



COURSE OUTLINE

ARC 123
Course Number

5
Credits

Architecture Basic Design II
Course Title

1 lecture/ 8 studio per week
Hours: lecture/laboratory/other (specify)

Catalog description:

Further study and exploration of the fundamental principles and elements of architecture design through a series of projects having increased complexity and depth of expression using more advanced presentation graphic techniques. Emphasis continues on the development of process drawing and model-building skills to explore design ideas.

Pre-requisites: ARC 121 with a minimum grade of C

Co-requisites: ARC 104 and ARC 125 (unless a minimum grade of C has already been earned in ARC 125)

Required texts: Francis D.K. Ching, *Building Construction Illustrated*,
ISBN: 978-0-470-08781-7
Edition / Copyright: Fourth edition
Publisher: John Wiley & Sons, Inc.

Don Hanlon, *Compositions in Architecture*
ISBN: 978-0-470-05364-5
Edition / Copyright: latest
Publisher: John Wiley & Sons, Inc.

Simon Unwin, *Analysing Architecture*
ISBN: 978-0-415-48928-7
Edition/Copyright: Third edition
Publisher: Routledge

Recommended: Geoffrey H. Baker, *Design Strategies in Architecture*
ISBN: 0-419-16130-9
Edition/Copyright: Second edition
Publisher: Routledge

Paul Laseau, *Graphic Thinking for Architects & Designers*
ISBN: 978-0-471-35292-1
Edition/Copyright: Third edition

Pierre von Meiss, *Elements of Architecture*
ISBN: 978-0-419-15940-7
Edition/Copyright: latest
Publisher: Spon Press

Last Revised: January 2010

Course coordinator: Prof. Marilyn L. Dietrich, dietricm@mccc.edu, (609) 586-4800, ext. 3328

Information resources: In addition to reference books listed above, additional books, periodicals, and other print materials are available in the freshman architecture studio, ET 213.

Course Competencies/Goals:

The student will be able to:

- Knowledgeably employ the various stages of the creative thought process (including critical thinking skills) in the task of producing an architectural design.
- Analyze a given architecture project statement and identify the specific issues that need to be addressed.
- Develop a concept (hypothesis) and, through an iterative and reflective design process, produce design strategies (partis) that support/express the concept and translate it into physical form.
- Use as tools for thinking and representation a combination of traditional and digital drawing and modeling techniques
- Utilize model-building techniques to produce study models and presentation models.
- Make a verbal and visual (2-dimensional and 3-dimensional) presentation of his/her work.
- Read, write, and listen actively, critically, and reflectively.
- Recognize, analyze, and assess historical and contemporary works using accepted approaches and criteria.
- Assess and evaluate their work and that of their peers.

General Education Knowledge Goals and Core Skills:

General Education Knowledge Goals

Goal 1. Communication. Students will communicate effectively in both speech and writing.

Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Goal 6. Humanities. Students will analyze works in the fields of art, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language.

Goal 8. Diversity. Students will understand the importance of a global perspective and culturally diverse peoples.

MCCC Core Skills

Goal A. Written and Oral Communication in English. Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.

Goal B. Critical Thinking and Problem-solving. Students will use critical thinking and problem solving skills in analyzing information.

Goal D. Information Literacy. Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Goal E. Computer Literacy. Students will use computers to access, analyze or present information, solve problems, and communicate with others.

Goal F. Collaboration and Cooperation. Students will develop the interpersonal skills required for effective performance in group situations.

Goal G. Intra-Cultural and Inter-Cultural Responsibility. Students will demonstrate an awareness of the responsibilities of intelligent citizenship in a diverse and pluralistic society, and will demonstrate cultural, global, and environmental awareness.

Units of study in detail:

Unit I: Defining Architectural Space – Grid Organization, Structure, Enclosure, Scale and Light

Learning Objectives

The student will be able to:

- Apply an understanding of the use of a grid as a tool for spatial organization and response to context
- Demonstrate an understanding of the difference between horizontal and vertical structural elements and the distinct and interrelated functions they serve.
- Demonstrate an understanding that size and proportion of structural elements are directly related to the tasks they perform and the materials of which they are made
- Demonstrate an understanding that the spatial qualities of form, proportion, scale, texture, light and sound depend of the properties of the enclosure of the space.
- Comprehend and apply the principles of scale in 2-dimensional and 3-dimensional contexts.
- Apply previously acquired architectural knowledge & principles to a new set of design parameters.
- Utilize 2D and 3D computer skills (in co-requisite course ARC 104) to explore, visualize and document various partis (design strategies).
- Utilize freehand architecture drawings and manual model-building skills to analyze, explore and investigate design partis and produce 2-D and 3-D presentations.

Unit II: Proportioning Systems, Modular Design, and Sustainability in Architectural Design

Learning Objectives

The student will be able to:

- Comprehend and apply the various stages of the creative thought process involved in producing an architectural design.
- Analyze and diagram all salient features of a site.
- Analyze a given program and develop a clear and explicit architectural concept (hypothesis).
- Demonstrate an understanding of how the design of architectural form and space are directly related to the physiological, psychological, sociological, and cultural needs of the client and/or building users.
- Demonstrate an understanding of basic principles of sustainable design by incorporating them in the development of the architectural design.
- Identify and explain the principles of the following proportioning systems: the Golden Section, the Modular, and the Ken.
- Discover through research, investigation, and analysis how a proportioning system establishes a consistent set of visual relationships amongst the parts of a building, as well as between the parts and the whole.
- Utilize sketching, diagramming and study models to explore various partis (design strategies).
- Utilize 2D and 3D computer skills (in co-requisite course ARC 104) to explore and investigate design partis.
- Produce presentation drawings and models.
- Make a verbal and visual (2-D and 3-D) presentation of the final design.

Unit III: Principles of Dialog in a Medium-Complexity, Non-Urban Architectural Design

Learning Objectives

The student will be able to:

- Comprehend and apply the various stages of the creative thought process involved in producing an architectural design.
- Analyze and diagram all salient features of a site.
- Analyze a given program and develop a clear and explicit architectural concept (hypothesis).
- Demonstrate an understanding of how the design of architectural form and space are directly related to the physiological, psychological, sociological, and cultural needs of the client and/or building users.
- Demonstrate an understanding of basic principles of sustainable design by incorporating them in the development of the architectural design.
- Utilize sketching, diagramming and study models to explore various partis (design strategies).
- Utilize 2D and 3D computer skills (in co-requisite course ARC 104) to explore and investigate design parties.
- Produce presentation drawings and models.
- Make a verbal and visual (2-D and 3-D) presentation of the final design.
- Comprehend and express the principles of dialog and their applications to architectural design and to specific site conditions.
- Utilize sketching, diagramming and study models to explore partis (design strategies)
- Utilize 2D and 3D computer skills (in co-requisite course ARC 104) to explore and investigate design partis.
- Produce presentation drawings and models.
- Make a verbal and visual (2-D and 3-D) presentation of the final design.

Unit IV: Architecture Design in an Urban (Infill) Context – Analysis, Context and Content

Learning Objectives

The student will be able to:

- Explore through analysis how exterior walls shape interior space and simultaneously define the form and massing image of the exterior façade.
- Explore through analysis, how the primary elevation (façade) is an integral part of the sequence of approach to a building and its entrance.
- Explore through analysis how elements such as rhythm, repetition, proportion, scale and horizontal and vertical lines can be used in the treatment of windows, doors, building materials, color and ornamental detail.
- Realize the significance of material, texture and lighting in architectural spaces.
- Explore the opportunity to design interior space with a specific character and/or quality.
- Study allied arts of interior design and furniture design in order to understand the relationships they have to architecture and to appreciate how all aspects of the building design are correlated.
- Understand the functional needs of a common commercial building use and its relationship to human scale and dimensions as it pertains to related activities.
- Begin to address the responsibility of providing universal access (ADA)
- Appreciate the role that the architect and architectural design play in revitalizing downtown areas.
- Utilize sketching, diagramming and study models to explore various parties.
- Utilize 2D and 3D computer skills (in co-requisite course ARC 104) to explore and investigate design partis.
- Produce presentation drawings and models.

- Make a verbal and visual (2-D and 3-D) presentation of the final design.

Unit V: Portfolio

The student will be able to:

- Select work from all projects during the course of the semester that is representative of the student's best effort and development as a designer
- Compose the selected work into a cohesive and logically-ordered portfolio that includes traditional and digital representation

Evaluation of student learning:

Grading of Projects – 80% of course grade

IMPORTANT NOTE: All assignments and gathering of research will be completed outside of class time. Students are expected to devote at least 10 additional hours per week to this course beyond scheduled class meeting times.

All component stages of each project (including the final stage) are due at the date and time indicated at the outset of each stage. For the final stage of each project, a drop of one full letter grade will be given to a project submitted at the same specified hour at the next class meeting time. A project submitted after this late period will be reviewed, but will receive the grade of "F".

The grades of all projects except the last will be of equal value. The last project will have a value two times that of each of the preceding projects.

The student is responsible for his/her regular attendance, participation in studio discussions and reviews of student work, and for on-time submission of his/her work for discussion and evaluation.

The following statement is meant to clarify the evaluation criteria in studio work. Individual work will be graded in consideration of these criteria. Values of quality, aesthetics, etc., are based upon the instructor's judgment of the work produced, the effort employed, and the total result achieved.

Analytic Skills:

- An ability to understand and identify the problem, its specific components, particularity, and constraints
- An ability to apply logic and intuition to discern possible strategies for resolving the major and minor issues that need to be addressed in the problem.

Synthetic Skills:

- An ability to harmoniously satisfy and integrate all aspects of a problem (architectural program) through the development of an appropriate architectural concept and its expression in physical form as an architectural design.

Technical Skills:

- An ability to discern and resolve the major problems inherent in the architectural design.
- An ability to produce a clear and explicit presentation of the architectural design, 2-dimensionally and 3-dimensionally, verbally and visually.

The grade of "A" will be earned by students who demonstrate mastery of the essential objectives of the project, as well as demonstrating excellence in aesthetics and originality, and in completing course objectives and learning unit objectives with at least 90% accuracy.

The grade of "B" will be earned by students who demonstrate more than adequate mastery of the essential objectives of the project, as well as demonstrating a more than adequate level of aesthetics and originality, and in completing course objectives and learning unit objectives with at least 80% accuracy.

The grade of “C” will be earned by students who demonstrate adequate mastery of the essential objectives of the project, as well as demonstrating an adequate level of aesthetics and originality, and in completing course objectives and learning unit objectives with at least 70% accuracy.

The grade of “D” is undesirable and indicates a less than adequate mastery of the essential objectives of the project and a less than adequate level of aesthetics and originality, with a minimum level of completion of course objectives and learning unit objectives.

The grade of “F” will be earned by students who do not demonstrate achievement.

Evaluation of student learning: (continued)

Professionalism – 20% of course grade

Professionalism refers to the degree of seriousness and commitment the student brings to his/her work in the course. It includes regular, on-time attendance in all lectures and studio classes, completing assignments on time, and contributing constructively to the overall demeanor and learning atmosphere of the lecture and studio.

Grading of professionalism will reflect the student’s sincere effort to strive for, develop, and demonstrate the following specific criteria:

Contribution:

To support the creative learning environment through excellence in behavior and attitude, individually and collectively.

Dedication:

To the study of architecture, including the willingness to put forth the time and effort to search and explore, study and analyze, and to develop and nurture the ability to imagine and create and follow-through to completion each design project.

Commitment:

To embrace a sincere and open-minded attitude toward new ideas, approaches and interpretations of what constitutes good architecture, including a new sense of aesthetics, structure and materials, construction and technology.

Participation:

To communicate effectively one-on-one with the course instructor and other students and to make productive contributions to the studio-learning environment through group interaction and sharing of ideas.

Academic Integrity Statement:

Students are expected to comply with the college-wide requirements for academic integrity. Mercer County Community College is committed to Academic Integrity—the honest, fair, and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work. Presenting another individual’s work as one’s own and receiving excessive help from another individual will qualify as a violation of Academic Integrity. The entire policy on Academic Integrity is located in the Student handbook and is found on the college website (http://www.mccc.edu/admissions_policies_integrity.shtml).

Special Needs

Any student in this class who has special needs because of a disability is entitled to receive accommodations. Eligible students at Mercer County Community College are assured services under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. If you believe you are eligible for services, please contact Arlene Stinson, the Director of Academic Support Services.