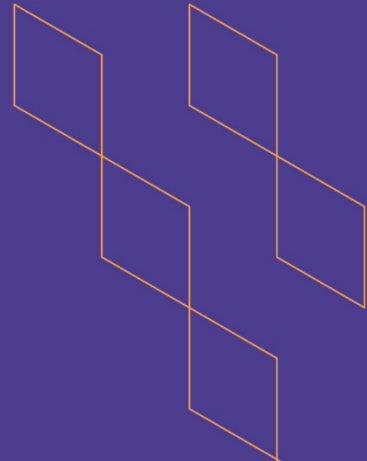T-104
2022

Course Specification

Course Title: Furniture Design and Technology (تكنولوجيا تصميم الأثاث)

Course Code: IND 563

Program: Interior Design Program

Department: Architecture Department

College: College of Engineering and Information Technology

Institution: Onaizah Private Colleges

Version: Third Version

Last Revision Date: 2025-05-20

Previous Course Specification

Table of Contents:

A. General information about the course:

Course Identification	
1. Credit hours:	2 Credit Hours [Theoretical]

2. Course type

a.　University ☐　　College ☐　　Department ☒　　Track ☐　　Others ☐

b.　Required ☒　　Elective ☐

3. Level/year at which this course is offered:	Fifth Level / Third Year

4. Course general Description

This course introduces students to the fundamental principles, methods, and technologies involved in the design and construction of furniture. Emphasizing both aesthetics and functionality, the course explores the interrelationship between form, material, ergonomics, and human interaction. Students will gain a comprehensive understanding of furniture typologies, joinery techniques, material behavior, structural logic, and fabrication processes. Through iterative design exercises, technical drawing, and model-making, students will develop the ability to conceptualize, detail, and construct furniture pieces that respond to user needs and spatial contexts. The course integrates both manual and digital production methods, with a focus on sustainability, craftsmanship, and innovation in contemporary furniture design. Final deliverables include prototypes, shop drawings, and material specifications suitable for professional presentation.

5. Pre-requirements for this course (if any):

None

6. Co- requirements for this course (if any):

None

7. Course Main Objective(s)

This course aims to provide students with a holistic understanding of the principles and practices of furniture design within the context of interior environments. It focuses on developing both analytical and practical skills necessary to design, prototype, and document furniture pieces that balance aesthetics, functionality, ergonomics, and sustainability. Students will examine historical and contemporary furniture styles, material properties, structural systems, and digital/manual fabrication techniques to understand the evolution of furniture and its integration into spatial design. Emphasizing hands-on experimentation, critical thinking, and ethical design, the course engages students in concept development, technical drawing, model-making, and the presentation of functional prototypes that respond to real-world user needs and align with contemporary interior design standards.

1. Teaching mode

No.	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	100%
2	E-learning		
3	Hybrid • Traditional classroom		

No.	Mode of Instruction	Contact Hours	Percentage
	• E-learning		
4	Distance learning		

2. Contact Hours (based on the academic semester)

No.	Activity	Contact Hours
1	Lectures	30
2	Laboratory/Studio	
3	Field	
4	Tutorial	
5	Others (specify)	
Total		**30**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
IND 563.C LO.K.1	Identify the historical, cultural, and material characteristics of furniture across major design movements, with a focus on their function and relevance to interior design	التصميم الداخلى Interior Design)K.2برنامج)	Primary: Lecture Additional: Research (Individual or Group)	Formative: Quiz (Online or F2F) Summative: Written Exam (MCQ or Essay / F2F or Online)
2.0	**Skills**			
IND 563.C LO.S.1	Design and model a functional furniture prototype that demonstrates appropriate material selection and responds to sustainability, comfort, and interior performance requirements	التصميم الداخلى Interior Design)S.1برنامج)	Primary: Project or Research (Individual or Group) Additional: Fieldwork	Formative: Quiz (Online or F2F) Summative: Student Portfolio
IND 563.C LO.S.2	Conduct and communicate ergonomic and anthropometric research findings to support the	التصميم الداخلى Interior Design)S.6برنامج)	Primary: Project or Research (Individual or Group) Additional: Presentations	Formative: Project Assessment (Rubric) Summative: Fieldwork

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	design and development of functional furniture solutions		(Individual or Group)	Assessment (by FE supervisors)
3.0	**Values, Autonomy, and Responsibility**			
IND 563.C LO.V.1	Demonstrate ethical decision-making and safety awareness in the selection of materials and design of furniture in alignment with professional interior design standards	التصميم برنامج(V.2 الداخلى Interior Design)	Primary: Discussion (or similar active learning strategies) Additional: Fieldwork	Formative: Observation (Instructor/ Students/ Committee) (Rubric) Summative: Student Portfolio

C. Course Content

No.	List of Topics	Contact Hours
1	Introduction: - Syllabus Handout. - Brief Introduction.	3
2	Principles of Furniture Design: - Selecting Furniture. Activity: Class Discussion: Criteria for selecting furniture for interiors	3
3	Historical Overview: Modern Furniture: - Arts & Crafts Movement. - Art Nouveau. - Art Deco. Activity: Observation: Compare/ Contrast similarities & differences between historical	3
4	Historical Overview: Modern Furniture: - Dutch De Stijl. - Bauhaus. - Famous Furniture Designers. - Functions of Furniture.	3
5	Typological Overview: Form, Spatial: - Organizations, Typological Orders of Furniture, and Case studies. Activity: In-Class Study: Development of furniture with advancements in materials.	3
6	Furniture: Design Theory: Activity: Class Discussion: Theories in furniture design.	3
7	Furniture Design Process: Activity: Class Discussion: How to approach designing a piece of furniture.	3
8	Midterm.	3
9	Design: Furniture Design Process: Activity: Demonstration: Sketch conceptual ideas of furniture piece.	3
10	Materials used in furniture: 1. Wood Furniture: - Basic properties.	3

	- Basic Joinery. - Basic fabrication techniques. - Finishing.	
11	2. <u>Metals:</u> - Basic properties. - Basic Joinery. - Basic fabrication techniques. - Finishing.	3
12	<u>Designing a Chair:</u> Concept sketches, ergonomics & Standards, Shop drawings, models.	3
13	3. <u>Plastics an Acrylics: Post-modernism:</u> - Basic properties. - Basic Joinery. - Basic fabrication techniques. - Finishing.	3
14	Presentation of designed furniture piece - Design A Chair Process.	6
15	Final Project.	3
Total		**48**

D. Students Assessment Activities

No.	Assessment Activities*	Assessment Timing (in Week No.)	Percentage of Total Assessment Score
1	Quiz (Online or F2F)	4th & 12th	10%
2	Research Assignment – Project Assessment (Rubric)	6th	10%
3	Midterm Exam	9th	25%
4	Design a Chair - Student Portfolio	17th	5%
5	Design a Chair - Fieldwork Assessment (by FE supervisors)	17th	5%
6	Written Exam (MCQ or Essay / F2F or Online)	16th	45%
			100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	- Materials and Design: The Art and Science of Material Selection in Product Design, by Ashby, Michael, Butterworth-Heinemann; 3rd edition 2014. - Furniture Design, by Jurgen-Sembach, Klaus, Taschen, September 2002. - Furniture studio: materials, craft, and architecture. By Ochsner, Jeffrey Karl. 2012.
Supportive References	None.
Electronic Materials	None.
Other Learning Materials	None.

2. Required Facilities and Equipment

Items	Resources
Facilities (Classrooms, Laboratories, Exhibition Rooms, Simulation Rooms, etc.)	Classrooms.
Technology Equipment (Projector, Smart Board, Software)	Data Show or Projector System.
Other Equipment (Depending on the nature of the specialty)	None.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Peer Reviewer	Direct (peer classroom observation according to the approved Rubric)
Effectiveness of students' assessment	Faculty/Instructor	Direct (analysis of CLOs assessment results and grade distributions)
Quality of learning resources	Students	Indirect (course evaluation survey)
The extent to which CLOs have been achieved	Faculty/Instructor	Direct (CLOs assessment and analysis of results according to CLOs targets)
	Students	Indirect (Students through course evaluation survey)
Commitment to learning and teaching strategies and assessment methods included in the program and course specifications	Peer Reviewer	Direct (Peer- classroom observation according to the approved Rubric in OC-QMS)
	Department Chair through Students Focus Groups	Indirect (Chair – survey questions to a focus group of students according to OC QMS)
Action Plan Continuity (Closing the Loop)	QAC (Quality Assurance Committee)	Direct (periodic review of course reports and submitting comments to course instructor/coordinator)
Instructor's Support to Students	Students	Indirect (course evaluation survey)

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Department of Architecture Council
REFERENCE NO.	11
DATE	2023-05-09

Learning outcomes of this course, as well as CLOs/Teaching Strategies/Assessment Methods matrix have been evaluated and reviewed by multiple OC parties according to OC-QMS. You can access results of these final reviews by scanning the QR code on the right, which contains a link to the reviews on OC-E-QMS.

Click Here