoric - Drawing and 3D Representation 40%
Technical – Technological Rendition 30%

Prerequisites: FND231 DESIA, FND232 DESIB, and FND235 Shop Techniques

Textbooks/Learning Resources:

There are no required readings. Various references are given to the group, according to the studio outline. Readings are assigned according to each student need.

Offered: Spring only, annually

Faculty assigned: Silia Abou Arbid, Chahid Akoury, Rached Bohsali, Youssef El-Helou, Lee Frederix, , Raffi Tchakerian, Karma Dabaghi Arwa Seifeddine, Hayla Saab

Design Studio II is a required course that can be fulfilled through a choice of one of the 3 electives

FND236B – Design Studio II – Formal Tectonics, 6 credits [3-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This studio focuses on the elaboration of kinetic artifacts, following a process of critical investigation into perceived phenomena and objects. Concepts such as structure, materiality, movement and form will be explored in the process of elaboration of creative mechanisms produced in the workshop. The studio will be open to a variety of approaches that include, but are not limited to, transformation from two- to three- dimensions, analytical deconstruction, construction or re-configuration and assembly of entities, as well as the exploration of structural components and relations. The studio will require an active engagement of thinking and making, and its outcome should lead to well-articulated apparatuses that materialize an engaging relationship between form and space.

Course Goals & Objectives:

1. Investigate formal tectonics with an emphasis on methodology and process in the creative exploration of original ideas.
2. Motivate the student to develop critical and analytical skills within a clear methodological framework.
3. Encourage personal analytical, critical and conceptual thinking and interpretation.

Student Performance Criterion/a addressed:

A.2 Design Thinking Skills: Ability to 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.

Topical Outline:

Genesis and Evolution of a Concept 30%
Visual Rhetoric - Drawing and 3D Representation 40%
Technical – Technological Rendition 30%

Prerequisites: FND231 DESIA, FND232 DESIB, and FND235 Shop Techniques

Textbooks/Learning Resources:

There are no required readings. Various references are given to the group, according to the studio outline. Readings are assigned according to each student need.

Offered: Spring only, annually

Faculty assigned: Charbel Abi Azar, Silia Abou Arbid, Chahid Akoury, Youssef El-Helou, Raffi Tchakerian, Karma Dabaghi

Design Studio II is a required course that can be fulfilled through a choice of one of the 3 electives

FND236C – Design Studio II – Anatomy and Space, 6 credits [3-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This studio investigates the fundamentals of perception and representation in the exploration of the human figure in its relation to space. Exercises focus on understanding anatomy and the synergy of the human body's movement in space. The studio develops students' skills in encoding information in two- and three- dimensional studies, while exploring the theoretical aspects of signification as it relates to the various manifestations of the human body. The studio outcome will show a mature understanding of the human body in its multifarious conditions, requiring students to visualize the poetic potential of its transformations through prosthetic extensions.

Course Goals & Objectives:

1. Develop an understanding of the anatomy of the human body.
2. Motivate students to develop their critical and analytical skills within a clear methodological framework.
3. Encourage personal analytical, critical and conceptual thinking and interpretation.

Student Performance Criterion/a addressed:

A.2 Design Thinking Skills: Ability to 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.

Topical Outline:

Genesis and Evolution of a Concept 30%
Visual Rhetoric - Drawing and 3D Representation 40%
Technical – Technological Rendition 30%

Prerequisites: FND231 DESIA, FND232 DESIB, and FND235 Shop Techniques

Textbooks/Learning Resources:

There are no required readings. Various references are given to the group, according to the studio outline. Readings are assigned according to each student need.

Offered: Spring only, annually

Faculty assigned: Lee Frederix, Karma Dabaghi, Hanibal Srouji, Tamara Barrage.

ARCH331 – Design Studio III, 6 credits [2-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This studio builds upon and extends the theoretical knowledge gained in the foundation studios through a concrete application of conceptual and perceptual analysis to small- and medium-scale problems in design, and the exploration of the limits and means of developing concepts into architectural form. This studio focuses on the representation of ideas into drawings, specifically stressing the importance of hand drawing and model making as design tools.

Course Goals & Objectives:

4. Identify architectural principles and proportions
5. Generate a concept for a design approach
6. Develop an architectural project from a specific concept
7. Produce manually ideas through coordinated drawings and models

Student Performance Criterion/a addressed:

A.4 Architectural Design Skills: Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.

A.5 Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Architectural Precedents 15%

Analytical Skills 30%

Architectural Design 40%

Architectural Presentation 15%

Prerequisites: FND236 Design Studio II & ARCH201 Architectural Drawing

Textbooks/Learning Resources:

Gaston Bachelard, *The Poetics of Space*, Beacon Press, 1969

Georges Perec, *Species of Spaces*, Galilée, 1974

Holl, Steven. *Parallax*. New York: Princeton Architectural Press, 2000.

Italo Calvino, *Invisible Cities*, 1972

Jacques, Tati. *Mon Oncle*. Gaumont, 1958

Peter Zumthor, *Thinking Architecture*, Basel 2010

Raymond Queneau, *Exercices de Style*, 1947

Offered: Fall only, annually

Faculty assigned: Ramona Abdo, Youssef El-Helou, Roula Khoury, Vanessa Dammous, Jemma Chidiac, Anahid Simitian.

ARCH332 – Design Studio IV, 6 credits [2-6] (Revised Course Description – Implementation started in Spring 2018)

Course Description: This studio furthers the elaboration of projects based on investigations of specific theoretical themes, and concentrating on medium-scale, public projects.

The studio will initiate students to the analysis of canonical works as a basic tool in the design process. The use of manual representational tools in translating ideas into drawings as well as, models will be stressed on.

Course Goals & Objectives:

1. Identify architectural theory and its translation in relevant precedents
2. Apply relevant theoretical principles in an architectural projects
3. Produce manually ideas through coordinated drawings and models

Student Performance Criterion/a addressed:

A.3 Investigative Skills: Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.

A.6 Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Architectural Precedents 20%

Analytical Skills 25%

Architectural Design 40%

Architectural Presentation 15%

Prerequisites: ARCH331 Design Studio III and ARCH361 Theory I

Textbooks/Learning Resources:

Bachelard, G. (1969). *The Poetics of Space* (22nd ed.). Boston: Beacon Press.

Cook, P., *Drawing: the motive force of architecture*: England: Wiley, 2008

Danto, A. (1992). *The Artworld*. In *The Philosophy of the Visual Arts* (1992 ed., pp. 426-433). New York: Oxford University Press. (Original work published 1964)

Gauzin-Müller, Birkhauser, 2002

S, M, L, XL, Rem Koolhaas, Penguin, 1996

Sustainable architecture and urbanism: concepts, technologies, examples, Dominique

Towards a New Architecture, Le Corbusier, 1989, Oxford, Architectural Press

Zumthor P. (2006) *Atmosphere. Architectural Environments. Surrounding Objects*, Basel, Switzerland. Birkhauser

Offered: Spring only, annually

Faculty assigned: Patrick Abou Khalil, Vanessa Dammous, Roula El-Khoury, Youssef El-Helou, Claudio Sgarbi, Jemma Chidiac.

ARCH431 – Design Studio V, 6 credits [2-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This studio examines problematic of construction and materiality, focusing on building technology, building program, in addition to environmental and site factors, as essential parameters in the development and resolution of a design project. Students at this stage are expected to manage the complexity of mixed-use program within a critical site. In correlation with studio work, building technology courses will inform the translation from conceptual design to material and construction techniques.

Course Goals & Objectives:

1. Integrate specific site conditions in the architectural intervention
2. Integrate materials and methods of construction in the design process
3. Develop a clear set of architectural documentation including assembly of materials and building systems

Student Performance Criterion/a addressed:

B.1 Pre-Design: Ability to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

B.2 Site Design: Ability to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Architectural Precedents 10%
Architectural Design 40%
Materials and Techniques 30%
Structural System 5%
Architectural Presentation 15%

Prerequisites: ARCH332 Design Studio IV and ARCH350 Digital Drawing

Co-requisite: ARCH421 Materials and Methods of construction

Textbooks/Learning Resources:

A. Edward, I. Joseph. Fundamentals of building construction: materials and methods. Hoboken, N.J.: John Wiley & Sons, Inc, 2009

A. Watts. Modern Construction Envelopes. Springer, 2010

D. Andrea. Constructing architecture: materials, processes, structures: a handbook. Basel: Birkhauser, 2008

F. Ching. Building construction illustrated. Hoboken, N.J. : John Wiley & Sons, c2008

Forty. Concrete and Culture: A Material History. Reaktion Books, London, 2012

G.P. Borden, M. Meredith. Matter: material processes in architectural production. London: Routledge, 2012

Offered: Fall only, annually

Faculty assigned: Jamil Abou Assaly, Elie Harfouche, Marwan Zouein, Patrick Abou Khalil, Riccardo Pedrazzoli, Tarek Sinno, Marwan Basmaji, Mustapha Saleh Moussa.

ARCH432 – Design Studio VI, 6 credits [2-6] (Revised Course Description – Implementation started in Spring 2018)

Course Description: This studio deals with projects of greater complexity in terms of program aspects, site constraints, accessibility, and introduction to life safety criteria. A specific attention will be given to the interrelation of structure and architecture as essential factors in the design process in view of creating an integrated project. Students at this level are expected to elaborate a clear set of drawings highlighting the tectonic aspect of their projects.

Course Goals & Objectives:

1. Develop an architectural program in correlation to site conditions and accessibility
2. Integrate structure in the design process
3. Integrate building life safety codes, regulations and criteria
4. Develop a clear set of architectural documentation including structural systems and egress

Student Performance Criterion/a addressed:

B.1 Pre-Design: Ability to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

B.2 Site Design: Ability to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

B.3. Codes and Regulations: Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

Topical Outline:

Architectural Design 40%
Structural and Functional System 25%
Integrated building life safety codes 20%
Architectural Presentation 15%

Prerequisites: ARCH431 Design Studio V, ARCH311 Structural Concept, ARCH422 Climate & Energy

Co-requisite: ARCH423 Building Technology

Textbooks/Learning Resources:

Ambrose, James E. & Tripeny, Patrick. Building Structures. John Willey & Sons, 2012
Boys, Jos. Doing Disability Differently. Routledge, 2014
Dabby Ramsey & Bedi, Ashwani. Structures for Architects. John Willey & Sons, 2012
E. Allen, and S. David. How Buildings Work: The Natural Order of Architecture. New York, NY: Oxford University Press, 2005
Gauld, Bryan J.B. Structures for Architects. Longman Scientific & Technical. 2nd Edition 1988
Moore, Fuller. Understanding Structures. McGraw - Hill, 1999
Pocket Guide to the ADA. Third Edition edited by Terry, Evan Associates, P.C. John Willey & Sons, 2007
R. McMullan. Environmental science in building. Basingstoke, England: Macmillan, 1998
Rhoads, Marcela Abadi. Applying the ADA. Willey, 2013
Tubbs, Jeffrey S. & Meacham Brian J. Egress Design Solutions. John Willey & Sons, 2007

Offered: Spring only, annually

Faculty assigned: Jamil Abou Assaly, Dara McPhee, Tarek Zeidan, Joseph Kiprianos, Tarek Sinno, Soulaf Aburas, Issam Barhouch, Mohamad Araji, Joy Kanaan

ARCH531 – Design Studio VII, 6 credits [2-6] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This comprehensive design studio entails the integration of questions of structure, building assemblies and environmental systems within a design experimentation. Students must develop their design proposal into a full-detailed solution, documented using various media at the appropriate scale.

Course Goals & Objectives:

1. Identify design strategies addressing the complexity of the project
2. Develop structural systems through architectural details
3. Develop environmental systems through architectural details
4. Develop building assemblies details
5. Present a comprehensive architectural documentation

Student Performance Criterion/a addressed:

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

C.2 Integrated Evaluations and Decision-Making Design Process: Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

C.3 Integrative Design: Ability to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

Topical Outline:

Research and Design Strategies 20%
Comprehensive Architecture Design 45%
Architectonic Details 20%
Architectural Presentation 15%

Prerequisites: ARCH432 Design Studio VI, ARCH411 Structural Design, ARCH424 Building Services and ARCH481 Construction Documents

Textbooks/Learning Resources:

Brown, G.Z. and Mark DeKay. (2000). Sun, wind, light: Architectural design strategies (2nd ed). New York, New York: John Wiley & Sons
Cherry, Edith (Ed.). (1999). Programming for design: From theory to practice. John Wiley & Sons, Inc.
Dabby Ramsey & Bedi, Ashwani. Structures for Architects. John Wiley & Sons, 2012
Deplazes, Andrea (Ed.). (2009). Constructing architecture: A handbook – materials processes structures (2nd ed.). Berlin, Germany: Birkhauser.
Moore, Fuller. Understanding Structures. McGraw - Hill, 1999
Pallasmaa, Juhani. (2007). The eyes of the skin: Architecture and the senses. West Sussex, England: WileyAcademy
Tubbs, Jeffrey S. & Meacham Brian J. Egress Design Solutions. John Wiley & Sons, 2007
Zumthor, Peter. (2005). Thinking architecture (2nd ed.). Berlin, Germany: Birkhauser.

Offered: Fall only, annually

Faculty assigned: David Awad, Maroun Daccache, Francesco Polesello, Tarek Zeidan, Nataly Abu Reslan, Omar Harb, Nathalie Melki, Tarek Sinno, Joseph Kiprianos, Hicham Bou Akl, Carlos Rizk, Hala Younes.

ARCH532 – Design Studio VIII, 6 credits [2-6] (Revised Course Description – Implementation started in Spring 2020)

Course Description: This course is an advanced design studio that addresses community-based projects within urban or rural settings. Students will analyze problems of practical relevance to contemporary issues, with an investigation of social, economic and ideological aspects.

Course Goals & Objectives:

1. Investigate social awareness and public interest addressing a problematic community need
2. Develop a multidisciplinary strategy addressing a community based project
3. Demonstrate advanced architectural representation skills

Student Performance Criterion/a addressed:

A.6 Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

Topical Outline:

Research and Design Strategies 30%

Urban Dimension & Design 50%

Architectural Presentation 20%

Prerequisites: ARCH531 Design VII and ARCH541 Urban Planning I

Textbooks/Learning Resources:

Alsayyad, Nezar and Ananya Roy. "Medieval Modernity: On Citizenship and Urbanism in a Global Era." *Space and Polity* 10.1 (2006): 1-20

Busquets, Joan and Felipe Correa, eds. *Cities X Lines: A New Lens for the Urbanistic Project*. Roverto, Italy: Nicolodi Editore, 2006. 382 pp.

C. Rowe. *The Architecture of Good Intentions*. Wiley-Academy, 1994

Gausa, Manuel. *Housing: New Alternatives, New Systems*. Basel: Birkhauser, 1999. 272 pp.

M.Gausa. V.Guallart. W. Muller. *The Metapolis Dictionary of Advanced Architecture*. Actar, 2007 R. Carpenter. *The architects of the Parthenon*. Penguin Books, 1970

R. Kolhaas. *Delirious New York*. Monicelli Press, 1978.

R.Rogers. *Cities for a Small Planet*. Icon Editions, 1998.

Sennet, Richard. *The Conscience of the Eye: The Design and Social Life of Cities*. New York: Knoph: Distributed by Random House, 1990. 266 pp.

Offered: Spring only, annually

Faculty assigned: Marwan Basmaji, Rachid Chamoun, Riccardo Pedrazzoli, Silvia Mazzetto, Joy Kanaan, Antoine Lahoud, Maroun El-Daccache, Clayton Strange, Hala Younes, Nour Zoghby.

ARCH631 – Final Project Research, 3 credits [1-3] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This is a research course supervised by the selected advisor for the final project studio, with the elaboration and definition of a thesis proposal, including a detailed program and site analysis, as well as the documentation of any other relevant research material.

Course Goals & Objectives:

1. Research of the urban conditions and site analysis
2. Elaborate a strategy for the thesis development
3. Develop a program proposal for a design project
4. Compile a comprehensive Final Project proposal

Student Performance Criterion/a addressed:

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

Topical Outline:

Design topic Research 100%

Prerequisites: ARCH532 Design VIII, ARCH581 Professional Practice I, ARCH582 Professional Practice II, Topic in Regional Architecture

Textbooks/Learning Resources:

Pending on Student's Topic

Offered: Fall only, annually

Faculty assigned: Elie Abs, David Awad, Maroun El-Daccache, Elie Harfouche, Hala Younes, Marwan Zouein, Silvia Mazzetto, Fouad Samara.

ARCH632 – Final Project, 6 credits [2-6] (Revised Course Description – Implementation Started in Spring 2017)

Course Description: The final studio is an opportunity for students to undertake an individual project through the development of the critical problematic that was elaborated as part of the Final Project Research. Students must develop their design proposal into a full comprehensive architecture design project.

Course Goals & Objectives:

1. Identify design strategies addressing the complexity of the project
2. Develop a design proposal into a full comprehensive architecture design project
3. Present a comprehensive architectural document

Student Performance Criterion/a addressed:

C.2 Integrated Evaluations and Decision-Making Design Process: Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

C.3 Integrative Design: Ability to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

Topical Outline:

Research and Design Strategies 30%
Comprehensive Architecture Design 50%
Architectural Presentation 20%

Prerequisites: ARCH631 Final Project Research

Textbooks/Learning Resources:

Pending on Student's Topic

Offered: Spring only, annually

Faculty assigned: Marwan Zouein, Elie Abs, David Awad, Maroun Daccache, Omar Harb, Elie Harfouche, Moustapha Saleh, Hala Younes, Monica-Rita Basbous, Silvia Mazzetto, Nour Zoghby, Layal Merhi, Fouad Hanna, Vart Bisanz, Fouad Samara, Jad Fadel, Robert Chahine, Tarek Zeidan.

Course Description

HISTORY & THEORY COURSES

FND281 – Design Culture, 3 credits [3-0]

Course Description: This course is an introduction to the wide discipline of design, and the interrelations between design and art, photography, film, and music. The course will revolve around a series of creative presentations of the multiple dimensions of design, through a series of lectures, movies, art documentaries, and other events that expose the student to the role of design within the contemporary cultural framework.

Course Goals & Objectives:

1. To introduce the cultural and aesthetic dimension of design through critical and selective exposure to photography, film and art.
2. To motivate the student to develop critical and analytical skills and encouraging personal critical interpretation of various art forms.
3. To offer cross-disciplinary design knowledge that provides insight into the various fields of design.

Student Performance Criterion/a addressed:

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Current Trends 40%

Design Cultural Understanding 60%

Prerequisites: None

Textbooks/Learning Resources:

Philip Meggs, *A History of Graphic Design*, New York : J. Wiley & Sons, c1998

Roland Barthes, *Mythologies*, Translated by Arnette Lavers, Farrar, Straus and Giroux, 1972

Andre Bazin, *What is cinema*, Berkeley, Calif. : University of California Press, 1972

Deleuze, *A Thousand Plateaus* (Chap 12 & 15). Trans. Brian Massumi. London and New York: Continuum, 2004

Munari, *Munari Machines*, Trans Caleffi, Corraini 2004

Le Corbusier. *Toward an Architecture*. Translated by John Goodman, Los Angeles: Getty Research Institute, 2007

Fathy Hassan, *Architecture For the Poor*, Chicago University Press

Samir Khalaf & Philippe Khoury, *Recovering Beirut*. Brill 1993

Ian Buchaman & Greg Hunter, *Deleuze and Space*, Edinburgh University Press

Walter Benjamin, *Illuminations*, Translated by Harry Zorn, Pimlico 1999

Michel de Certeau, *The practice of everyday life, walking in the city/spatial stories*, translated by Steven Randall, University of California Press

Steven Heller, *Graphic design history*, Allworth Press

Flusser, *Writings*, University of Minnesota Press

Offered: Fall and Spring

Faculty assigned: Niloufar Afnan, Chahid Akoury, Danielle Kattar, Anna Ogden-Smith, Lee Frederix, Karma Dabaghi.

ARCH361 – Theory I, 2 credits [2-0] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This course introduces the basic principles and formal concepts that constitute an 'architectural language', such as proportion, rhythm, harmony, hierarchy. Through analysis of key architectural projects, these concepts would be illustrated and would serve as a basis for an understanding of the syntactical dimension in architecture. In addition, the course will introduce the anthropological and sociological dimensions, exploring the impact of spatial forms and architectural patterns on social organization and human behavior, by examining comparative models from various cultural settings.

Course Goals & Objectives:

1. Employ proper architectural terminology in verbal and written communication
2. Understand architectural principles [such as organization, rhythm, harmony, scale, proportion, hierarchy, etc.]
3. Understand social and behavioral impacts of architectural ideas
4. Interpret architectural ideas within various cultural contexts

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

A.5 Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Architectural Principles 50%

Critical Reading 30%

Cultural Development 20%

Prerequisites: FND281 Design Culture

Textbooks/Learning Resources:

Francis Ching, Architecture: Form, Space and Order, (Wiley, 2007)

Gaston Bachelard, The Poetics of Space, (Beacon Press, 1994)

Michael Benedikt, For an Architecture of Reality, (Lumen, 1988)

Peter Zumthor, Thinking Architecture, (Birkhauser, 2006)

Hazel Conway and Rowan Roenisch, Understanding Architecture: An Introduction to Architecture and Architecture History, (Routledge New York, 2005)

Robin Evans, Translations from Drawing to Building and Other Essays (London: Architectural Association, 1997)

Sigfried Giedion, The Beginnings of Architecture, (New York: Pantheon Books, Princeton, Princeton University Press, 1964)

Walter Benjamin, Illuminations, (New York, Harcourt Brace and World, 1968)

Offered: Fall and Spring

Faculty assigned: Elie Harfouche, Anahid Simitian, Rony Hobeika, Abir Kaouk, Ricardo Pedrazzoli, Roula El Khoury, Silvia Mazzetto.

ARCH362 – Theory II, 2 credits [2-0] (Revised Course Description – Implementation started in Fall 2017)

Course Description: A survey of architectural theories in the Twentieth century, through critical readings of a selection of canonical texts by major architectural authors or movements, spanning from Early Modernism to Post-Modernism and later developments. Such readings would serve as a basis for a discussion of the aesthetic and ideological frameworks behind the paradigmatic changes in architecture during the past century.

Course Goals & Objectives:

1. Show a good command on using academic architectural vocabulary
2. Demonstrate a critical understanding of major architectural theories in the Twentieth century
3. Understand the relationship between theory and design in the Twentieth century
4. Conduct research and informed analysis of architectural theories

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

A.3 Investigative Skills: Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

Topical Outline:

Modern Architecture 50%

Critical and Analytical Skills 30%

Cultural Development 20%

Prerequisites: ARCH361 Theory I

Textbooks/Learning Resources:

Le Corbusier. *Towards a New Architecture*. Dover, 1985

Peter Eisenman. *Written Into the Void*. Yale, 2007

Siegfried Giedion. *Space, Time and Architecture*. Fifth Edition. Harvard, 2003

Rem Koolhaas. *Delirious New York*. Monacelli, 1994

Adolf Loos. *Ornament and Crime: Selected Essays*. Ariadne Press, 1997

Christian Norberg-Schulz. *The Concept of Dwelling*. Rizzoli, 1982

Aldo Rossi. *The Architecture of the City*. MIT Press, 1984

Robert Venturi. *Complexity and Contradiction in Architecture*. MoMA, 2002

Kate Nesbit (ed.), *Theorizing a New Agenda for Architecture, An Anthology of Architectural theory 1965-1995*, Princeton Architectural Press, 1996

Peter Eisenman, *Written Into the Void*, Yale 2007

Offered: Fall and Spring

Faculty assigned: Samir Mahmoud, Elie Harfouche, Claudio Sgarbi.

ARCH461 – Contemporary Trends, 2 credits [2-0] (Revised Course Description – Implementation started in Fall 2018)

Course Description: This course continues the architectural history survey, from the 1960's until the present date. The course will examine major architectural developments following the partial eclipse of Modern Architecture in the 1960's and the emergence of alternative movements from Post-Modernism to Deconstruction, and will conclude by surveying the contemporary condition in its multi-faceted manifestations around the world.

Course Goals & Objectives:

1. Exhibit knowledge of the major architectural developments from 1960 to the present
2. Evaluate the variety of contemporary architectural approaches from around the world
3. Analyze various architectural work within their theoretical and cultural contexts

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

Topical Outline:

Contemporary Architecture 50%
Critical and Analytical Skills 30%
Cultural Development 20%

Prerequisites: ARCH362 Theory II

Textbooks/Learning Resources:

Alan Colquhoun. *Modern Architecture*. Oxford History of Art. Oxford, 2002
Charles Jencks, *The New Paradigm in Architecture: The language of Postmodernism*. 2002
Elie Haddad & David Rifkind eds. *A Critical History of Contemporary Architecture 1960-2010*. Ashgate, 2014
Ignasi de Sola Morales. *Differences: Topographies of Contemporary Architecture*. MIT Press, 1996
Kenneth Frampton. *Modern Architecture, A Critical History*. Thames & Hudson, 1992
Rafael Moneo. *Remarks on 21 Works*. Monacelli, 2010
Robert Venturi. *Complexity and Contradiction in Architecture*. MOMA, 1977
William Curtiss. *Modern Architecture since 1900*. Phaidon, 1996

Offered: Once a year

Faculty assigned: Elie Haddad

ARCH371 – History of Architecture I, 3 credits [3-0] (Revised Course Description – Implementation started in Fall 2016)

Course Description: This course surveys the history of architecture, from early civilizations until the 17th century. It covers Western and non-Western architecture within this time span. The survey explores the major architectural styles in Europe from Classical Greece to Baroque architecture, as well as the main traditions in Asia, pre-Columbian America and Africa. The survey will also cover developments in Islamic Architecture from the 8th century to the 17th century.

Course Goals & Objectives:

1. Exhibit knowledge of architectural history from early civilizations until the 17th century in Western and non-Western traditions
2. Identify the formal aspect of various architectural styles
3. Categorize architectural types and functions in their historical context
4. Understand the various relations between architecture and cultural contexts

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

Topical Outline:

History Development of Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisites: FND281 Design Culture

Textbooks/Learning Resources:

Ackerman, J.S. *The Architecture of Michelangelo*. New York: Zwemmer, 1966

Focillon, H. *The Art of the West in the Middle ages: Romanesque Art*. Trans. D. King. New York:

Frankl, P. *Gothic Architecture*. New Haven: Yale University Press, 1990

Kostof, S., *A History of Architecture*. New York: Oxford University Press, 1985

Lawrence A.W. *Greek Architecture*. New Haven, Conn.: Yale University Press, c1996

Norberg-Schultz, O. *Baroque Architecture*. New York: Abrams, 1971

Pevsner, N. *A History of Building Types*. Princeton: Princeton University Press, 1976
Phaidon, 1963

Ruskin, A. *Prehistoric Art and Ancient Art of the Near East*. New York, N.Y.: McGraw-Hill, c1971

Trachtenberg, M. *Architecture, from Prehistory to Post-modernism: The Western Tradition*. New York: Harry N. Abrams, Inc., c2002

Wittkower, R. *Art and Architecture in Italy, 1600-1750*. Harmondsworth: Penguin, 1958.

Offered: Fall only, annually

Faculty assigned: Ramona Abdo, Abdallah Kahil, Tony Nasrallah, May El-Hage, Samir Mahmoud, Paola Ardizzola.

ARCH372 – History of Architecture II, 3 credits [3-0] (Revised Course Description – Implementation started in Fall 2017)

Course Description: This course covers the major developments in Architecture from the 18th to the middle of the 20th century, focusing on the development of Modern Architecture in Europe and its dissemination around the world. The course will cover the post-World War II developments and the growth of new traditions, leading to the momentous period of contestation of Modern Architecture in the 1960's.

Course Goals & Objectives:

1. Outline the development of architecture from the 18th to the middle of the 20th century.
2. Understand the relations between architecture and cultural contexts
3. Understand the emergence of the role and the responsibilities of the Modern architect.

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Development of Modern Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisites: ARCH371 History of Architecture I

Textbooks/Learning Resources:

Banham, Reyner. *Theory and Design in the First Machine Age*, London, 1960

Benevolo, Leonardo. *History of modern architecture*. Cambridge, M.I.T. Press, 1977
Cambridge, Mass. 1981

Cohen, Jean Louis. 2012. *The Future of Architecture since 1889*. London – New York: Phaidon Press.

Colquhoun, Alan. *Essays in Architectural Criticism: Modern Architecture and Historical Changes*,

Curtis, William. 1996. *Modern Architecture since 1900*. London - New York: Phaidon Press.

Frampton, Kenneth. *Modern Architecture, a Critical History*, London, 1980; 1992

Giedion, Sigfried. *Space, Time, and Architecture*, 1967

Harmondsworth: Penguin Books, 1968

Hitchcock, H.R. and Philip Johnson. *The International Style: Architecture since 1922*, New York, Museum of Modern Art 1932

Pevsner, Nikolaus. *Pioneers of Modern Design: From William Morris to Walter Gropius*. Rev. ed.

Tafuri, Manfredo and Francesco Dal Co. *Modern Architecture*, New York, 1979

Venturi, Robert. *Complexity and Contradiction in Architecture*, New York, 1966

Offered: Spring only, annually

Faculty assigned: Tony Nasrallah, Samir Mahmoud, May El Hage, Paola Ardizzola.

Topics in Regional Architecture are a required course that can be fulfilled through a choice of one of the 3 electives that focus on architecture in Lebanon and the Middle East region.

ARCH441 – *Topic in Regional Architecture* – Regional Architecture, 3 credits [3-0] (New Course – Implementation started in Fall 2018)

Course Description: A historical survey of the regional architectural heritage with a specific focus on the traditional domestic architecture of Lebanon, and the analysis of its setting, building techniques, climate and other factors which led to the development of this specific type of architecture in the Nineteenth and early Twentieth century. The course will take as a reference the major publications on this topic, and will initiate case studies of particular landmarks or domestic houses, with on-site surveys, analysis and documentation.

Course Goals & Objectives:

1. Outline the historical development of architecture in Lebanon
2. Examine the typologies of traditional Lebanese domestic architecture

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Analysis of Historical Regional Architecture 50%

Cultural Development 20%

Critical and Analytical Skills 20%

Studies of Typology 10%

Prerequisites: ARCH372 History of Architecture II, ARCH362 Theory II

Textbooks/Learning Resources:

Corpus Levant Rehabilitation, *Manuel pour l'Entretien et la Rehabilitation de L'Architecture Traditionelle Libanaise* 2004

Fadel, Raweya. *Reconstruction of Hafsia Quarter II*. 1995

Liger-Belair, Jacques, *L'habitation au Liban: The Dwelling in Lebanon*, Societe Nouvelle, Librairie Orientaliste, Paul Geuthner, S.A. Paris, 2000

Ragette Friedrich, *Architecture in Lebanon, the Lebanese house during 18 and 19 centuries* thth Caravan Books, Delmar, New York, 1998

Roujon, Yves. Vilan, Luc. *Les Faubourgs de Damas*. 2010

Saliba, Robert, *Beirut 1920-1940: Domestic Architecture Between Tradition and Modernity*, the order of Engineers and Architects, Beirut, Lebanon, 1998

Offered: Fall or Spring

Faculty assigned: Antoine Lahoud,

Topics in Regional Architecture are a required course that can be fulfilled through a choice of one of the 3 electives that focus on architecture in Lebanon and the Middle East region.

**ARCH442 – *Topic in Regional Architecture* – Modern Architecture in Lebanon, 3 credits [3-0]
(New Course – Implementation will start in Spring 2020)**

Course Description: This course will discuss the development of architecture in Lebanon from the late 19th century to the present. It traces the various experimentations in architecture in the country and their relationship to various international movements and styles. It explores the relationships among architecture and the various social, economic and political changes

Course Goals & Objectives:

1. Outline the development of architecture in Lebanon from the late 19th century to the present [in light of historical, political, economic, and social factors]
2. Examine the relation of local experimentations in architecture to international movements and styles
3. Demonstrate an understanding of the cultural contexts of architecture

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

Topical Outline:

Contemporary Architecture 50%
Critical and Analytical Skills 20%
Cultural Development 20%
Case Studies 10%

Prerequisites: ARCH372 History of Architecture II, ARCH362 Theory II

Textbooks/Learning Resources:

To be developed

Offered: Fall or Spring

Faculty assigned:

Topics in Regional Architecture are a required course that can be fulfilled through a choice of one of the 3 electives that focus on architecture in Lebanon and the Middle East region.

ARCH442 – Topic in Regional Architecture – Architecture in the Middle East, 3 credits [3-0] (New Course – Implementation started in Fall 2017)

Course Description: This course will trace architectural developments in the Middle East from the end of the Nineteenth century to the Present. The survey will cover the colonial period and the process of westernization in Middle Eastern countries, as well as the formation of National schools of architecture and the ensuing spread of Modernism. The problematic relationship between modernity and local traditions will be examined, in addition to the particular 'postmodern' reactions that followed.

Course Goals & Objectives:

1. Outline architectural developments in the Middle East from the end of the Nineteenth century to the present.
2. Appraise the process of Westernization in the Middle East [focusing on the relationship between modernity and local traditions]
3. Demonstrate an understanding of the cultural (political and economic) contexts of architecture in the Middle East

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Development of Architecture in the M.E. 50%
Critical, Analytical and Comparative Skills 20%
Cultural Contexts 30%

Prerequisites: ARCH372 History of Architecture II, ARCH362 Theory II

Textbooks/Learning Resources:

Chaderji, Rifat. *“Architectural Education in Iraq: a Case Study,”* *Architectural Education in the Islamic World*. (Ahmet Evin, ed.), Singapore: Concept Media/Agha Khan Award for Architecture, 1986, pp. 112-120

Ehlers, Eckart and Willem Floor. *“Urban Changes in Iran,”* *Iranian Studies*, Vol. 26, No. 3/4 Summer-Autumn 1993), pp. 251-275

Haluk, Pamir. “Architectural Education in Turkey in its Social Context: Underlying Concepts and Changes,” *Architectural Education in the Islamic World*. (Ahmet Evin, ed.), Singapore: Concept Media/Agha Khan Award for Architecture, 1986, pp. 131-151

Isenstadt, Sandy and Kishwar Rizvi (Eds.). *Modernism and the Middle East: Architecture and Politics in the Twentieth Century*, Studies in Modernity and National Identity, Univ. of Washington Press, Seattle: 2008.

Kultermann, Udo. *Contemporary Architecture in the Arab States: Renaissance of a Region*, New York, N.Y. : McGraw-Hill, c1999

Offered: Fall or Spring

Faculty assigned: Abdallah Kahil

ARCH463 – Landscape Architecture, 2 credits [2-0] (New Course – Implementation started in Fall 2018)

Course Description: An introduction to the multidisciplinary field of landscape architecture, examining its historical evolution and the development of landscape design as a practice. The course will explore the different underlying theories behind landscape architecture, as well as its contemporary developments around the world, with a focus on regional and local case studies.

Course Goals & Objectives:

1. Outline the historical evolution of the landscape architecture
2. Examine the theoretical background of landscape architecture
3. Analyze regional and local case studies
4. Recognize the role and responsibility of landscape architects

Student Performance Criterion/a addressed:

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

History of Landscape 50%

Analysis of precedents 20%

Critical Thinking 10%

Contemporary Landscape Trends 20%

Prerequisites: ARCH372 History of Architecture II, ARCH362 Theory II

Textbooks/Learning Resources:

Booth, N. 2011. *Foundations of Landscape Architecture. Integrating Form and Space Using the Language of Site Design*, N.J.: Wiley & Sons.

Jellicoe, G. and Jellicoe, S. 1975. *The Landscape of Man*, London: Thames and Hudson.

Rappaport, N., Amidon, J. and Reed P. 2006. *Ken Smith Landscape Architects Urban Projects: A Source Book in Landscape Architecture*. Princeton Architectural Press.

Rogers, E.B. 2001. *Landscape Design: A Cultural and Architectural History*. New York: Harry N. Abrams.

Woland, J. 2013. *Site engineering for landscape architects*. Hoboken, N.J.: Wiley & Sons.

Yglesias, C. 2014. *The Innovative Use of Materials in Architecture and Landscape Architecture*. History Theory and Performance. McFarland

Offered: Fall only, annually

Faculty assigned: Hala Younes, Silvia Mazzetto, Marwan Basmaji.

ARCH541 – Urban Planning I, 3 credits [3-0] (New Course – Implementation started in Fall 2018)

Course Description: This course is a survey of the modern city as a historical development in relation to economic, social and political factors, from the Nineteenth century to the contemporary period. The course will also present an overview of planning theories, from the context of modernist ideals of utopian planning, to current planning practices in the United States, Europe and the Middle East.

Course Goals & Objectives:

1. Understand the historical development of the city [in relation to economic, social and political factors] from the nineteenth century to the present
2. Outline various planning theories
3. Understand contextual relations between architecture and culture [politics, economy, ecology and technology]
4. Recognize the role and responsibility of the architect in urban planning.

Student Performance Criterion/a addressed:

A.7 History and Global Culture: 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.

A.8 Cultural Diversity and Social Equity: Understanding of 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.

Topical Outline:

Introduction and Development of Urban Planning 30%

Urban Theories and Principles 45%

Case studies 25%

Prerequisites: ARCH432 Design Studio VI

Textbooks/Learning Resources:

Aldo Rossi, *The Architecture of the City*. MIT, 1984

Bruegmann, R. 2005. "Sprawl across the centuries", in *Sprawl: a Compact History*.

Choay, Françoise, *The Rule and the Model*, MIT Press, Massachusetts, 1997.

G. Carnevali, G. Delbene & V. Patteeuw. *Geno(v)a: Developing and Rebooting a Waterfront City*.

Le Corbusier. *Urbanisme*. Paris: Cres, 1927 [also available in English translation] Kevin Lynch.

Lefebvre, H., *Writings on Cities*, 1996.

Maggie Toy, ed. *Architecture after Geometry*. London: Architectural Design, 1997

Manfredo Tafuri. *Architecture and Utopia*. MIT, 1976

Rem Koolhaas, *Dutchtown, A City Center*. NAI, 1999

Rotterdam: NAI, c. 2002

Stein, Jay M. Edit. *Classic Readings in Urban Planning*, Mc Graw-Hill, Inc. New York, 1995

Stout, Fredric & Le Gates, Richard T. Edits., *The City Reader*, Routledge, London and New York, 2000

The Image of the City. MIT Press

Offered: Fall only, annually

Faculty assigned: Juliana Sfeir, Rachid Chamoun

Course Description

TECHNICAL AND COMPUTER GRAPHICS COURSES

FND201 – Drawing for Foundation, 3 credits [0-6]

Course Description: The purpose of this course is to discover the exploratory potential of visualizing thinking through hand drawing. Students' skills in drawing as mimesis and as perception are emphasized. The course delves into traditional and conceptual transcription, using drawing as a primary mode of inquiry and perception. Through different drawing exercises, students will be introduced to the study of chiaroscuro, perspective, nature, object, materials, textures and principles of composition. Each student will be expected to complete a black book series that demonstrates their mastery of basic drawing skills

Course Goals & Objectives:

1. Acquire the skills needed in representing forms.
2. Use drawing and mark-making as a broad synthetic process, for transcription and the generation of ideas.
3. Experiment with different drawing materials and carry investigations in both traditional and perceptual media and techniques.

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

A.5 Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

Topical Outline:

Communication skills 40%
Graphic representation 40%
Accuracy and scales 20%

Prerequisites: None

Textbooks/Learning Resources:

None

Offered: Fall and Spring, annually

Faculty assigned: Bassam Geitani, Janet Hakopian, Gretta Khoury, Nouhad Hanna El Daher, Silia Abou Arbid, Vitali Konstantinov, Adline Tsang, Betina Khoury Badr.

FND202 – Photography for Foundation, 3 credits [2-3]

Course Description: This course is an introduction to digital photography, with an overview of the basic theoretical principles of photography, including composition, exposure and lighting. Lectures will be complemented by applied projects that explore different photography techniques based on a variety of themes. Students will also be trained to photograph art and design works as well as process digital images.

Course Goals & Objectives:

1. Teach the fundamentals of photography through their physical, conceptual and theoretical characteristics.
2. Explore critical, analytical and concept driven photography of various themes.
3. Show how technologies are used for the production of expressive photographic artwork and documentation.

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

Topical Outline:

Technical skills 50%

Visual Perceptions 50%

Prerequisites: None

Textbooks/Learning Resources:

To be developed

Offered: Fall and Spring, annually

Faculty assigned: Bassam Lahoud, Albert Saikali, Carlos Aoun, Jean-Pierre Tarabay.

FND251 – Digital Media, 3 credits [2-2]

Course Description: This studio course is composed of two parts, starting with a basic exposure to computer platforms and the primary software used in computer graphics application. The first part addresses the basics of generating and manipulating images using digital media, and covers monochrome patterns, control and mix of colors, raster images, scanning, pixel and vector graphics. The second part introduces the basic concepts of four-dimensional design, in which properties of time and movement are explored. A range of time-based media are addressed from computer-driven technologies and digital photography to interactive media. A workshop on video editing and post production is offered as integral part of this studio.

Course Goals & Objectives:

1. Developing an understanding of the fundamental concepts, principles and elements of four dimensions in relation to the fields of art, film and design.
2. Initiation into the design methods and digital media in four-dimensional design.
1. Analyzing the role of kinetics, motion, sound, lighting, and time as they relate to various forms of art and design, in videography and motion graphics.
2. Demonstrating the ability to analyze and conceptualize design problems and come up with design solutions through digital media.

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

Topical Outline:

Introduction to digital medias 50%
Digital Graphic representation 50%

Prerequisites: None

Textbooks/Learning Resources:

NA

Offered: Fall and Spring, annually

Faculty assigned: Maher Berro, Sami Kiwan, Ahmad Shami, Rami Mahfouz.

ARCH201 – Architectural Drawing, 3 credits [1-4] (Implementation started in Summer 2017)

Course Description: This course is an introduction to the formal representation of architecture through orthographic projections and auxiliary drawings; proportion, plans, sections, elevations, isometric, axonometric, perspective, and shade & shadows. This course will also introduce students to the various tools and techniques of technical drawing using pencil and ink.

Course Goals & Objectives:

3. Recognize the scales of architectural drawings
4. Develop a correct set of interrelated 2D and 3D drawings
5. Illustrate complete orthographic drawings
6. Organize a composite presentation layout for a set of drawings

Student Performance Criterion/a addressed:

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Architecture Communication skills 40%
Drawing Presentation 40%
Accuracy and scales 20%

Prerequisites: None

Textbooks/Learning Resources:

Ching, Francis D.K. **Architectural Graphics**, Fourth Edition, Wiley, 2003
Yee, Rendow **Architectural Drawing: A Visual Compendium to Types and Methods**, Fourth Edition, Wiley, 2013

Paré, E.G., Loving, R.O., Hill, I.L. Paré, R.C. **Descriptive Geometry**, Ninth Edition, Prentice Hall, 1997

Zell, Mo, **Architectural Drawing Course**, Barron's, 2008

Offered: Summer, Fall and Spring annually

Faculty assigned: Namitta Merchak, May El-Hage, Roland Mitri, Joseph Kiprianos, Roula El Khoury, Farid Jreidini, Marie-Lyne Samaha, Georges Hakim.

ARCH351 – Digital Drawing, 3 credits [2-2] (Implementation will start in Fall 2017)

Course Description: This course specifically addresses architectural applications in digital graphics, for drafting of architectural plans, sections, elevations, 3D representations, and details. The course will familiarize students with techniques of 2D drafting and 3D modeling through manipulation of geometrical and free-form objects leading to the development of a complete project.

Course Goals & Objectives:

1. Reproduce digitally a set of architecture drawings
2. Apply correct digital drafting settings
3. Construct a set of drawings in 2D and 3D to represent an architecture project
4. Translate project drawings from 2D drafting to 3D modeling and vice versa
5. Organize an output presentation for an architecture project

Student Performance Criterion/a addressed:

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Digital Principles (2D/3D) 30%
Computer Drafting and Modeling 40%
Presentation 30%

Prerequisites: FND251 Digital Media and ARCH201 Architectural Drawing

Textbooks/Learning Resources:

Hamad, Munir **AutoCAD 2019 Beginning and Intermediate**. Mercury, 2019
Moss, Elise **AutoCAD 2019 Fundamentals**. SDC publications, 2018
Onstott, Scott **AutoCAD 2108 and AutoCAD LT 2018 Essentials**. SYBEX, 2017 (ebook)
Omura, George & Benton, Brian C. **Mastering AutoCAD 2018 and AutoCAD LT 2018**. Autodesk Official Press, SYBEX, 2017 (ebook)
Dix, Mark & Riley, Paul **Discovering AutoCAD 2017**. Peachpit Press, 2016 (ebook)
Bethume, James D. **Engineering Graphics with AutoCAD 2017**. Peachpit Press, 2016 (ebook)
Richard, Paul **Introduction to AutoCAD 2017: A Modern Perspective**. Peachpit Press, 2016 (ebook)

Offered: Summer, Fall and Spring annually

Faculty assigned: Joyce Himo, Farid Jreidini, Ayman Wehbeh.

ARCH352 – Digital Modeling, 3 credits [2-2] (New course – Implementation started in Spring 2018)

Course Description: This course expands on digital skills learned to cover renderings and advanced visualization of space related to design issues. The course will cover user-defined lighting and materials application in order to generate realistic 3D renderings, walk-through, parts in motion, and other animation techniques while enabling students to explore new software and digital design tools.

Course Goals & Objectives:

1. Highlight the visualization of architecture space through the use of rendering and animations
2. Simulate realistic rendered images of architecture projects
3. Develop animated presentation of architecture projects
4. Represent an output using post-production techniques

Student Performance Criterion/a addressed:

A.1 Professional Communication Skills: Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

Topical Outline:

Digital Principles (2D/3D) 30%

Computer Rendering and Animation 40%

Presentation 30%

Prerequisites: ARCH351 Digital Drawing

Textbooks/Learning Resources:

Derakhshani, Randi; Derakhshani, Dariush, *Autodesk 3DS MAX 2016: essentials*. Wiley, 2015

Cardoso, Jamie, *3D Photorealistic rendering: interiors & exteriors with V-RAY and 3DS MAX*. CRC Press, 2017

Offered: Summer, Fall and Spring annually

Faculty assigned: Camille Saad, Ayman Wehbeh, Jean Paul El Hachem, Marwan Bijjani.

Course Description

BUILDING SYSTEMS & TECHNOLOGY COURSES

ARCH311 – Structural Concepts, 3 credits [3-0] (Implementation started in Fall 2017)

Course Description: This course introduces basic principles of mechanics and structural analysis in order to come to an understanding of the behavior of structural systems and their implication on the built environment. Main structural concepts are reviewed, looking into forces, loads, and stress, as well as approaching questions of strain.

Graphical and numerical analysis of statically determined and undetermined members allow the students to apply and verify these concepts and investigate basic structural objects.

Course Goals & Objectives:

1. Outline principles of structural systems
2. Identify structural concepts involved in a given situation
3. Estimate loads and forces and the correspond dimensioning of basic structural objects.

Student Performance Criterion/a addressed:

B.5 Structural Systems: Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

Topical Outline:

Structural Basics 30%

Structural Calculations 40%

Structural Stability 30%

Prerequisites: MTH102 Calculus II, PHY111 Mechanics

Textbooks/Learning Resources:

Engineering Mechanics: Statics, by R.C. Hibbeler, Twelfth Edition, Pearson SI Edition, 2009

Mechanics of Materials, 5th Edition, by Beer, Johnston, and DeWolf, McGrawHill

R. C. Hibbeler, Mechanics of Materials, 8th Edition SI, Pearson, ISBN 978-981-06-809-6.

R.C. Hibbeler and K.B. Yap, 2013, Mechanics for Engineers: Statics, 13th Edition SI, Pearson.

Ramsey Dabby, Ashwani Bedi, 2012, Structure for Architects: A Primer, Wiley, ISBN: 978-0-470-63376-2.

Offered: Fall only, annually

Faculty assigned: Walid Haddad, Fatima El Meski, Roger Skaff.

ARCH421 – Materials and Methods of construction, 3 credits [2-2] (Implementation started in Fall 2018)

Course Description: This course focuses on the process of construction as fundamental to the process of architectural design. Main theories of construction are introduced along vernacular and historical examples, providing a foundation for the study of materials, their origin, meaning, properties, and methods of assembly. Construction materials and systems such as concrete, masonry, steel, and wood as well as their basic details and components are studied, along with the revision of their role as finishing materials for walls, floors, and ceilings.

Course Goals & Objectives:

1. Explain the different construction sequences and the methods involved.
2. Examine a selection of materials and their method of assembly in a given context.
3. Analyze the impact of construction materials/systems and their relevant details on architectural structure and form.

Student Performance Criterion/a addressed:

B.7 Building Envelope Systems and Assemblies: Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.8 Building Materials and Assemblies: Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

Topical Outline:

Site Works 20%

Building Systems 20%

Environmental Factors & Architectural Materials 20%

Building Envelope 20%

Structural Systems 20%

Prerequisites: ARCH332 Design Studio IV

Textbooks/Learning Resources:

Allen, Edward and Joseph Iano. *Fundamentals of Building Construction: Materials and Methods*. Sixth ed. Hoboken, NJ: Wiley & Sons, Inc, 2014.

Deplazes, Andrea, Ed. *Constructing Architecture: Materials, Processes, Structures; A Handbook*. Zurich: Birkhäuser, 2005.

Simmons, Olin, "Construction – Principles, Materials and Methods". J. Wiley & Sons

Offered: Fall and Spring, annually

Faculty assigned: Joseph Kiprianos, Per-Johan Dahl, David Awad.

ARCH422 – Climate & Energy, 3 credits [2-2] (Implementation started in Fall 2018)

Course Description: This course investigates issues of climate and energy and their ramification in architecture, exploring the notion of thermal comfort and the necessary integration in the design decision of environmental parameters such as the sun, wind, light, and water. Passive and active solutions are studied and analyzed using performance assessment tools, providing students with a comprehensive knowledge of sustainable design strategies.

Course Goals & Objectives:

1. Understand the notions of thermal comfort in architecture.
2. Identify sustainable design strategies and their impact on building form.
3. Evaluate different passive and active solutions.
4. Develop an adequate environmental system for a climate responsive design solution.

Student Performance Criterion/a addressed:

B.6 Environmental Systems: Ability to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

B.9 Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

Topical Outline:

Buildings and Mechanical Systems 50%

Solar Energy 30%

Innovative Technologies and Case Studies 20%

Prerequisites: None

Textbooks/Learning Resources:

DeKay, M. and Brown, G.Z., 2013. Sun, wind, and light: Architectural design strategies. John Wiley & Sons.

La Roche, P.M., 2017. Carbon-neutral architectural design. CRC Press.

McDonough, W. and Braungart, M., 2010. Cradle to cradle: Remaking the way we make things. North point press.

Moore, F. and McGraw-Hill architecture and urban planning series, 1993. Environmental control systems: Heating, cooling, lighting. New York: McGraw-Hill

Poldma, T., Talking up spaces, Exploring the Design Process, Fairchild Books, 2009

Offered: Fall and Spring, annually

Faculty assigned: Mohamad Araji, Wassim Bahr.

ARCH423 – Building Technology, 3 credits [2-2] (Implementation started in Spring 2019)

Course Description: This course focuses on the enclosure of the building and the various essential roles it assumes, mainly as interface between the external environment and the internal spaces. Appropriate selection of enclosure materials and systems of assembly, positioning of windows and doors, and roofing solutions, are explored in detail. This includes the study of thermal conductivity and use of weather control membranes, insulation layers, and flashing elements.

Course Goals & Objectives:

1. Compare various roles of building enclosures.
2. Develop a range of building enclosures and their assembly details
3. Use the detail documentation process in the production of an elaborated wall section drawing.
4. Use the detail documentation process in the production of a scaled 1/1 partial model

Student Performance Criterion/a addressed:

B.7 Building Envelope Systems and Assemblies: Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.8 Building Materials and Assemblies: Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

Topical Outline:

Architectural Materials and Finishes 40%

New Technologies 25%

Material Characteristics 20%

Detail Systems 20%

Prerequisites: ARCH421 Materials and Methods of construction

Textbooks/Learning Resources:

Deplazes, Andrea, **Constructing Architecture: Materials, Processes, Structures; A Handbook Fourth edition.** Birkhäuser, 2018.

Ching, Francis D.K. **Building Construction Illustrated, Fifth edition.** Wiley, 2014

Kolarevic, Branko, and Kevin R. Klinger. **Manufacturing Material Effects: Rethinking Design and Making in Architecture.** Routledge, 2008

Allen, Edwards & Iano, Joseph. **Fundamentals of Building Construction: Materials and Methods, Sixth edition.** Wiley, 2014

Watts, Andrew . **Modern Construction Handbook: Augmented Reality, Fifth edition.** Ambrea, 2016

Oxman, Rivka & Oxman, Robert, (guest-eds.), **The New Structuralism - Design, Engineering and Architectural Technologies.** Wiley, 2010

Offered: Spring only, annually

Faculty assigned: Marwan Zouein, Dara McPhee, Farid Jreidini.

ARCH424 – Building Services, 3 credits [2-2] (Implementation started in Spring 2019)

Course Description: This course introduces students to the basic physics principles and implications of environmental systems and building services. Methods of lighting and managing water are studied and designed, surveying different systems with their technical requirements and specifications. Issues of energy conservation are put forward in an effort to identify environmentally sound alternatives.

Course Goals & Objectives:

1. Demonstrate an adequate selection of methods of water and sanitary management in a given context.
2. Demonstrate an adequate selection of methods of lighting and electrical management in a given context
3. Develop the detailed documentation of proposed solutions.

Student Performance Criterion/a addressed:

B.6 Environmental Systems: Ability to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

B.9 Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

Topical Outline:

Electrical and Lighting Design 35%

Water & Plumbing Design 35%

Energy Conservation 30%

Prerequisites: None

Textbooks/Learning Resources:

Kemi Adeyeye. Water Efficiency in Buildings. John Wiley & Sons, UK, 2014.

LEED v4 for Neighborhood Development. USGB, 2018.

Norbert Lechner. Heating, Cooling, Lighting. Sustainable Design Methods for Architects. John Wiley & Sons, New Jersey, third edition, 2015.

Norbert Lechner. Plumbing, Electricity, Acoustics. Sustainable Design Methods for Architects. John Wiley & Sons, New Jersey, 2012.

Paul Tymkow, Savvas Tassou, Maria Kolokotroni, Hussam Jouhara. Building Services Design For Energy Efficient Buildings. Taylor & Francis, Oxon, 2013.

Technical Guidance Manual for Sustainable Neighborhoods. USGBC, 2013.

Offered: Spring only, annually

Faculty assigned: Michel Franics, Mohamad Araji, Wassim Bahr.

ARCH411 – Structural Design, 3 credits [3-0] (Implementation started in Spring 2019)

Course Description: This course explores synergies of structure, form, and material, and considers structure as integral to the creative design process. Main systems and components are studied and estimated, evaluating the selection of an appropriate structural system, taking in account environmental factors and aspects of building construction. Material efficiency, life cycle, cost and code requirements are also reviewed.

Course Goals & Objectives:

1. Integrate structural aspects in a design thinking process
2. Explain adequate selection of a structural system and its implications.
3. Relate structural solutions to issues of sustainability and code requirements.

Student Performance Criterion/a addressed:

B.5 Structural Systems: Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

Topical Outline:

Structural Systems 30%

Structural Design 40%

Materials 30%

Prerequisites: ARCH311 Structural Concept

Textbooks/Learning Resources:

James Ambrose, Patrick Tripeny, 2012, Building Structures, 3rd Edition, John Wiley & Sons, Hoboken, New Jersey.

R.C. Hibbeler and K.B. Yap, 2013, Mechanics for Engineers: Statics, 13th Edition SI, Pearson.

Ram S. Gupta, 2011, Principles of Structure Design: Wood, Steel, and Concrete, CRC Press, ISBN 978-1-4200-7339-3.

Ramsey Dabby, Ashwani Bedi, 2012, Structure for Architects: A Primer, Wiley, ISBN: 978-0-470-63376-2.

Schierle, G. G., c2012, Structure and design, United States : Cognella/University Readers.

Offered: Spring only, annually

Faculty assigned: Fatima El-Meski, Roger Skaff.

ARCH511 – Advanced Building Systems, 3 credits [2-2] (Implementation will start in Spring 2020)

Course Description: This course offers insights into advanced construction solutions, exploring innovative and hybrid structural systems such as wood, steel and high performance concrete, and contemporary finishing materials. Topics such as efficiency, flexibility, adaptability, and sustainability are investigated through an in-depth study of historical and contemporary cases of construction solutions. The sessions emphasize interdisciplinary work by inviting experts from other fields to present unconventional and innovative solutions recently introduced in architecture.

Course Goals & Objectives:

1. Analyze the impact of unconventional construction materials/systems on architectural structure and form.
2. Integrate contemporary construction issues (such as sustainability, efficiency and adaptability...) into architectural details.
3. Develop advanced detailed drawings and models for innovative solutions.

Student Performance Criterion/a addressed:

B.5 Structural Systems: Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.7 Building Envelope Systems and Assemblies: Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.8 Building Materials and Assemblies: Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse

Topical Outline:

Advanced Structural Systems 50%

Innovative Solutions 30%

Sustainability 20%

Prerequisites: ARCH423 Building Technology and ARCH411 Structural Design

Textbooks/Learning Resources:

Offered: Spring only, annually

Faculty assigned:

Course Description

PROFESSIONAL COURSES

ARCH481 – Construction Documents, 4 credits [1-4] (Revised course – Implementation started in Summer 2018)

Course Description: This course prepares students to efficiently realize their projects through the elaboration of complete set of execution drawings with introduction to specifications and Bill of Quantities.

Course Goals & Objectives:

1. Produce a complete set of architectural execution drawings at the appropriate scales.
2. Demonstrate decision making in construction system, material and finishes selection.
3. Develop specifications and bill of quantities as tender documents.

Student Performance Criterion/a addressed:

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

D.1 Stakeholder Roles in Architecture: Understanding of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.

Topical Outline:

Construction Development 30%
Architectural Materials & Methods 30%
Accuracy & Detailing 25%
Specifications 15%

Prerequisites: ARCH432 Design Studio VI

Textbooks/Learning Resources:

Liebing, Ralph W. Architectural Working Drawings, 4th Edition. John Wiley & Sons, New York: 1999

MasterFormat Numbers & Titles - www.csinet.org

National CAD Standards - www.nationalcadstandards.org

Rosen, Harold J. & Kline, Mark. Construction Specification Writing Principles and Procedures, 6th Edition. John Wiley & Sons, New York: 2010

Styles, Keith & Bichard, Andrew. Working Drawing Handbook, 4th Edition. Architectural Press, Oxford: 2004

Wakita, Osamu A. Hon. AIA, Bakhoun, Nagy R. & Linde, Richard M. AIA. The Professional Practice of Architecture Working Drawings, 4th Edition. John

Wiggins, Glen E. AIA. A Manual of Construction Documentation. Whitney, New York: 1989

Wiley & Sons, New York: 2012

Offered: Summer only, annually

Faculty assigned: Omar Harb, Farid Jreidini, David Awad, George Hakim, Carlos Rizk, Joyce Himó

ARCH581 – Professional Practice I, 3 credits [3-0] (New Course – Implementation started Fall 2017)

Course Description: This course is a study of the local building and urban codes, and offers an introduction to international codes (USA, Europe and Regional). The course will also cover the architect's responsibility in public and private projects in relation to safety codes and the ensuing legal responsibilities.

Course Goals & Objectives:

1. Outline the requirements of local and international building and urban codes.
2. Explain the architect's responsibilities involved in the profession.
3. Demonstrate understanding of safety and legal responsibilities towards public
4. Recognize the ethical issues related to professional conduct.

Student Performance Criterion/a addressed:

D.4 Legal Responsibilities: Understanding of the architect's responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.

D.5 Professional Conduct: Understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

Topical Outline:

Local and Regional Building Codes 25%

International Codes 25%

Safety and Legal Responsibility 25%

Contracts and Documents 25%

Prerequisites: ARCH431 Design Studio V

Textbooks/Learning Resources:

Caroma, M., Heath, T., Oc T., & S.Tiesdell. c2004. Public Places-Urban Spaces: The Dimensions of Urban Design. Elsevier, UK. Architectural Press.

D. K. Ching, Francis.c2016. Building Codes Illustrated, 5th edition. Hoboken, NJ. Wiley.

European Commission. c1990. Booklet by European Commission: The European construction sector – A global partner.

European Commission. c1993. JRC Scientific and Policy Report: Eurocodes: Background & Applications. Design of Steel Buildings. Worked examples.

LeGates, Richard, & Stout, Frederic (eds.). Cc2007. The City Reader, 4th edition. New York, NY. Routledge.

Stein, Jay M. (ed.). c1995. Classic Readings in Urban Planning. New York, NY. Mc Graw-Hill.

U.S. Green Building Council. c2013. LEED Reference Guide for Building Design and Construction.

Washington. USGBC. Available online: https://www.uncp.edu/sites/default/files/BDC_FINAL.pdf.

U.S. Green Building Council. c2013. LEED V4 User Guide. Washington. USGBC. Available online: <http://www.cabrillo.edu/~msoik/3/LEED%20v4%20guide.pdf>.

Offered: Fall only, annually

Faculty assigned: Roger Skaff, Graziella Abi Fares, Sawsan Saridar

ARCH582 – Professional Practice II, 3 credits [3-0] (New Course – Implementation started in Spring 2018)

Course Description: This course introduces the business aspects of the design practice, through the exploration of the financial, legal, and managerial components. It covers contract negotiations, marketing design services, as well as the managing of the client and contractor relationships. The course will introduce quality, economic, and time management principles of design projects; financing, budgeting, ethic – social and legal responsibility.

Course Goals & Objectives:

1. Originate a business plan and structure for starting a practice
2. Assess project conditions to recommend types of contractual agreements.
3. Examine the fundamentals of project financing and building costs.

Student Performance Criterion/a addressed:

B.10 Financial Considerations: Understanding of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs

D.2 Project Management: Understanding of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and recommending project delivery methods.

D.3 Business Practices: Understanding of the basic principles of a firm's business practices, including financial management and business planning, marketing, organization, and entrepreneurship.

Topical Outline:

Management Principles 30%

Contracts and Documents 45%

Finance and Budgeting 25%

Prerequisites: ARCH581 Professional Practice I

Textbooks/Learning Resources:

Greg Winkler, Gary C. Chiumento, c2009, Construction administration for architects, New York: McGraw-Hill.

Project Management Institute, c2013, A Guide to the Project Management Body of Knowledge (PMBOK)-4th edition, Newtown Square, Pennsylvania: Project Management Institute

The American Institute of Architects, c2009. The architecture student's handbook of professional practice - 14th ed., Hoboken, N.J.: John Wiley & Sons Inc.

Offered: Spring only, annually

Faculty assigned: Roger Skaff, Graziella Abi Fares, Sawsan Saridar.

ARCH501 – Internship I, 4 credits [0-250] (Revised course – Implementation will start in Summer 2020)

Course Description: This course is an introduction to the professional practice, the ability to work as part of the team, and the ability to work for the public and the private. The course involves a documented practical experience (250 work hours) in a professional firm, approved by the Department.

Course Goals & Objectives:

1. Take part in a multidisciplinary team on a design project.
2. Demonstrate professional skills in a construction process.
3. Fulfill the Internship report and training log requirements

Student Performance Criterion/a addressed:

B.3. Codes and Regulations: Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

D.5 Professional Conduct: Understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

Topical Outline:

Team Work, Ethical & Legal Responsibilities and Professional Development 100%

Prerequisites: ARCH432 Design Studio VI

Textbooks/Learning Resources: N/A

Offered: Summer only, annually

Faculty assigned:

ARCH502 – Internship II, 4 credits [0-250] (Revised course – Implementation will start in Fall 2020)

Course Description: This course is an introduction to site construction and project management, to develop shop drawings and to work with multidisciplinary environment. The course involves a documented practical experience (250 work hours) in a professional firm, approved by the Department.

Course Goals & Objectives:

1. Take part in a multidisciplinary team on a design project.
2. Demonstrate professional skills in a construction process.
3. Fulfill the Internship report and training log requirements

Student Performance Criterion/a addressed:

B.3. Codes and Regulations: Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

D.5 Professional Conduct: Understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

Topical Outline:

Team Work, Ethical & Legal Responsibilities and Professional Development 100%

Prerequisites: ARCH532 Design Studio VIII, ARCH501 Internship I

Textbooks/Learning Resources: N/A

Offered: Fall only, annually

Faculty assigned: