

COURSE DESCRIPTIONS

Course Title: Design studio I-A, FND 231, 3 CREDITS

Course Descriptions: 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 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, axiality, 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 addressed (list number and title):

- A.3. Visual Communication Skills
- A.6. Fundamental Design Skills
- A.8. Ordering Systems Skills

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

Design Principles 35%

Drawing and other representation Skills 35%

Critical analysis and Interpretation 30%

Prerequisite: None

Textbooks/ Learning Resources:

Ocvirk, Otto G. (Ed). Art Fundamentals: Theory and Practice, 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: Rashed Bohsali, Ghassan Ghazal, Christine Kettaneh, Guitta Melki, Susan Molesky, Arwa Seiffeddine, Hanibal Srouji

Course Title: Design Studio I-B, FND 232, 3 credits

Course Descriptions: 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 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 addressed (list number and title):

- A.3. Visual Communication Skills
- A.6. Fundamental Design Skills
- A.8. Ordering Systems Skills

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

3D Apprehension 35%
Craftsmanship Skills 35%
Critical analysis and Interpretation 30%

Prerequisite: None

Textbooks/ Learning Resources:

Basic Visual Concepts and Principles; Charles Wallschlaeger, Cynthia Basic- Synder; WCB, 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: Ramona Abdo, Silia Abou Arbid, Niloufar Afnan, Chahid Akoury, Hani Asfour, Rashed Bohsali, Lee Frederix, Maria Matloub, Guitta Melki, Susan Molesky, Arwa Seiffeddine

Course Title: Technical Graphics, ARC/DES/GRA 241, 2 credits

Course Descriptions: This course is an introduction to the basics of formal representation, with two-dimensional representation of objects through orthographic projections and auxiliary drawings, isometric and axonometric drawings, and the basics of shade and shadows. This studio will also introduce students to the various tools and techniques of technical drawing in pencil and ink.

Course Objectives:

1. To introduce manual drafting and presentation techniques
2. To introduce the basics of orthographic projection
3. To learn the basics of shade and shadow projection
4. To learn various rendering techniques in pen and ink [graphite, charcoal, pastels colored pencils, ink, markers and water color]
5. To emphasize on craftsmanship and layout presentations

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
A.4. Technical Documentation

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

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

Prerequisite: None

Textbooks/ Learning Resources: None

Offered: Fall and Spring, annually

Faculty assigned: Georges Hakim, Alexandra Kallab, Antoine Lahoud, Namitta Merchak, Roland Mitri, Jamal Radwan Ali Ahmad

Course Title: Drawing I, ART 221, 3 credits

Course Descriptions: This course is a study of the basic drawing techniques in various media with regard to landscape, still life, and the human figure.

Course Objectives:

1. Reproduce various subject areas and translate them accurately, with correct scales and proportions
2. Reproduce drawings in precise lines and contours
3. Illustrate the use of shadows and tone values
4. Demonstrate coordination between the hand and the eye
5. Employ correct perspective illustrations

Student performance Criterion addressed (list number and title):

A.3. Visual Communication Skills

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

Communication skills 40%

Graphic representation 40%

Accuracy and scales 20%

Prerequisite: None

Textbooks/ Learning Resources: None

Offered: Fall, Spring and Summer

Faculty assigned: Chawki Chamoun, Bassam Geitani, Ghassan Ghazal, Teline Hammoud, Azza Hussein, Mona Jabbour, Donna Kdouh, Betina Khoury Badr, Gretta Khoury, Ruth Maalouf, Fadi Mattar

Course Title: Design studio II, FND 236, 6 CREDITS

Course Descriptions: This studio is a sequence to Studio I-A and I-B and constitutes a master studio in foundation, where the techniques and methods acquired in the previous studios are taken to a higher level in a project that emphasizes process thinking in design, effectively synthesizing between two-and three- dimensions. Projects should allow each student to develop mature works that combine analytical thinking, interpretation, and experimentation in design. Formal exercises involve structural analysis, dissection, assembly and transformation, with the objective of creating elaborate objects that move beyond simple repetition of acquired types or 'models', and reflect articulate thought, intuitive understanding of phenomena and deductive reasoning. Students are expected to develop their faculties of creative interpretation, using a multiplicity of design tools simultaneously, from manual crafts / model making to technical sketching and precision drafting. Rather than developing independent objects, the aim of this studio is to emphasize on process in design and the generation of multiple variations on a single theme.

Course Objectives:

1. To further develop three-dimensional formal studies, with an emphasis on process in design
2. To develop critical and analytical skills within a clear methodological framework involving analytical and conceptual thinking
3. To further develop the student's own capacity for creative exploration of original ideas, for critical interpretation and translating ideas into forms
4. To master manual craftsmanship in design, using the shop as a laboratory for the development of formal elements in wood, metal and other materials
5. To teach students to draw conceptual and conventional technical drawings

Student performance Criterion addressed (list number and title):

- A.3. Speculative-Interpretive / Reflective-Deductive Reasoning Skills
- A.6. Implementation of a Methodical Study Process Skills
- A.8. Investigation in Forms, Structures and Phenomena Skills

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

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

Prerequisite: DES IA – DES IB

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: Ramona Abdo, Silia Abou Arbid, Niloufar Afnan, Chahid Akoury, Hani Asfour, Rashed Bohsali, Lee Frederix, Ghassan Ghazal, Christine Kettaneh, Maria Matloub, Susan Molesky, Arwa Seiffeddine, Hanibal Srouji.

Course Title: Design Culture, FND 281, 2 Credits

Course Descriptions: 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 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 addressed (list number and title):

- A.1. Communication Skills
- A.9. Historical Traditions and Global Culture
- A.10. Cultural Diversity

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

Current Trends 40%
Design Cultural Understanding 60%

Prerequisite: 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 & Philipe 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, Spring

Faculty assigned: Niloufar Afnan, Chahid Akoury, Hani Asfour, Lee Frederix, Cynthia Issa, Danielle Kattar, Gulnar Nader, Anna Ogden-Smith, Amal Saade

Course Title: Photography I PHO 211, 3 Credits

Course Descriptions: This course is an introduction to the basic photographic methods. It covers an applied study in pictorial composition, and darkroom procedures, in relation to advertising.

Course Objectives: Student performance Criterion addressed (list number and title):
A.3. Visual Communication Skills

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

Technical skills 50%
Visual Perceptions 50%

Prerequisite: None

Textbooks/ Learning Resources: Offered:

Faculty assigned: Bassam Lahoud, Rania Mouawad, Albert Saikaly, Christina Rahme, Carlos Ghoussoub, Abdallah Sfeir, Maroun Akiki

Course Title: Sketching ARC/DES/GRA 240, 2 Credits

Course Descriptions: This general course on sketching stresses freehand drawing techniques with pencil, charcoal, as well as the basics of watercolor rendering.

Course Objectives:

1. To develop their perception in observational skills.
2. To practice analytical thinking in sighting techniques.
3. To use linear perspective for an accurate rendering of space.
4. To explore personal expression in using the elements and principles of design.
5. To use the terminology in the language of criticism.
6. To develop the ability to use a wide range of media

Student performance Criterion addressed (list number and title):

A.3. Visual Communication Skills

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

Communication skills 40%

Graphic representation 40%

Accuracy and scales 20%

Prerequisite: None

Textbooks/ Learning Resources:

Howard I Smagula. Creative Drawing. Mc Graw Hill- New York. Bert Dodson, Keys to drawing- North Light Books, Ohio.

Offered: Fall, Spring and Summer

Faculty assigned: Youssef El Helou, Mona Jabbour, Antoine Lahoud, Fadi Mattar, Marie-Lyne Samaha, Youssef Shawki

Course Title: Design Studio III. ARC 331, 6 credits

Course Descriptions: This studio builds upon and extends the theoretical knowledge gained in the foundation studios through a concrete application of conceptual and perceptual analysis to problems of small and medium scale in design, and the exploration of the limits and means of developing concepts into architectural form. The studio will emphasize on the development of representational tools in translating ideas into architectural drawings and models, specifically stressing on the importance of drawing as a design tool.

Course Objectives:

1. To develop the students' ability to translate ideas into forms by working on projects of small to medium scale that develops their perceptual and theoretical approach to form making
2. To develop the students analytical and synthetic skills through drawing and model-making as means of visualization, experimentation and formalization
3. To develop the students' understanding of scale, proportion, rhythm and their application in the development of spatial forms
4. To develop the students' understanding of spatial relations, specifically the relationship between exterior form and interior space as a basis for the development of a coherent project
5. To develop the students' cultural knowledge of architectural precedents and the interrelation between practical design on the one hand, and its historical and theoretical dimensions on the other hand

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
- A.4. Technical Documentation
- A.5. Investigative Skills
- B.1. Pre-Design

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

Architectural Precedents 15%
Analytical Skills 30%
Architectural Design 40%
Architectural Presentation 15%

Prerequisite:

ARC/DES/GRA 233, Design Studio II-A, ARC/DES/GRA 234, Design Studio II-B

Textbooks/ Learning Resources:

Gaston Bachelard, The Poetics of Space, Beacon Press, 1969
Georges Perec, Species of Spaces, Galilée, 1974
Raymond Queneau, Exercices de Style, 1947
Italo Calvino, Invisible Cities, 1972
Peter Zumthor, Thinking Architecture, Basel 2010

Offered: Fall only, annually

Faculty assigned: Jean-Marc Abcarius, Ramona Abdo, Charbel Abi Azar, Hani Asfour, Vanessa Damrous, Wissam Khairallah, Cindy Menassa, Igor Piraza Curiel, Erhard Schuetz

Course Title: Computer Graphics I. ARC 351, 2 credits

Course Descriptions: This course specifically addresses the architectural applications in computer graphics, for drafting of architectural plans, sections, elevations and details.

Course Objectives:

1. To learn the principles of computer vector drawings and its application in design
2. To master one of the major computer drafting softwares used in design such as AutoCAD
3. To understand the basic advantages of computer drafting in creating and controlling drawing libraries and grouping repetitive entities (blocks, layers, styles, layouts)
4. To develop the ability to manage scale and scaled drawing presentations within a system where scale and space are unlimited
5. To enhance the students' sensitivity in project presentation by controlling the values of line-weights, line types, rendering hatches, etc

Student performance Criterion addressed (list number and title):

A.4. Technical Documentation

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

2D Principles 20%

2D Computer Drafting 30%

Drafting Sensitivity 30%

Rendering 20%

Prerequisite: ARC251

Textbooks/ Learning Resources:

Adobe Photoshop Adobe Illustrator AutoCAD

Offered: Fall, Spring and Summer

Faculty assigned: Rania Nasr El-Zouki, Samer Farah, Joyce Himo, Farid Jreidini, Camille Saad

Course Title: Technical Graphics II, ARC 341, 3 credits

Course Descriptions: Specific application of technical drawing to architectural plans, sections and elevations, with two-dimensional and three-dimensional representations, axonometric, perspective, shades & shadows applied to two-dimensional, three-dimensional and perspective drawings.

Course Objectives:

1. To provide students with the necessary architectural communication skills
2. To develop the students' understanding of graphical presentation as it applies to architectural drawings
3. To develop the students' ability to manually manipulate drafting tools, and work with both ink and lead, on various paper materials, such as tracing paper and white cardboard
4. To develop the students' ability to draft architectural drawings at different scales depending on detail requirements
5. To develop the students' sensitivity in project presentation by learning the values of different line-weight, symbols and rendering techniques

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
A.4. Technical Documentation

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

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

Prerequisite: ARC241

Textbooks/ Learning Resources:

Architects' data, Ernst and Peter Neufert. - 3rd ed. / edited by Bousmaha Baiche and Nicholas Walliman, Oxford, U.K. : Blackwell Science, c2000
Design graphics, C. Leslie Martin
Architectural design graphics / Marco Ciriello, New York : McGraw-Hill, c2002
Engineering drawings and graphic technologies – French and Vierck 14th Edition

Offered: Fall, Spring and Summer

Faculty assigned: Nataly Abu Reslan, Juliana Aouad, Chantal El-Hayek, Roula El-Khoury, Georges Hakim, Joseph Kiprianos, Roland Mitri, Jamal Radwan, Carlos Rizk, Ghida Zein

Course Title: History of Architecture I, ARC 371, 3 credits

Course Descriptions: This course will trace the development of Western architecture from the Greek and Roman period to the Byzantine, Gothic, and Italian Renaissance, Late Renaissance and Baroque, with the analysis of important icons and landmarks in art and architecture, and the principles, technical developments, and ideologies underlying these various movements. The course will also study the importance of cultural ideas and ideals and their relation to the development of aesthetic forms in particular and civilization in general.

Course Objectives:

1. To develop a comprehensive understanding of the development of Western architecture from the Greek to the Baroque period
2. To develop the students' awareness of the historical development of architecture in relation to aesthetic, political, social, and technological parameters
3. To develop a clear understanding of the distinguishing characteristics of each style or period in terms of construction methods and building techniques
4. To develop a clear understanding of iconic buildings and structures which played an essential role in the development of architecture?
5. To encourage the students' curiosity, critical thinking and interest in the history of architecture

Student performance Criterion addressed (list number and title):

- A.1. Communication Skills
A.9. Historical Traditions and Global Culture

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

History of Ancient Architecture 50%
Architectural Styles 20% Iconic Buildings 20%
Critical Thinking 10%

Prerequisite: None

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: Phaidon, 1963
Frankl, P. *Gothic Architecture*. New Haven: Yale University Press, 1990
Kostof, S., *A History of Architecture*. New York: Oxford University Press, 1985
Norberg-Schultz, O. *Baroque Architecture*. New York: Abrams, 1971
Pevsner, N. *A History of Building Types*. Princeton: Princeton University Press, 1976
Wittkower, R. *Art and Architecture in Italy, 1600-1750*. Harmondsworth: Penguin, 1958.

Offered: Fall only, annually

Faculty assigned: Alia Fares, May Farhat, Abdallah Kahil, Tony Nasrallah

Course Title: Theory I, ARC 361, 2 credits

Course Descriptions: This course introduces major aesthetic theories in the field of design, with an investigation of the relations between these theories and physical space in its aesthetic, social and cultural significance, examining the ideological frameworks behind paradigmatic changes and movements in aesthetics and their effects on the field of design.

Course Objectives:

1. To introduce students to the basics of the architectural language through a review of architectural principles as organization, rhythm, harmony, scale, proportion, hierarchy, etc.
2. To initiate students into critical reading of selected texts as a basis for the development of a personal theoretical position
3. To develop the students curiosity regarding issues of contemporary interest and to initiate them into research as a means for personal learning and development of a cultural background

Student performance Criterion addressed (list number and title):

- A.1. Communication Skills
A.10. Cultural Diversity

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

Architectural Principles 50%

Critical Reading 30%

Research 20%

Prerequisite: None

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)

Adolf Loos, "Ornament and Crime" in *Architecture and Design in Europe and America, 1750-2000*, (Wiley-Blackwell, 2006)

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: Yasmina El Chami, Karim Fakhry, Elie Harfouche, Fabiano Micocci, Marwan Zouein

Course Title: Design Studio IV, ARC 332, 6 credits

Course Descriptions: This studio further elaborates the process of theoretical investigation of space, with the emphasis on the communication of ideas through different representational models and tools. Problems at this stage will continue the study of small to medium scale projects with emphasis on basic principles of spatial design. References and case studies of canonical works in modern design may serve as theoretical background in the continuing development of a theoretical foundation. The elaboration of a complete set of architectural drawings for the final design plans/sections/elevations] in addition to models will be expected at this stage.

Course Objectives:

1. To develop the students' ability to translate ideas into forms by working on projects of small to medium scale in an actual site, with particular attention to the issues of context, topography, and other constraints
2. To develop the students' technical skills to produce a complete set of architectural drawings that demonstrates an understanding of the means and conventions of architectural representation
3. To develop the students analytical, perceptual, and synthetic abilities through both drawing and model-making as means of visualization, experimentation and formalization
4. To further develop the students understanding of scale, proportion, rhythm and their application in the development of an architectural project
5. To elaborate on the students awareness of the complex relationship between external form and interior space, and to further develop the tools of articulating and representing a design project both in its external form and internal dispositions

Student performance Criterion addressed (list number and title):

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|------------------------------|--------------------|
| A.2. Design Thinking Skills | B.1. Pre-Design |
| A.4. Technical Documentation | B.2. Accessibility |
| A.5. Investigative Skills | B.4. Site Design |
| A.7. Use of Precedents | |

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

Architectural Precedents 15%

Analytical Skills 30%

Architectural Design 40%

Architectural Presentation 15%

Prerequisite: ARC331

Textbooks/ Learning Resources:

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

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

Sustainable architecture and urbanism: concepts, technologies, examples, Dominique Gauzin-Müller, Birkhauser, 2002

Offered: Spring only, annually

Faculty assigned: Charbel Abi Azar, Stefano Corbo, Vanessa Dammous, Wissam Khairallah, Antoine Lahoud, Maha Nasrallah, Igor Peraza Curiel

Course Title: Computer Graphics II, ARC 352, 2 Credits

Course Descriptions: This course expands on the skills learned to cover new applications for surface and solid modeling, as well as rendering, material library, applications of light leading to the development of complete projects rendering.

Course Objectives:

The objectives of the course are to provide the students with an understanding and practical experience of 3D computer modeling through the:

1. Learn the principles of computer 3D modeling drawings and its usage related to design profession.
2. Learn the usage of 3D tools of a computer drafting software such as AutoCad
3. Enhance the sensitivity in the project presentations by controlling the applications of materials textures and lights as well as visual appearance.
4. The ability to accentuate the use of the still images as isometrics and perspectives VS. the concept of moving formats as walkthrough and animations.

Student performance Criterion addressed (list number and title):

- A.4. Technical Documentation
A.8. Ordering Systems Skills

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

3D Modeling Principles 30%
3D Computer Drafting 30%
Drafting Sensitivity 20%
Rendering and Animation 20%

Prerequisite: ARC352

Textbooks/ Learning Resources:

Mastering AutoCAD by George Omura
AutoCAD student's edition by Autodesk
Illustrated AutoCAD 2008 Quick References by Ralph Grabowski
AutoCAD for interior Design and Space Planning by Beverly L. Kirkpatrick, BFA, NCIDQ,
Adjunct Faculty, East field College
Inside AutoCAD

Offered: Spring and Summer

Faculty assigned: Joyce Himo, Farid Jureidini, Moustapha Saleh Moussa, Ayman Wehbe

Course Title: Technical Graphics III, ARC 342, 3 Credits

Course Descriptions: This course covers the translation of the technical drawings of canonical projects into three-dimensional architectural models with different materials and techniques, and the development of the full set of corresponding architectural drawings (plans, sections, and elevations) at appropriate scales.

Course Objectives:

1. To provide students with the necessary model making and 3D skills as a means to properly and creatively communicate their designs
2. To understand the different applications of 2D vs. 3D architectural drawings by differentiating between orthographic paraline drawings and perspective presentations
3. To enhance 3D model construction techniques by executing partial shapes at different scales
4. To enhance the students' sensitivity in project presentation by learning the properties of different model making materials and mastering various techniques of model making
5. To properly build one complete 3D model based on an actual building by a renowned architect on a scale larger than 1/75

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
A.4. Technical Documentation

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

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

Prerequisite: ARC341

Textbooks/ Learning Resources:

AutoCAD Photoshop Illustrator

Offered: Spring , annually

Faculty assigned: Stephanie, Bashir, Vanessa Dammous, Samer Farah, Georges Hakim, Farid Jureidini, Sophie Khayat, Roland Mitri, Candice Naim, Ramzi Najjar, Camille Saad, Moustapha Saleh Moussa

Course Title: History of Architecture II, ARC 372, 2 credits

Course Descriptions: This course will trace the developments in Architecture from Neo-Classicism, in the Eighteenth the seminal projects and buildings that characterized these developments and their subsequent transformations in Post-Modernism, Deconstruction and later trends.

Course Objectives:

1. To develop a comprehensive understanding of the development of Modern Architecture from the Nineteenth to the Twentieth century
2. To develop the students' awareness of the historical development of architecture in relation to aesthetic, political, social, and technological parameters
3. To develop the students' understanding of the technological innovations in construction technologies and their effects on the development of modern architecture
4. To develop the students' knowledge of iconic buildings or structures that left a mark on the development of Modern Architecture
5. To develop the students' curiosity, critical thinking and interest in Modern Architecture

Student performance Criterion addressed (list number and title):

- A.1. Communication Skills
A.9. Historical Traditions & Global Culture

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

History of Modern Architecture 50%
Technology & Architectural Development 20%
Iconic Buildings 20%
Critical Thinking 10%

Prerequisite: None

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
Colquhoun, Alan. *Essays in Architectural Criticism: Modern Architecture and Historical Changes*, Cambridge, Mass. 1981
Frampton, Kenneth. *Modern Architecture, a Critical History*, London, 1980; 1992
Giedion, Sigfried. *Space, Time, and Architecture*, 1967
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. Harmondsworth: Penguin Books, 1968
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: May El-Hage, Abdallah Kahil, Tony Nasrallah

Course Title: Theory II, ARC 363, 2 credits

Course Descriptions: This course examines in depth the ideologies behind modern and post-modern culture and the influence of contemporary theories on the architectural and design cultures, with a thematic approach that deals with specific aspects of contemporary practice.

Course Objectives:

1. To expose students to the major architectural theories of the Twentieth century by covering canonical texts spanning the period of development of Modern Architecture
2. To further develop the students' critical and analytical skills through comparative discussions of different theoretical positions
3. To further develop the students' interest in reading and research as creative activities and as means for the development of a personal cultural background

Student performance Criterion addressed (list number and title):

- A.1. Communication Skills
- A.10. Cultural Diversity
- A.11. Applied Research

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

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

Prerequisite: None

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

Offered: Spring only, annually

Faculty assigned: Louisa Bravo, Karim Fakhry, Elie Harfouche

Course Title: Building systems I, ARC 311, 3 credits

Course Descriptions: This course is an introductory course to the basic laws of equilibrium, covering forces on particles, bodies, and structures or assemblage of elements, simple algebraic applications of the equations of equilibrium in 1-D and 2-D with free body diagram analysis. The course will include experimental investigation of the stability of structures (solid object, beams, frames, trusses, simple buildings) and the different ways to support gravity and other loads by vertical transfer and lateral transfer of forces. It will also include an introduction to the concept of compressive and tensile uni-axial stresses in structural members and to internal forces in beams, shear and moment diagram concepts, with empirical investigation of beam bending.

Course Objectives:

To develop the understanding of how forces act and interact with basic structural components and how to account for loads and their effects on the structural components.

Student performance Criterion addressed (list number and title):

B.9. Structural Systems

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

Structural Basics 30%

Structural Calculations 40%

Structural Stability 30%

Prerequisite: MTH102 Calculus II, PHY111 Mechanics

Textbooks/ Learning Resources:

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

Offered: Summer only, annually

Faculty assigned: Camille Issa, Bassam Daher, Robert Farha

Course Title: Design Studio V, ARC 431, 6 credits

Course Descriptions: This studio will deal with projects that examine problems of different structures and materials, and focus on building technology, building program, environmental and site factors, as essential parameters in the development and resolution of a design project. The studio will be given in correlation with Building Technology courses in order to reinforce the relationship of conceptual design to materials and construction techniques, and as means to give concrete form to design projects.

Course Objectives:

1. To develop the students' ability to deal with a complex architectural project in relation to site, program, and structural systems and to apply the knowledge gained in building technology courses
2. To develop the students' knowledge of different materials, construction techniques, and structural systems, and their interrelation in the development of a design project
3. To develop the students' research into materials and techniques, and their application in the design process
4. To further develop the students' presentation skills through detailed drawings and models, showing materials, structural systems and construction details in addition to technical documentation
5. To develop the students cultural knowledge of architectural precedents through personal research and the analytical study of significant projects as a basis for the development of design proposals

Student performance Criterion addressed (list number and title):

- | | |
|--------------------------------|--------------------------------------|
| A.2. Design Thinking Skills | B.2. Accessibility |
| A.5. Investigative Skills | B.8. Environmental Systems |
| A.11. Applied Research | B.10. Building Envelope Systems |
| A.4. Technical Documentation | B.12. Building Material & Assemblies |
| A.7. Use of Precedents | B.1. Pre-Design B.4. Site Design |
| B.4. Site Design | B.9. Structural Systems |
| B.11. Building Service Systems | C.1. Collaboration |

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

- Architectural Precedents 10%
Architectural Design 35%
Structural System 20%
Materials and Techniques 20%
Architectural Presentation 15%

Prerequisite: ARC332 Design Studio IV

Textbooks/ Learning Resources:

- Bloome, Harold: *The Anxiety of Influence*, Oxford University Pres, New York/Oxford 1997
Eisenman, Peter: *Ten Canonical Building 1950-2000*, Rizzoli, New York 2008
Shields, David: *Reality Hunger – a manifesto*, Alfred A. Knopf, New York 2010, or Hamish Hamilton / Penguin Books, London 2010

Offered: Fall only, annually.

Faculty assigned: Elie Harfouche, Issam Barhouch, Richard Douzjian, Ahmad Sharif Khouja, David Kulby, Igor Peraza Curiel, Marwan Zouein

Course Title: Building Technology I, ARC 421, 2 credits

Course Descriptions: Overview of the major components of a building (foundation, walls, openings, roof, floors) and their interrelation through construction. Analysis of the different construction elements (structure, bearing walls, envelope, components) with their variation in materials, in addition to the study of the different techniques used for the insulation of buildings.

Course Objectives:

1. Study of site analysis and environmental factors and their influence on design
2. Comprehend the building as an embodiment of a number of necessarily related, coordinated and integrated systems
3. Understand the different components of a building, from the foundation to the floor, walls and roof systems, and their different characteristics and role in a building, as well as their variety in terms of materials and techniques

Student performance Criterion addressed (list number and title):

- B.9. Structural Systems
B.10. Building Envelope Systems

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

Environmental Factors & Architectural Materials 20%
Site Works 10%
Structural Systems 15%
HVAC Systems 10%
Foundations Systems 15%
Floor & Roof Systems 15%
Wall Systems 15%

Prerequisite: None

Textbooks/ Learning Resources:

Building Construction Illustrated by Francis D.K. Ching

Offered: Fall only, annually

Faculty assigned: Karen Bou Jaoude, Joseph Kiprianos, Antoine Lahoud, Philippe Saleh, Marwan Zouein

Course Title: Building Systems II, ARC 312, 3 credits

Course Descriptions: This course is an introduction of the basic concepts of internal stresses and strains inside structural members, solid bodies and the limit states for strength and deformation. Experimental investigation of the different types of stresses and the resulting deformations are covered. This course will also make use of computer software to model internal and external behavior of structural elements and assemblages of structural elements. It will serve to develop a physical understanding of the interrelationship of material properties, structural dimensions, and structural behavior and safety through the numerical simulation of the behavior of typical designs using simple computer packages.

Student performance Criterion addressed (list number and title):

B.9. Structural Systems

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

Structural Basics 30%

Structural Calculations 40%

Structural Stability 30%

Prerequisite: MTH102 Calculus II, and PHY111 Mechanics

Textbooks/ Learning Resources:

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

Offered: Spring only, annually

Faculty assigned: Bassam Daher, Najwa El Khoury

Title: Design Studio VI, ARC 432, 6 credits

Course Descriptions: Development of projects of greater complexity in terms of functional and programmatic constraints, with specific attention to the structural dimension in design, according to different technologies and building systems projected. This studio will address technical and construction details, and will explore the architectural detail as an essential element in the design process.

Course Objectives:

1. To develop the students' ability to deal with projects of greater complexity, in terms of function and program, focusing specifically on the role of different structural systems in design
2. To develop the students' interest in the detail as an essential element of the design process
3. To develop the students' understanding of the different architectural systems, and the interrelation of different parts and components in a design project
4. To further develop the students' research into different materials and techniques, and their application in design
5. To further develop the students' presentation skills in producing a complete set of architectural drawings, including details of specific components at the appropriate scale, structural plans and materials schedules

Student performance Criterion addressed (list number and title):

- | | |
|--------------------------------------|--------------------------------|
| A.2. Design Thinking Skills | C.2. Human Behavior |
| A.5. Investigative Skills | A.4. Technical Documentation |
| A.11. Applied Research | A.7. Use of Precedents |
| B.2. Accessibility | B.1. Pre-Design |
| B.8. Environmental Systems | B.4. Site Design |
| B.10. Building Envelope Systems | B.9. Structural systems |
| B.12. Building Material & Assemblies | B.11. Building Service Systems |
| C.2. Human Behavior | C.1. Collaboration |

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

Architectural Design 40%
Structural and Functional System 25%
Design Details and New Techniques 20%
Architectural Presentation 15%

Prerequisite: ARC431

Textbooks/ Learning Resources:

Deleuze, Gilles. *A thousand Plateaus*, Minneapolis: University of Minnesota Press 1987
Eisenman, Peter. *Tracing eisenman*, Thames & Hudson 2006
Holl, Steven. *Urbanisms: working with doubt*, Princeton Architectural Press 2009
Kolarevic, Branko. *Manufacturing Material Effects: Rethinking Design and Making in Architecture*, Routledge Chapman and Hall 2008
Lynch, Kevin. *The image of the city*, MIT press 1992

Offered: Spring only, annually

Faculty assigned: Jawad Abi Akl, Jamil Abou Assaly, Luisa Bravo, Stefano Corbo, Richard Douzjian, Elie Harfouche, Joseph Kiprianos, Erhard Schuetz, Maroun Tabbal

Course Title: Building Technology II, ARC 422, 2 credits

Course Descriptions: Ways that they impact architectural design, in addition to the analysis of the properties of different structural systems. Discussion of the interaction between building envelopes and structural systems and the introduction of the current and applicable engineering structural models will be covered.

Course Objectives:

1. An advanced understanding of building components and systems and their interrelation to each other.
2. Understand the specification and construction techniques for stone, concrete and wood as building materials.
3. Understand the construction techniques of exterior and interior wall claddings of different materials such as: stone, wood, aluminum etc.
4. Identify the basic wall and floor finish construction systems such as: plaster, screed, tiling etc.

Student performance Criterion addressed (list number and title):

- B.10. Building Envelope Systems
B.12. Building Material & Assemblies

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

Environmental Factors & Architectural Materials 20%

Building Envelope 40%

Structural Systems 40%

Prerequisite: None

Textbooks/ Learning Resources:

Offered: Spring only, annually

Faculty assigned: Karen Bou Jaoude, Joseph Kiprianos, Antoine Lahoud, Philippe Saleh, Marwan Zouein

Course Title: Building Systems III, ARC 411, 3 credits

Course Descriptions Introduction to the different soil-structural systems and the different ways they impact architectural design, in addition to the analysis of the properties of different structural systems. Discussion of the interaction between building envelopes and structural systems, and introduction of the current and applicable engineering structural models.

Course Objectives:

Introduce the students to the basic subjects of soil mechanics and the fields of geotechnical engineering, which are in interaction with the architectural project. Give the students sufficient knowledge and practical sense to enable them to make right decisions regarding soil related subjects affecting their architectural concept and design.

Student performance Criterion addressed (list number and title):

B.9. Structural Systems

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

Soil and Structure 30%

Structural Systems 35%

Structure and Envelope 35%

Prerequisite: ARC312 Building Systems II

Textbooks/ Learning Resources:

Principles of Geotechnical Engineering, Braja M. Das, Latest Edition

Principles of Foundation Engineering, Braja M. Das, Latest Edition

Offered: Spring only, annually

Faculty assigned: Antoine Abboud, Joseph Assaad, Bassam Daher, Roger Skaff

Course Title: Construction Documents, ARC481, 4 credits

Course Descriptions: This course entails a preparation of a full set of architectural working drawings for the execution of a mid-size building or project. The course will also cover the basics of preparing a specifications' document.

Course Objectives:

1. Train students with the necessary information to prepare a complete set of architectural construction drawings on a scale of 1/50 or bigger. This set should include:
2. Initiate students to decision making in construction system, material and finishes selections.
3. Organize architectural execution drawings as part of tender documents and coordination with other engineering disciplines.
4. Learn basic specification format and writing.

Student performance Criterion addressed (list number and title):

- | | |
|--------------------------------------|---------------------------------|
| B.4. Technical Documentation | B.8. Environmental Systems |
| B.2. Accessibility | B.9. Structural Systems |
| B.3. Sustainability | B.10. Building Envelope Systems |
| B.5. Life Safety | B.11. Building Service Systems |
| B.12. Building Material & Assemblies | C.1. Collaboration |

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

Site Work 20%
Design Development 30%
Architectural Materials & Methods 30%
Accuracy & Detailing 20%

Prerequisite: ARC432 Design Studio VI.

Textbooks/ Learning Resources:

W. Otie Kilmer and Rosemary Kilmer, Construction Drawings and Details for Interiors, John Wiley and Sons, 2003
Architectural graphic standards
Working Drawings Handbook, Keith Styles & Andrew Bichard
A Manual of Construction Documentation, Glenn E. Wiggins
Construction specifications writing, Rosen

Offered: Summer only, annually

Faculty assigned: Graziella Abi Fares, David Aouad, Tarek Ghattas, Farid Jureidini, Carlos Rizk, Roger Skaff

Course Title: Design Studio VII, ARC 531, 5 credits

Course Descriptions: Elaboration of projects with continuing emphasis on technical, structural, and environmental parameters in design, through the investigation of complex building types, stressing the necessity of adapting computer-aided means in the early phases of the design process, as a design tool, from analysis to design production. The studio will also investigate emerging technologies in environmental systems as a means to make new buildings responsive to environmental issues.

Course Objectives:

1. To develop the students' skills in using digital media as a design tool in the generation of a project, and not just as a representational tool at the end of the design process
2. To develop the students' abilities in designing large scale projects, with a complex set of programmatic requirements
3. To further develop the integration of technical, structural and environmental systems in the design as well as the coordination between these various systems in the generation of a coherent project
4. To further develop the ability to apply architectural research on emerging technologies in the process of concept generation
5. To further develop the student's ability to produce a complete set of drawings and models, including advanced digital representations of the various aspects of the project

Student performance Criterion addressed (list number and title):

- | | |
|---|----------------------------|
| A.2. Design Thinking Skills | B.2. Accessibility |
| A.5. Investigative Skills | B.4. Site Design |
| A.8. Ordering Systems Skills | B.6. Comprehensive Design |
| A.11. Applied Research | B.9. Structural Systems |
| A.4. Technical Documentation | B.1. Pre-Design |
| A.7. Use of Precedents | B.3. Sustainability |
| A.9. Historical Traditions and Global Culture | B.5. Life Safety |
| C.2. Human Behavior | B.8. Environmental Systems |
| C.1. Collaboration | |

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

Research and Concept Generation 30%

Architectural urban integration 50%

Architectural Representation 20%

Prerequisite: ARC432 Design Studio VI

Textbooks/ Learning Resources:

Derrida Jaques, *Introduction à Husserl, l'Origine de la Géométrie*, 1962

Le Corbusier, *Vers une Architecture*, 1977 Arthaud Paris

Mallarme Stephan, *Igitur ou la folie d'Elbenon*, 1987 Paris

Raymond Andre, *Grands Villes Arabes à l'époque Ottomane*, Paris 1985

Quenneau Raymond, *Exercices de Style*, Gallimard Paris 1947

Offered: Fall only, annually

Faculty assigned: Issam Barhouch, Sandra Frem, Mike Kamel, Charbel Maskineh, Fabiano Micocci, Igor Peraza Curiel, Rana Samara Jubayli, Erhard Schuetz, Tarek Zeidan

Course Title: Design Workshop I, ARC 501, 1 credit

Course Descriptions: This course is a workshop in conjunction with Design Studio VII, to introduce new computer modeling and rendering techniques, and/or to explore the new technologies in structural and environmental design.

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
- A.5. Investigative Skills

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

Research and Concept Generation 30%

Architectural urban integration 50%

Architectural Representation 20%

Prerequisite: ARC432 Design Studio VI

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Sandra Frem, Jason Hage, Jose Manuel Madrigal, Charbel Maskineh, Igor Peraza Curiel, Mario Saab, Erhard Schuetz, Amr Taha El Baba, Aram Yeretzian

Course Title: Building Technology III ARC 521, 2 credits

Course Descriptions: This course deals with the detailing in design and the role of the detail in the generation of design, from brick to wood and steel detailing, with actual drawings, and/or actual construction exercises, at 1:1 or 1:2 scale of wall sections in different materials, as well as in fixture details, windows and other architectural components.

Course Objectives:

1. To expose students to different materials and finishes, their features and characteristics
2. To develop the students' understanding of the methods used to finish a building interior and/or exterior surface such as wood flooring, gypsum, paints, ceramics, veneers, etc.
3. To develop the students' understanding of the basic mechanical and electrical systems which are required to maintain the comfort and safety of the building occupants
4. To develop the students' understanding of the water resistant roofing systems including flashings, roof edges, waterproofing membranes etc.

Student performance Criterion addressed (list number and title):

- B.10. Building Envelope Systems
B.12. Building Material & Assemblies

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

Architectural Materials and Finishes 40%

Electrical Systems 30%

Mechanical Systems 30%

Prerequisite: None

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Graziella Abi Fares, Aseel Honein, Farid Jureidini, Philippe Saleh

Course Title: Environmental Systems I, ARC 523, 3 credits

Course Descriptions: Study and design of plumbing systems, in addition to heating, ventilation and air-conditioning systems with a survey of the different systems and their properties, cost analysis, and environmental factors; including a survey of environmentally sound alternatives [solar energy and heating, insulated walls, alternative materials].

Course Objectives:

1. To develop a comprehensive understanding of the principles and basics of mechanical systems in design and their effect on the design of buildings, as well as their economic and environmental aspects
2. To introduce students to new environmental systems using solar energy and their impact on design
3. To instigate students to expand their knowledge of environmental systems through personal research into innovative technologies, and case studies of examples that show a good integration of environmental systems in design

Student performance Criterion addressed (list number and title):

B.8. Environmental Systems
B11. Building Service Systems

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

Buildings and Mechanical Systems 50%
Solar Energy 30%
Innovative Technologies and Case Studies 20%

Prerequisite: None

Textbooks/ Learning Resources:

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

Offered: Fall only, annually

Faculty assigned: Toufic Haidamous, Abdo Jamous

Course Title: Urban Planning I, ARC 581, 3 credits

Course Descriptions: Survey of the city as a historical development, in relation with economic, social, and political factors, from the early settlements to the development of contemporary urbanism; with a broad overview of current planning theories from the context of modernist ideals to the social studies of planners and sociologists.

Course Objectives:

1. To provide a comprehensive survey of the development of urban planning as a discipline and the major tendencies and theories of urban planning in the Twentieth century
2. To develop the students' understanding of urban theories and principles as basis for the development and transformation of cities through history
3. To develop the students' research interests in urban planning, by stressing the impact of urban planning on the creation of livable cities and communities, and by examining successful examples of cities and renovated urban districts around the world

Student performance Criterion addressed (list number and title):

- A.9. Historical Traditions & Global Culture
A.10. Cultural Diversity
A.11. Applied Research

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

Introduction and Development of Urban Planning 30%
Urban Theories and Principles 45%
Case studies 25%

Prerequisite: ARC432 Design Studio VI

Textbooks/ Learning Resources:

G. Carnevali, G. Delbene & V. Patteeuw. *Geno(v)a: Developing and Rebooting a Waterfront City*. Rotterdam: NAI, c. 2002
Le Corbusier. *Urbanisme*. Paris: Cres, 1927 [also available in English translation] Kevin Lynch. *The Image of the City*. MIT Press
Rem Koolhaas, *Dutchtown, A City Center*. NAI, 1999
Rem Koolhaas, S,M,L,XL. New York: Monacelli, 1995 [or Koln: Taschen, 1997]
Aldo Rossi, *The Architecture of the City*. MIT, 1984
Manfredo Tafuri. *Architecture and Utopia*. MIT, 1976
Maggie Toy, ed. *Architecture after Geometry*. London: Architectural Design, 1997

Offered: Fall only, annually

Faculty assigned: Rachid Chamoun, Jose Manuel Madrigal, , Rita Pinto de Freitas

Course Title: Building Systems IV, ARC 412, 3 credits

Course Descriptions: This course covers the selection of specific applications for the design of structural systems in conjunction with architectural design projects, or as applicable to a real life situation. Comparisons between computer/empirical simulation for design and code compliance, as well as the selection of one structural system (Concrete/ACI, Steel/AISC, or other) for detailed design, are covered.

Course Objectives: Student performance Criterion addressed (list number and title):
B.9. Structural Systems

Topical Outline (include percentage of time in course spent in each subject area):
Structural Systems 60%
Code Compliance 40%

Prerequisite: ARC312 Building Systems II

Textbooks/ Learning Resources:

Principles of Geotechnical Engineering, *Braja M. Das*, Latest Edition
Principles of Foundation Engineering, *Braja M. Das*, Latest Edition

Offered: Spring only, annually

Faculty assigned: Joseph Assaad, Robert Farha, Roger Skaff

Course Title: Design Studio VIII, ARC 532, 5 credits

Course Descriptions: This studio will be open to new issues in design, through projects that address contemporary design problems, and/or use state of the art media in the process of design production and representation. Projects that deal with complex urban issues, and/or competitions are encouraged at this stage.

Course Objectives:

1. To explore new ideas, processes & techniques addressing original design problems
2. To apply new media in the design process
3. To explore projects that addresses current and actual challenges, and deal with the urban dimension in architectural design
4. To present an opportunity for students to creatively explore new ideas, theories and techniques and to integrate their personal research in the generation of a comprehensive design project
5. To encourage students to collaborate on a project of significant complexity, simulating an actual design problem that necessitates team work

Student performance Criterion addressed (list number and title):

- | | |
|---|----------------------------|
| A.2. Design Thinking Skills | B.2. Accessibility |
| A.5. Investigative Skills | B.4. Site Design |
| A.8. Ordering Systems Skills | B.6. Comprehensive Design |
| A.11. Applied Research | B.9. Structural systems |
| C.2. Human Behavior | B.1. Pre-Design |
| A.4. Technical Documentation | B.3. Sustainability |
| A.7. Use of Precedents | B.5. Life Safety |
| A.9. Historical Traditions & Global Culture | B.8. Environmental Systems |
| C.1. Collaboration | |

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

Ideas & Processes 20%

New Media 10% Urban Dimension & Design 30%

Personal Research & Generation of Design 30%

Team Work 10%

Prerequisite: ARC 531Design Studio VII

Textbooks/ Learning Resources:

Behne Adolf, *The modern functional building*, Santa Monica, Calif. : Getty Research Institute for the History of Art and the Humanities, 1996

Tzonis Alexander and Lefavre Liane, *Classical architecture : the poetics of order*, Cambridge, Mass. MIT Press, c1986

Cacciari, Massimo, *Architecture and nihilism*, New Haven, Conn. : Yale University Press, c1993

Eisenman, Peter. *Tracing eisenman*, Thames & Hudson 2006

Offered: Spring only, annually

Faculty assigned: Luisa Bravo, Elie Harfouche, Fabiano Micocci, Igor Peraza Curiel, Sandra Richani, Rana Samara Jubayli, Marwan Zouein

Course Title: Design Workshop II, ARC 502, 1 credit

Course Descriptions: This course is a workshop in the design topics that offer exposure to the practice of architecture in other contexts, revolving around specific and intensive design exercises, as a supplement to Design Studio VIII.

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
- A.5. Investigative Skills

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

Ideas & Processes 20%
New Media 10%
Urban Dimension & Design 30%
Personal Research & Generation of Design 30%
Team Work 10%

Prerequisite: ARC432 Design Studio VI.

Textbooks/ Learning Resources:

Offered: Spring only, annually

Faculty assigned: Elie Harfouche, Jose Manuel Madrigal, Igor Peraza Curiel, Rana Samara Jubayli

Course Title: Building technology IV, ARC 522, 2 credits

Course Descriptions: Analysis of high-tech construction systems such as steel and glass, as well as new systems and materials construction, and their various properties and technical advantages. Focus on the specific characteristic of each system/material and its compatibility with other materials, its physical treatment, as well as the different possibilities of its finishing, weathering and maintenance.

Course Objectives:

1. To explore the effects of new technologies on the design of complex structures
2. To develop the students' understanding of the characteristics of new materials used in building construction such as titanium, plastics etc.
3. To emphasize the role of industry in developing new building materials, through factory visits that introduce students to new products and their application
4. To develop the students' ability to produce detail drawings for new material construction systems

Student performance Criterion addressed (list number and title):

- B.10. Building Envelope Systems
B.12. Building Material & Assemblies

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

New Technologies & Complex Structure 30%

New Material Characteristics 30%

Industry & Building Materials 20%

Detail Drawings 20%

Prerequisite: None

Textbooks/ Learning Resources:

Building Construction illustrated, Eighth edition Francis D.K. Ching

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

Rivka Oxman and Robert Oxman (guest-eds.), "The New Structuralism - Design, Engineering and Architectural Technologies", in: *Architectural Design* July/August 2010, London

Thomas, Katie Lloyd. *Material Matters: Architecture and Material Practice*. London: Routledge, 2007

Offered: Spring only, annually

Faculty assigned: Wassim Bahr, Aseel Honein

Course Title: Environmental systems II, ARC 524, 3 credits

Course Descriptions: This course deals with two subjects: lighting and electrical circuits, and acoustics. The first part addresses the analysis of basic electric circuits with emphasis on energy management, electric ratings and capacity, wiring and lighting systems and different lighting equipment, and methods for building electrical systems. The second part is a survey of basic acoustical systems, theories, acoustic properties of different materials used in buildings and their consequences on noise reduction, as well as study of properties of acoustical spaces such as theaters or concert halls.

Course Objectives:

1. To develop a comprehensive understanding of the principles and basics of electrical systems, lighting, and acoustics in design
2. To introduce students to different lighting systems and to explore their concrete properties and effects on the design of interior spaces
3. To introduce students to different acoustical systems and to explore the different acoustical properties of various building materials
4. To instigate students to expand their knowledge of lighting and acoustical systems through personal research into innovative technologies, and case studies of examples that show a good integration of such systems in design

Student performance Criterion addressed (list number and title):

- B.8. Environmental Systems
B.11. Building Service Systems

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

Electrical and Lighting Design 35%
Acoustics Design 35%
Case Studies 30%

Prerequisite: None

Textbooks/ Learning Resources:

Designing a Quality Lighting Environment, Winchip, M., Fairchild, 2005 ISBN 1563673177

Offered: Spring only, annually

Faculty assigned: Robert Farha, Toufic Haidamous, Abdo Jamous

Course Title: Internship, ARC583, 1 credit

Course Descriptions: This course is an introduction to the professional practice, with introductory lectures that outline the basics of job search, application and practical training. The course involves a documented practical experience (200 work hours) in a professional firm, approved by the Department.

Course Objectives:

Student performance Criterion addressed (list number and title):

- | | |
|----------------------------------|--|
| C.1. Collaboration | C.6. Leadership |
| C.2. Human Behavior | C.7. Legal Responsibilities |
| C.3. Client Role in Architecture | C.8. Ethics & Professional Judgment |
| C.4. Project Management | C.9. Community & Social Responsibility |
| C.5. Practice Management | |

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

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

Prerequisite: ARC432 Design Studio VI

Textbooks/ Learning Resources: NA

Offered: Summer only, annually

Faculty assigned: Maroun Daccache, Aseel Honein, Jose Manuel Madrigal

Course Title: Design Studio IX, ARC 631, 5 credits

Course Descriptions: This studio will concentrate on a design problem that addresses the urban dimension in architecture, analyzing problems of practical relevance to contemporary urban issues, with an investigation of the social and ideological aspects of the urban design process. Projects in this studio would deal with a comprehensive study of a city, or a section of a large city, as a prelude to the development of a final project, as an elaboration to the studies developed in this studio.

Course Objectives:

1. To engage students in a project at the urban scale, that provides an opportunity to integrate their theoretical studies in urban design as well as their research into contemporary urban strategies and developments
2. To further develop the students' digital skills in modeling techniques as well as applying the computer as a design tool for the generation of a project
3. To investigate new tools in design, such as parametric design, which provide the capacity to study the transformation of a design with respect to changing variables, and the integration of different parameters in the design process
4. To present an opportunity for students to creatively explore new ideas, theories and techniques and to integrate their personal research in the generation of a comprehensive design project
5. To encourage students to collaborate on a project of significant complexity, simulating an actual design problem that necessitates team work

Student performance Criterion addressed (list number and title):

- | | |
|------------------------------|---|
| A.2. Design Thinking Skills | B.2. Accessibility |
| A.5. Investigative Skills | B.4. Site Design |
| A.8. Ordering Systems Skills | B.6. Comprehensive Design |
| A.11. Applied Research | B.9. Structural Systems |
| C.2. Human Behavior | A.4. Technical Documentation |
| A.7. Use of Precedents | A.9. Historical Traditions & Global Culture |
| B.1. Pre-Design | B.3. Sustainability |
| B.5. Life Safety | B.8. Environmental Systems |
| C.1. Collaboration | |

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

Research and Urban Design Strategies 40%

Architectural Presentation 20%

Research and Architectural Design Strategies 40%

Prerequisite: ARC532 Design Studio VIII

Textbooks/ Learning Resources:

Le Corbusier. *Urbanisme*. Paris: Cres, 1927

Kevin Lynch. *The Image of the City*. MIT Press

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

Rem Koolhaas, S,M,L,XL. New York: Monacelli, 1995 [or Koln: Taschen, 1997]

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

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

Offered: Fall only, annually

Faculty assigned: Bachar Abdel Samad, Zaher Abo Ghosn, Elie Abs, Rachid Chamoun, Maroun Daccache, Yasmine El Chami, Aseel Honein, Mike Kamel, Joseph Kiprianos, Rona Kobaissi, Antoine Lahoud, Jose Madrigal, Maria Makhoul, Cindy Menassa, Fabiano Micocci, Igor Piraza Curiel, Rita Pinto de Freitas, Antoine Romanos, Erhrd Schuetz, Hala Younes, Tarek Zeidan

Course Title: Final Project research, ARC601, 1 credit

Course Descriptions: 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 Objectives: This course will be given as a seminar, in which students are exposed to the process of researching and programming for their final year project. This will be therefore a supporting course for the final year studios, and will assist students in preparing the components of research [project types, precedent studies, theoretical background, thesis] and programming [development of a full program of elements] that will be instrumental in developing their project. In addition, it will give them the background information regarding the site [zone of study] chosen for the final year project and will concentrate on 3 objectives:

1. Research of urban condition and site analysis
2. Exploration of problematic related to site
3. Elaboration of strategies for future development

Student performance Criterion addressed (list number and title):

- A.11. Applied research
- B.1. Pre-Design
- B.4. Site Design
- C.7. Legal Responsibilities

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

Design topic Research 100%

Prerequisite: ARC532 Design Studio VIII

Textbooks/ Learning Resources:

Pending on Student's Topic

Offered: Fall only, annually

Faculty assigned: Elie Abs, David Aouad, Maroun Daccache, Yasmina El Chami, Roula El Khoury, Joseph Kiprianos, Antoine Lahoud, Jose Manuel Madrigal, Karim Nader, Igor Peraza Curiel, Antoine Romanos, Erhard Schuetz, Marwan Zouein

Course Title: Building Codes & Laws, ARC584, 1 credit

Course Descriptions: This course is a study of the local and regional building codes, with an introduction to other codes (USA, Europe, the Arab World) as comparative tools and an introduction to the local laws governing the building industry.

Student performance Criterion addressed (list number and title):

C.7. Legal Responsibilities

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

Local and Regional Building Codes 100%

Prerequisite:

Textbooks/ Learning Resources: Offered: Fall only, annually

Faculty assigned: Joseph Kiprianos

Course Title: Design Studio X, ARC 632, 6 credits

Course Descriptions: The final studio in this sequence is an opportunity for students to develop an individual project through the formulation of a critical problematic simultaneously addressing the various factors in the design process, leading to a synthesis that demonstrates a thorough understanding and resolution of the different issues analyzed in the design of a building, from the understanding of context, to structural and environmental systems, down to the details of construction.

Course Objectives:

1. To present students with the challenge of engaging an architectural problem on their own, at a specific scale, in order to demonstrate their ability to develop a coherent and comprehensive architectural solution
2. To develop an 'architectural thesis', which can be summarized as a personal synthesis developed in response to a problematic, with specific constraints and limitations, requiring the development of an appropriate solution at a certain scale and in actual site
3. To show the ability to think through a project from the macro to the micro level with the necessary development of details
4. To show the ability to coordinate the different layers of an architectural project, and to integrate environmental and structural systems in the design solution
5. To present a final project that is coherent, clear and well developed, with high quality presentations produced by the student, in a coherent final graphic presentation

Student performance Criterion addressed (list number and title):

- | | |
|---|---------------------------|
| A.2. Design Thinking Skills | B.2. Accessibility |
| A.5. Investigative Skills | B.4. Site Design |
| A.8. Ordering Systems Skills | B.6. Comprehensive Design |
| A.11. Applied Research | B.9. Structural Systems |
| C.2. Human Behavior | B.1. Pre-Design |
| A.4. Technical Documentation | B.3. Sustainability |
| A.7. Use of Precedents | B.5. Life Safety |
| B.8. Environmental Systems | C.1. Collaboration |
| A.9. Historical Traditions & Global Culture | |

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

Comprehensive Architectural Design 40%
Architecture, Structure & Environmental Solutions 30%
Architectural Presentation 30%

Prerequisite: ARC601 Final Project Research, ARC631 Design Studio IX

Textbooks/ Learning Resources: Pending on Student's Topic

Offered: Spring only, annually

Faculty assigned: Bachar Abdel Samad, Zaher Abi Ghosn, Elie Abs, David Aouad, Maroun Daccache, Yasmina El Chami, Youssef El Helou, Aseel Honein, Mike Kamel, Joseph Kiprianos, Antoine Lahoud, Jose Manuel Madrigal, Omaya Malaeb, Bernard Mallat, Karim Nader, Igor Peraza Curiel, Bernard Mallat, Karim Nader, Igor Peraza Curiel, Petia Ratzov, Antoine Romanos, Erhard Schuetz, Hala Younes, Tarek Zeidan, Nour Zeino Saccal, Marwan Zouein

Course Title: Introduction to Islamic Art, ARC 375, 3 credits

Course Descriptions: An introductory course to the arts of the Muslim world from the rise of Islam until the advent of the early modern period. This course will comprise a selective survey of artifacts drawn from a variety of media which represent the pinnacles of artistic accomplishment across the vast expanse of the Islamic world. Paintings, textiles, coins, ceramics, metal work, jewelry, and woodcarving will be investigated in the context of cultural history and examined in terms of their evolving forms, multiple meanings, and the development of a distinctively Islamic aesthetic. Particular emphasis will be placed on the spiritual content of Islamic art, the role of the artist in Islamic society, and the effect of religious pronouncements on the production of art.

Course Objectives:

1. To develop a comprehensive understanding of the development of Islamic Art in various media
2. To develop students' awareness of the historical development and the synthesis of the various artistic traditions in the Muslim world, in relation to the social, religious, artistic, and technological parameters
3. To develop a clear understanding of the distinguishing characteristics of the various styles and productions of Islamic Art
4. To develop a clear understanding of the iconic works of art in different periods, which played an essential in the development of Islamic art
5. To encourage the students' curiosity, critical thinking and interest in Islamic Art

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Islamic Art 50%

Study of Iconic Works 30%

Critical Thinking 20%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil

Course Title: Introduction to Islamic Architecture, ARC 376, 3 credits

Course Descriptions: This course is a survey of the architectural heritage of the Islamic world from the early Caliphate to the era of the Muslim superpowers of the pre-modern times. It traces the most significant and influential edifices of the Muslim world from Spain in the west to India in the East. Monuments will be studied and analyzed in their political, religious, socio-economic, cultural, and aesthetic contexts. The course will also examine the evolution of such varied building types as mosques, madrasas, mausoleums, caravanserais, and palaces. Selected structures will be studied through a range of methodologies and the development of Islamic architecture will be analyzed from the standpoint of the manipulation of space, materials, and building technology.

Course Objectives:

1. To develop a comprehensive understanding of the development of Islamic Architecture from its beginnings to the Modern period
2. To develop students' awareness of the historical development of the various architectural traditions in the Muslim world, in relation to the social, religious, artistic, and technological parameters
3. To develop a clear understanding of the distinguishing characteristics of each style or period, and the transition between them
4. To develop a good understanding of iconic works which played an essential role in the development of Islamic Architecture
5. To encourage the students' curiosity, critical thinking and interest in Islamic Architecture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Ancient Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil, Fatma Dahmani

Course Title: Topics in Architecture Theory, ARC 461, 2 credits

Course Descriptions: This course will address issues and architectural theories with a focus on specific themes of contemporary relevance and importance. The course will be run as an advanced theory seminar

Course Objectives:

1. To offer students a deeper exposure to specific issues that have particular relevance for contemporary developments in architecture
2. To offer students a platform for critical discussions and personal presentation of ideas and thematic of contemporary architecture
3. To develop the students' competence in critical presentations and theoretical debates
4. To develop the students awareness of topics and themes of research that are typically offered at the graduate level, as a prelude for graduate studies in the field

Student performance Criterion addressed (list number and title):

- A.10. Cultural Diversity
A.11. Applied Research

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

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

Prerequisite: ARC 363 Theory II

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Fabiano Micocci, Karim Fakhry, Marwan Zouein

Course Title: Contemporary Trends, ARC 471, 2 credits

Course Descriptions: Study of important design projects with analysis of their aesthetic concepts and structural innovations, focusing on particular themes and/or movements in contemporary design.

Course Objectives:

1. To expose students to contemporary architecture and to the major trends from around the world, and their development from the last quarter of the Twentieth century to the current period
2. To develop the students' awareness of the development of contemporary architecture in relation to contemporary aesthetic, social, and technological parameters, as well as contemporary issues of ecology and sustainability
3. To develop the students' understanding of the technological innovations in construction technologies and their effects on the development of contemporary architecture
4. To develop the student's interest in contemporary works through personal research, and their abilities to critically assess and compare architectural works from different contexts
5. To develop the student's curiosity, critical thinking and interest in contemporary architecture

Student performance Criterion addressed (list number and title):

- A.10. Cultural Diversity
A.11. Applied Research

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

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

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Elie Haddad

Course Title: Classical Art & Architecture, ARC 472, 2 credits

Course Descriptions: A thorough investigation of the Classical Art and Architecture of the Greek and Roman periods, with specific studies of important artistic and architectural works, highlighting the theoretical dimensions of these works, and their role within the cultural history of the periods in which they were created.

Course Objectives:

1. To develop a comprehensive understanding of the development of Classical Art and Architecture during the Greek and Roman periods
2. To develop students' awareness of the historical developments in art and architecture of these periods in relation to political, social, religious, technological, and functional parameters
3. To develop a clear understanding of the distinguishing characteristics of each style or period in terms of construction methods and techniques
4. To develop a good understanding of iconic buildings and structures which were essential in the development of Classical Art & Architecture
5. To encourage the student's curiosity, critical thinking and interest in the history of Classical Art & Architecture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Classical Art & Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Fatma Dahmani

Course Title: Architecture of the Renaissance, ARC 473, 2 credits

Course Descriptions: A thorough investigation of the Art and Architecture of the Italian Renaissance and Late Renaissance, with specific studies of important artistic and architectural works, and the theoretical framework of these works, and their role within the cultural history of the periods in which they were created, with the consequences and developments of these works on the broader European context.

Course Objectives:

1. To develop a deep and critical understanding of the development of Renaissance architecture with an exposure to the essential theoretical interpretations of the architecture of this period
2. To develop students' awareness of the development of Renaissance architecture in relation to aesthetic, political, social, and technological parameters
3. To develop a good understanding of iconic buildings and structures which were essential in the development of Renaissance Architecture through formal analysis and personal research leading to case studies by students of specific buildings
4. To further develop the students' research abilities, critical thinking and analytical skills

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Renaissance Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned:

Course Title: Islamic Architecture in the Age of Empires, ARC 475, 2 credits

Course Descriptions: This course surveys the development of Islamic architecture under the most powerful Islamic Empires of the early modern period, namely the Ottomans of Turkey, the Mughals of India, and the Safavids of Iran. It reviews and analyzes a number of paradigmatic architectural examples from these illustrious Islamic dynasties as a way of elucidating how each royal house possessed its unique vision of the world, a vision which ultimately led to the formulation of unique regional styles in architecture. Sacred, commemorative, and secular monuments will be closely examined so as to illustrate how royal Muslim patronage evolved, how it produced structures of unprecedented scale and complexity, and how Islam and modernity began to come to terms.

Course Objectives:

1. To cover in depth the specifics of the Islamic architecture of the Ottoman, Safavid and Mughal periods
2. To develop comprehensive case studies of the major works of these periods, through students' research and formal analysis of such works in relation to the aesthetic, political and social factors
3. To further develop the students' research abilities and interest in history as a record for the development and transformations of architecture with a particular attention to issues of context and specifics of culture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Islamic Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisite: ARC 376 Introduction to Islamic Architecture

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil

Course Title: Art & Architecture of the Mamluks, ARC 476, 2 credits

Course Descriptions: This course offers a close examination of the visual art of the Mamluks from the thirteenth century until the beginning of the sixteenth century. It will discuss and analyze the distinctive design vocabulary of the Mamluks and trace its stylistic development across time and space. Cities, landmarks, and artifacts will be studied in their cultural, political, socio-economic and aesthetic contexts and evaluated in terms of courtly aspirations and the sources of design inspiration. Furthermore, the course will employ a range of methodologies and will explore a variety of themes including patronage, power, courtly taste, and the role of waqt.

Course Objectives:

1. To cover in depth the specifics of the Islamic Art & Architecture of the Mamluk period
2. To develop comprehensive case studies of the major works of this period, through students' research and formal analysis of such works in relation to the aesthetic, political and social factors
3. To further develop the students' research abilities and interest in history as a record for the development and transformations of art and architecture with a particular attention to issues of context and specifics of culture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Islamic Architecture 50%

Architectural Styles 20%

Iconic Buildings 20%

Critical Thinking 10%

Prerequisite: ARC 376 Introduction to Islamic Architecture

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil

Course Title: Art & Architecture of the Umayyad, ARC 477, 2 credits

Course Descriptions: This course offers an in-depth investigation of the material heritage of the Umayyad dynasty in Syria in the Seventh and Eighth centuries. Monuments and artifacts will be examined in terms of their purpose and meaning and will be interpreted in the context of cultural history. Particular attention will be afforded to the issue of the formation of Islamic art and to the discernment of what can be regarded as "Islamic" in the visual art forms of Islam. This will involve exploring cross-cultural dialogues in the Levant in the first century of Islam, and the attempt to blend elements from west and east in the framework of the new faith.

Course Objectives:

1. To cover in depth the specifics and development of the Islamic Art & Architecture of the Umayyad period
2. To develop comprehensive case studies of the major works of this period, through students' research and formal analysis of such works in relation to the aesthetic, political and social factors
3. To further develop the students' research abilities and interest in history as a record for the development and transformations of art and architecture with a particular attention to issues of context and specifics of culture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Islamic Architecture 50%
Architectural Styles 20% Iconic Buildings 20%
Critical Thinking 10%

Prerequisite: ARC 376 Introduction to Islamic Architecture

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil

Course Title: The Decorative Art of Islam, ARC 478, 2 credits

Course Descriptions: This course is a survey of the salient examples of decorative arts of Medieval Islam. Arts of the Book, calligraphy, metalwork, ceramics, textiles, ivory, and woodcarving will be explored within their religious, political, and socio-economic context as well as in terms of meaning, function, aesthetics and emerging forms. Particular emphasis will be given to the regional design vocabulary and to the evolution of style, content, and iconography. The course will also investigate the pivotal role of geometry, vegetable ornaments, and epigraphy in Islamic design and the supremacy of color and pattern.

Course Objectives:

1. To cover in depth the specifics of the decorative arts in Islamic Art, in the various products and media, and to study their development in relation to aesthetic, social and religious factors
2. To develop case studies of major decorative arts works, through students' research and analysis of such works in relation to the aesthetic, political and social factors
3. To further develop the students' research abilities and interest in history as a record for the development and transformations of art and design, with a particular attention to issues of context and specifics of culture

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Islamic Art 60%

Iconic Art 30%

Critical Thinking 10%

Prerequisite: ARC 375 Introduction to Islamic Art

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Fatma Dahmani

Course Title: History of Landscape Design, ARC 373, 2 credits

Course Descriptions: Overview of the historical developments of landscape design, with a survey of the ideas, principles and practical considerations behind the major landscape design cases under study, from the classical to the modern period.

Course Objectives:

1. To develop an understanding of the development of major movements and tendencies in Landscape Design in various contexts around the world
2. To develop the students' awareness of landscape design in relation to aesthetic, philosophical, political, social, and contextual parameters
3. To develop a clear understanding of the major characteristics of different styles, such as Renaissance or Baroque gardens, Islamic gardens, Japanese landscape design, etc
4. To develop a clear understanding of major landscape projects throughout history as well as important contemporary projects, and to examine the relationship between landscape design and contemporary urbanism
5. To develop the students' curiosity, critical thinking and interest in landscape design, as an extension of architecture and urbanism

Student performance Criterion addressed (list number and title):

A.9. Historical Traditions & Global Culture

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

History of Landscape 60% Analysis of precedents 30% Critical Thinking 10%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Bachar El-Amine, Rita Pinto de Freitas

Course Title: Architectural Photography, ARC 381, 2 credits

Course Descriptions: Advanced photography course emphasizing specific photographic techniques, lighting and composition, dealing with architectural and design subjects.

Student performance Criterion addressed (list number and title):

A.5. Investigative Skills

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

Technical skills 50%

Visual Perceptions 50%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Bassam Lahoud

Course Title: Landscape Design Workshop ARC404, 2 credits

Course Descriptions: Elaboration of an actual landscape design project or competition, either within the format of a regular term project, or as a series of intensive workshop.

Course Objectives:

1. To develop the students' interest in contemporary landscape design problems
2. To develop the students' ability to explore Landscape Design as an interdisciplinary field in relation to urbanism, architecture, ecology and other disciplines
3. To explore within the framework of an intensive workshop, new techniques and methods of landscape analysis, planning and design
4. To encourage students to work collaboratively on projects of community interest, and to develop coherent and appropriate solutions to design problems that affect communities, environment and people

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
A.5. Investigative Skills

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

Design Works 50%
Analysis of precedents 30%
Critical Thinking 10%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Rachid Chamoun, Jose Manuel Madrigal, Rita Pinto de Freitas

Course Title: Design Workshop –IAAD ARC405, 1 credit

Course Descriptions: This workshop will revolve around an intensive thematic investigation consisting of a seminar combined with design application, addressing a design problem of current importance, such as a competition for a mosque or madrasah, or the restoration of a historic structure in the Islamic world.

Course Objectives:

1. To develop the students' interest in contemporary design problems that are related to Islamic architecture, with a particular attention to issues of context and culture
2. To develop the students' ability to critically reinterpret historical traditions and typologies, and to develop an appropriate synthesis of different factors in design
3. To encourage students to work collaboratively on projects of greater complexity, within a limited time period and to develop coherent and appropriate solutions to design problems of greater historical complexity

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
- A.5. Investigative Skills
- B.1. Pre-Design
- B.4. Site Design

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

Design Works 50%

Analysis of precedents 30%

Critical Thinking 10%

Prerequisite:

ARC 332 Design Studio IV

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Abdallah Kahil

Course Title: Design Studio –IAAD ARC435, 4 credits

Course Descriptions: Investigation of a project pertaining to contemporary design issues in the Islamic world, as for example design of religious centers, housing, schools, cultural compounds, libraries, and so on, with specific focus on the issues of context, cultural setting, and climate. The design will be studied in terms of functional and programmatic constraints and in relationship to cultural considerations. Students will be encouraged to develop their ideas by critically assessing the applicability of traditional Islamic design paradigms to contemporary design problems. The studio will be further enriched through discussions and critique of contemporary design in the Islamic world.

Course Objectives:

1. To develop the students' interest in contemporary design problems that are related to Islamic architecture, with a particular attention to issues of context and culture
2. To develop the students' ability to critically reinterpret historical traditions and typologies, and to develop an appropriate synthesis of different factors in design, as they apply to projects of significant complexity
3. To encourage students to develop creative and original design interpretations that apply to problems of historical and contextual value, while understanding the significance of continuity in architecture

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
B.1. Pre-Design B.4. Site Design

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

Design Works 50%
Analysis of precedents 30%
Critical Thinking 10%

Prerequisite: ARC 332 Design Studio IV

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned:

Course Title: Digital Modeling ARC451, 3 credits

Course Descriptions: An introduction to 3D digital modeling as related to design issues and applications, enabling students to explore new tools for design.

Course Objectives:

1. To introduce 3D modeling techniques and their various applications to design problems
2. To develop the students' ability to create and render 3D visualizations of major interior spaces in a project
3. To develop the students' ability to create and render 3D visualizations of the external form of a project

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
A.4. Technical Documentation

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

3D Modeling Principles 30%
3D Computer Drafting 30%
Drafting Sensitivity 20%
Rendering and Animation 20%

Prerequisite: ARC 352 Computer Graphics II

Textbooks/ Learning Resources:

Offered: Fall only, annually

Faculty assigned: Yasmina El Chami, Ahmad Sharif Khouja

Course Title: Computer Animation ARC452, 3 credits

Course Descriptions: Introduction to the basics of computerized representations of space, using walk-through and animation techniques.

Course Objectives:

1. To construct an elaborated walkthrough in and around an architectural design project using a software such as 3D Studio
2. To develop the students' skills to use computer moving cameras as a visual tool
3. To develop a computer animation of a single object, as well as a computer animated environment change

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
A.4. Technical Documentation

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

3D Modeling Principles 30%
3D Computer Drafting 30%
Drafting Sensitivity 20%
Rendering and Animation 20%

Prerequisite: ARC 352 Computer Graphics II

Textbooks/ Learning Resources:

Offered: Fall and Spring, annually

Faculty assigned: Ahmad Sharif Khouja, Ayman Wehbeh

Course Title: Dynamic 3D Modeling ARC454, 3 credits

Course Descriptions: An introduction to building information modeling with the understanding of real time modeling including spatial relationship and properties of building components.

Course Objectives:

Student performance Criterion addressed (list number and title):

- A.3. Visual Communication Skills
- A.4. Technical Documentation

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

3D Modeling Principles 30%
Building Information Modeling 30%
Drafting Sensitivity 20%
Rendering and Animation 20%

Prerequisite: ARC352 Computer Graphics II

Textbooks/ Learning Resources:

Offered: Fall and Spring, annually

Faculty assigned: Habib Bou Habib

Course Title: Regional Architecture I ARC482, 2 credits

Course Descriptions: Analytical & historical survey of the regional architectural heritage with a specific focus on the traditional domestic architecture of Lebanon, and the analysis of setting and building techniques and other factors on the development of regional architecture in the Nineteenth and early Twentieth century.

Course Objectives:

1. To introduce students to the rich architectural heritage in Lebanon and to provide a survey on its development in relation to historic, economic, technological and other factor
2. To develop the students' understanding of the basic typologies of the 'Lebanese House' and its variations, as well as its extensions into larger projects such as town halls, khans, and other types
3. To develop the students' curiosity and research interest in the rich architectural heritage of the country and the region

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
A.9. Historical Traditions and Global Culture

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

Analysis of Historical Regional Architecture 50%
Technical Survey 30%
Critical Thinking 20%

Prerequisite: ARC 332 Design Studio IV

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned:

Course Title: Regional Architecture II ARC483, 3 credits

Course Descriptions: On site application of the study of the regional architectural heritage, with case studies, analysis and documentation of particular landmarks, religious structures, and domestic houses.

Course Objectives:

1. To develop the students' skills and expertise in surveying the historic heritage in the region, by taking case studies of specific towns or villages as a field for analysis, research and visual and graphic documentation
2. To develop comprehensive analysis of the various typologies of historic architecture, and their extensions into specific urban organizations such as towns or districts
3. To promote student awareness towards issues of preservation, conservation and environmental sustainability

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
A.7. Use of Precedents
A.9. Historical Traditions and Global Culture

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

Analysis of Historical Regional Architecture 50%

Technical Survey 30%

Critical Thinking 20%

Prerequisite: ARC 332 Design Studio IV

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Rachid Chamoun, Maroun Daccache

Course Title: Regional Urbanism ARC484, 3 credits

Course Descriptions: Case study of a regional town supported by a field survey of the urban structure and its historical development, with an investigation of the role of climate, topography, typology, building technology, and other factors in the development of its urban plan and morphology.

Course Objectives:

1. To provide students with the opportunity to explore a case study of urbanism as it applies to a certain region or town
2. To apply the appropriate methodologies generally used by urban planners to investigate an urban problem and propose concrete and feasible solutions to issues of land use and infrastructure development, with a focus on environmental sustainability and proper management of growth
3. To provide students with the tools of mapping and projection, and the opportunity to apply their urban studies of zoning, land use, building typologies, and urban morphology, in a project that concretely revitalizes a specific town

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
- A.7. Use of Precedents
- A.10. Cultural Diversity
- A.11. Applied Research

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

Analysis Regional Urbanism 50%

Mapping Survey 30%

Critical Thinking 20%

Prerequisite: ARC 332 Design Studio IV

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Rachid Chamoun

Course Title: Computer Graphics Studio ARC 551, 4 credits

Course Descriptions: An investigation of design problems through the use of computer graphics from the initial stages of design conceptualization to design development, visualizing a new approach to different issues of computer-aided design.

Course Objectives:

1. To develop the students' ability to design a complete architectural project using only a CAD software such as Revit
2. To develop the students' awareness of the process for a CAD software to perform the transition from the conceptual sketch to the final construction plans
3. To explore the latest tools and software used in computerized design representations

Student performance Criterion addressed (list number and title):

- A.2. Design Thinking Skills
A.4. Technical Documentation

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

Prerequisite: ARC 451 Digital Modeling / ARC 452 Computer Animation/ ARC 454 Dynamic 3D modeling

Textbooks/ Learning Resources:

Design Works 50% Drafting Sensitivity 25% Rendering and Animation 25%

Offered: Once a year

Faculty assigned: Ayman Wehbeh

Course Title: Urban Planning II ARC 582, 2 credits

Course Descriptions: Study of actual planning processes, issues and problems, urban and regional zoning, demographical projections, with comparative studies of regional or international planning cases.

Course Objectives:

1. To introduce students to Action Research through a case study that proposes a comprehensive vision, gathers political support within the community, can be implemented within a transition process, and can sustain its momentum
2. To introduce the techniques and tools of mapping and data gathering used at a regional scale
3. To implement a scheme that directly contributes to the development and improvement on the local and regional environment
4. To develop the students' awareness of issues of ecological and environmental impact from human development

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
- A.7. Use of Precedents
- A.10. Cultural Diversity
- A.11. Applied Research

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

Introduction and Development of Urban Planning 30%

Urban Theories and Principles 45%

Case studies 25%

Prerequisite: ARC 581 Urban Planning I

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Jose Manuel Madrigal

Course Title: Professional Practice ARC 585, 2 credits

Course Descriptions: This course will introduce the business aspects of the design practice, through the exploration of the financial, legal, and managerial aspects, contract negotiations, marketing design services, and managing of the client and contractor relationships, with an introduction to the economic and management principles of design projects, financing, cost-estimate and budgeting.

Course Objectives:

Student performance Criterion addressed (list number and title):

- | | |
|----------------------------------|-------------------------------------|
| B.7. Financial Considerations | C.5. Practice Management |
| C.1. Collaboration | C.6. Leadership |
| C.3. Client Role in Architecture | C.7. Legal Responsibilities |
| C.4. Project Management | C.8. Ethics & Professional Judgment |

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

Management Principles 30%
Contracts and Documents 45%
Finance and Budgeting 25%

Prerequisite:

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Graziella Abi Fares, Antoine Romanos

Course Title: International Studio ARC 591, 3 credits

Course Descriptions: This studio offers an opportunity for the students to gain a first-hand experience of the wealth and breadth of the material heritage of the Arab and Islamic worlds. The knowledge gained through the design history and theory courses will be complemented by field trips and site visits that offer direct exposure to and engagement with the architectural heritage of a particular region in the Islamic world, or an area with substantial Islamic heritage outside of the Islamic world. Students will be required to analyze and document specific works and study their relationship with the urban history and culture of the area. This will then be documented and presented in a portfolio.

Course Objectives:

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
- A.10. Cultural Diversity

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

Analysis of Contemporary Architecture 50%
Documentation and Presentation 50%

Prerequisite: ARC432 Design Studio VI.

Textbooks/ Learning Resources:

Offered: Summer only, annually

Faculty assigned: David Aouad, Yasmina El Chami, Karim Fakhry, Aseel Honein, Sophie Khayat, Erhard Schuetz

Course Title: International Workshop ARC 592, 2 credits

Course Descriptions: This course is a workshop abroad at a host school revolving around specific and intensive architectural and urban design projects.

Course Objectives:

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
- A.10. Cultural Diversity
- A.11. Applied Research

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

Design Case Study 50%
Documentation and Presentation 50%

Prerequisite: ARC432 Design Studio VI.

Textbooks/ Learning Resources:

Offered: Once a year

Faculty assigned: Elie Haddad, Jose Manuel Madrigal, Erhard Schuetz

Course Title: International Studio-IAAD ARC 595, 3 credits

Course Descriptions: This studio offers an opportunity for the students to gain a first-hand experience of the wealth and breadth of the material heritage of the Arab and Islamic worlds. The knowledge gained through the design history and theory courses will be complemented by field trips and site visits that offer direct exposure to and engagement with the architectural heritage of a particular region in the Islamic world, or an area with substantial Islamic heritage outside of the Islamic world. Students will be required to analyze and document specific works and study their relationship with the urban history and culture of the area. This will then be documented and presented in a portfolio.

Course Objectives:

Student performance Criterion addressed (list number and title):

- A.5. Investigative Skills
- A.10. Cultural Diversity

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

Analysis of Islamic Architecture 50%
Documentation and Presentation 50%

Prerequisite: ARC432 Design Studio VI.

Textbooks/ Learning Resources:

Offered: Summer only, annually

Faculty assigned: