

**Kitchen and Bath Design I**  
**INDC2910**  
**Dr. Ann Roccon IIDA, CKD, Instructor**  
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**3 Credit Hours**

**Introduction:**

This class is an introduction to Kitchen and Bathroom design. Please come to class prepared to take notes and work.

**Course Description**

This course teaches basic kitchen and bath design. The National Kitchen and Bath Association design principles are presented. Students complete a kitchen design project including programming, space planning, mechanical systems and product selection. Drafting ability and computer skills are required for this course.

**Pre-Requisites:**

IND 1020: Principles of Interior Design

IND 1401: Technical Design I (COREQUISITE)

IND 1010: Residential Design 1 (COREQUISITE)

**Assessed Degree Program Learning Outcome:** To understand and exhibit civic engagement and social responsibility. Assessment will be evaluated based on the student's presentation of the final project in Week 14 – 16 of the course.

**Learning Outcomes and Objectives**

1. **Depict the interior design process.**
  - a. Develop complete concept plans for kitchens and bathrooms.
  - b. Apply design methods and techniques to a project.
  - c. Apply the programming sequences in a design project.
  - d. Prepare specifications furniture, fixtures, finishes and equipment for a project.
  - e. Examine catalog price lists.
  - f. Prepare order forms.
  - g. Develop a budget for a project.
  - h. Compile finish schedules/plans.
  - i. Develop installation schedules.
  - j. Demonstrate an understanding of the purpose and content of a post-occupancy evaluation.
2. **Assess all variables in the planning of a kitchen or bath to address a client's needs.**
  - a. Create a client profile.
  - b. Apply known methods of collecting information and projected user requirements as fundamental to design project preparation.

- c. Define all areas of a kitchen or bathroom that should be considered in a complete design.
  - d. Identify functional and aesthetic goals and objectives that direct the programming process.
  - e. Examine the work triangle in relationship to space of a kitchen design.
  - f. Identify good traffic circulation.
3. **Examine the interrelationship between humans and their interior environments.**
  - a. Identify personal and group needs that influence the use of each occupied space, including those of persons with special needs and of the aged.
  - b. Identify family needs and activities that influence space requirements.
  - c. Identify environmental characteristics of housing that affect the well-being of the family.
  - d. Identify ways that environmental characteristics may be controlled to provide a healthful physical environment and conserve energy.
  - e. Demonstrate an understanding of the Americans with Disabilities Act and how it affects the interior environment.
  - f. Demonstrate an understanding of the design needs for the elderly population.
  - g. Demonstrate an understanding of the design needs of the special needs population.
  - h. Analyze the principles of ergonomics and anthropometrics in the way they condition and define natural human movements.
  - i. Identify responses to the psychological and social needs of people using interiors as well as to their physical needs (i.e. territoriality, personalization, and group interaction).
  - j. Ascertain ergonomic considerations.
4. **Analyze interior methods and systems in building construction.**
  - a. Identify methods and techniques of construction.
  - b. Analyze mechanical plans.
  - c. Analyze electrical plans.
  - d. Analyze construction plans.
  - e. Differentiate the materials and assemblies employed in the construction of partitions, walls, and ceilings.
  - f. Explore the advantages of applying green design considerations to construction decisions.
5. **Evaluate the impact of structural alterations related to a proposed design concept.**
  - a. Explain the role of organizations that regulate housing, energy efficiency, and dangerous materials.
  - b. Identify the effects of sound on kitchen/bathroom space due to structural considerations.
  - c. Identify lighting considerations on kitchen/bathroom space due to structural considerations.
  - d. Evaluate client needs in relation to structural alterations.
  - e. Define environmental considerations that would affect the client's health, safety and welfare due to structural alterations.
  - f. Define the types of structural changes that affect design.

- g. Ascertain the appropriateness of structural alterations as it relates to mechanical systems and other design issues.
  - h. Identify components of the building envelope including types of foundations, framing, roofing, windows and other materials and their impact on design solutions.
  - i. Demonstrate understanding of construction materials and systems.
  - j. Examine the implications of altering construction materials and construction systems as related to cost, structure, and design.
6. **Analyze historical, cultural and societal influences on structures, interiors and furnishings.**
- a. Analyze characteristics of historic design in relation to the history of interiors.
  - b. Examine sequences of historical influence on architecture and interior design.
  - c. Identify various movements in the evolution of contemporary architecture and interior design.
  - d. Apply knowledge and appropriate synthesis of the contemporary form with furnishings, finishes, and materials in design projects.
7. **Plan for space utilization according to identified functions.**
- a. Synthesize concepts of space utilization.
  - b. Confirm appropriate allocations of space according to programmatic needs.
  - c. Sketch preliminary layouts.
  - d. Demonstrate comprehension of spatial adjacency, utilization, circulation, light, and function.
  - e. Incorporate client needs in the design plan.
  - f. Define the work triangle in relationship to space of a kitchen design.
8. **Develop a furniture arrangement and traffic plan.**
- a. Analyze criteria for the selection and arrangement of furnishings including furnishings to be used by persons with disabilities, the elderly, and/or children.
  - b. Identify appropriate dimensions for furniture, equipment and accessories.
  - c. Lay out kitchen and bath cabinets.
  - d. Apply principles and elements of design to plans to satisfy aesthetic criteria.
  - e. Demonstrate knowledge of color theories and how color relates to space.
  - f. Demonstrate awareness of current design trends.
9. **Design safe and universally accessible spaces.**
- a. Examine the principles of universal design.
  - b. Apply human anthropometrics to design solutions.
  - c. Apply the requirements of good traffic circulation.
  - d. Apply building codes and NKBA Planning Guidelines into the project to assure the public's health, safety and welfare.
  - e. Apply the NKBA Access Standards as related to client needs.
  - f. Illustrate lighting needs for the aging.
10. **Determine appropriate amounts and types of light.**
- a. Identify requirements in terms of specific purposes for which lighting is to be used.
  - b. Identify appropriate lighting fixtures to perform efficiently and effectively.
  - c. Describe human response to light contrast and glare.
  - d. Apply knowledge of appropriate fixture placement and location in interior design projects.

- e. Identify appropriate placement and selection of light switches.
  - f. Describe lighting and related electrical codes and regulations as they apply to health, safety, and welfare requirements in interior design.
11. **Incorporate applicable electrical, ventilation, plumbing, heating/cooling systems, and light into kitchen and bath designs.**
- a. Identify lighting requirements.
  - b. Apply lighting symbols and terminology to design drawings.
  - c. Interpret mechanical system symbols for plumbing, HVAC, and electrical systems.
  - d. Adapt plumbing, heating and cooling systems and their components to satisfy the design criteria.
  - e. Apply plumbing and ventilation symbols and terminology to design drawings.
  - f. Apply electrical systems, symbols and terminology to design drawings.
12. **Specify appropriate material, equipment, fixtures and furniture in kitchen and bathroom designs to meet the needs of the client.**
- a. Distinguish those aspects of interior materials and installation methods that have potential to impact the health, safety, and welfare of clientele.
  - b. Recognize client's needs, style, and budget to create the best design solutions.
  - c. Recognize architectural styles of overall design and cabinetry.
  - d. Identify manufacturers of architectural treatments, lighting, accessories, cabinetry, appliances, fixtures, flooring, countertops and materials related to kitchen and bath design and remodeling.
  - e. Identify appropriate types of light.
  - f. Select ventilation equipment according to codes and NKBA Planning Guidelines.
  - g. Select plumbing, heating and cooling systems and components to satisfy the design criteria.
  - h. Identify types and functions of appliances, fixtures and equipment used in kitchens and bathrooms.
  - i. Select bathroom and kitchen flooring materials.
  - j. Identify counter materials that suit functional and aesthetic needs.
  - k. Apply appropriate industry-generic or manufacturer-specific cabinetry nomenclature to describe styles, types, construction methods, materials, hardware, sizes and specifications.
  - l. Describe quality differences in design materials.
  - m. Investigate recyclable resources for design materials.
  - n. Reference sources for products and technologies.
13. **Draft space plans, millwork details, elevations, mechanical and construction plans utilizing take-off and site-measurement methods.**
- a. Translate dimensions and building features accurately from architectural blueprints.
  - b. Translate measurements of kitchens, baths and adjacent spaces taken personally on site into accurate dimensions.
  - c. Demonstrate proper use of drafting equipment, metric and imperial scale applications and measuring techniques per NKBA recommendations.
  - d. Apply measurements to drawing according to NKBA Graphic and Presentation Standards.
  - e. Apply appropriate construction symbols to drawings.
  - f. Design millwork and special features.

14. **Demonstrate the process of preparing a complete set of working construction and installation drawings.**
  - a. Order a construction package according to content categories.
  - b. Coordinate documents from different parties involved in the process of compiling construction drawings.
  - c. Implement standard graphics, symbols and terminology.
15. **Frame design concepts through oral/visual presentations.**
  - a. Use drafting equipment and/or computer programs to present interior design concepts.
  - b. Demonstrate the use and care of graphics equipment.
  - c. Demonstrate neatness and accuracy.
  - d. Execute line work.
  - e. Illustrate size and scale in a drawing.
  - f. Demonstrate overlapping techniques.
  - g. Explain detail drawings.
  - h. Compare presentation techniques as vehicles for graphic illustration.
  - i. Demonstrate layout techniques.
  - j. Apply design principles to presentation layout.
  - k. Contrast methods for professional presentation of graphic illustration.
  - l. Use lettering techniques and/or computer skills for oral/visual presentations.
16. **Defend design solutions to a client.**
  - a. Develop a written design statement to substantiate the project to the client.
  - b. Develop an oral/visual presentation that communicates the design solution.
  - c. Interpret color theories and how color relates to space and materials.
  - d. Compile product specifications to support selections.
  - e. Apply NKBA Graphic and Presentation Standards.
  - f. Apply the NKBA Code of Conduct, ethical standards of business conduct and professional service to ensure public confidence.

#### **Assessment of Learning Outcomes:**

Assessments are determined by measuring the ability of each student to retain the learning objectives of the course. Performance –based methods, such as completion of learning objectives of the course, performance-based methods, such as completion of assigned projects, general knowledge test, oral and written presentations of assignment, group discussion, observation of mastery of critical skills, analysis of the final project and class participation and attendance including involvement with the Angel On-Line learning system will determine the final grade of this course.

#### **Outline of Course Work:**

Do the necessary textbook reading and corresponding homework before coming to class. Use the instructor's comments and suggestions to improve your work.

#### **Texts:**

#### **Reference Books:**

NKBA. (2012). *NKBA Kitchen & bathroom planning guidelines handbook*. Wiley.

Germer, J. (2013). *K & B Residential construction & systems, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

Beamish, J., Parrott, K., Emmel, J., & Peterson, M. (2013). *Kitchen Planning; Guidelines, codes, & standards, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

Parrott, K., Beamish, J., Emmel, J., & Peterson, M. (2013). *Bathroom planning: Guidelines, codes, standards, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

Krohn, M. (2015). *Kitchen & bath; Design presentation, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

Darlington, H. & Cheever, E. (2015). *Kitchen and Bath Business and Project Management, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

Blitzer, D., & MacKay, T. (2015). *Kitchen & bath: Lighting.* Wiley  
~Optional Text~

Wolford, N. L., & Cheever, E. (2015). *Design Principles, 2<sup>nd</sup> ed.* Wiley.  
~Optional Text~

### **GRADING Division**

*30 points maximum – Final Oral Project Presentation*

*30 points maximum – total for each of two Exams, Midterm and Final Exam*

*20 points maximum – Smaller Projects*

*10 points maximum – Handouts/Homework*

*10 points maximum – for the attendance and punctuality*

### **Grading Scale**

90 – 100	= A
80 – 89	= B
70 – 79	= C
60 – 69	= D
Below 60	= F

### **Course Requirements:**

- Project Presentations

### **Policy on Late Work or Make-Up Exams**

Work handed in over one week late will have 10 points automatically removed from their grade. Visual Presentation will be handed in on the dates indicated and Oral Presentation will be given on the dates assigned. Only in extreme circumstances will late presentation be considered for grading and are subject to approval by the instructor.

**Special Needs**

If you have any special needs or requirements pertaining to this course, please discuss them with the instructor early in the term.

**Syllabus Disclaimer**

This syllabus is subject to change at the discretion of the instructor. Changes will be distributed when appropriate as an addendum to the syllabus. The course goals, objectives, and student competencies do not change.

**Withdrawal and Attendance Policy**

It is the student's responsibility to withdraw from the class by **April 2, 2016** with a grade of "W".

