هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title: Finishing Materials Properties (2) (خواص مواد التشطيب)
Course Code: IND 665
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
https://drive.google.com/file/d/1T_uq3McE0SuWnueVlNVGt4d3168fzAwO/view

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:	Sixth Level / Third Year
4. Course general Description This course provides an in-depth exploration of sustainable interior finishing materials and their application within interior design practice. Building on the foundational knowledge acquired in Finishing Materials Properties I, the course enables students to evaluate and specify environmentally responsible materials for various surface applications, including flooring, wall coverings, ceiling systems, and decorative treatments. Emphasis is placed on material life cycle assessment, environmental certifications, and performance standards related to health, fire safety, indoor air quality, and overall wellness. Students will engage with a diverse range of materials—such as recycled-content products, bio-composites, rapidly renewable resources, and smart or nanotechnology-based finishes—while examining their aesthetic, functional, and regulatory attributes. Through lectures, case studies, and hands-on analysis, students will develop the ability to make rational, ethical, and economical material choices that support sustainability goals, design integrity, and client values.	
5. Pre-requirements for this course (if any): IND 564	
6. Co- requirements for this course (if any): None	
7. Course Main Objective(s) This course aims to deepen students' understanding of sustainable finishing materials and their responsible application in interior design projects. It introduces evaluation criteria such as life cycle assessment, environmental certifications, low-emission content, and recyclability. Students will examine how material choices affect indoor environmental quality, user health, and resource conservation. The course fosters critical thinking in selecting materials that meet both functional and aesthetic objectives while adhering to environmental and safety regulations. By the end of the course, students will be able to assess, specify, and document sustainable finishes for diverse interior applications with a professional, ethical, and environmentally conscious approach.	

1. Teaching mode

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

No.	Mode of Instruction	Contact Hours	Percentage
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 665.C LO.K.1	Explain the principles of sustainable material selection and performance, including life-cycle evaluation, construction use, maintenance, reuse, recycling, and disposal within interior design projects	K.4(التصميم برنامج الداخلى Interior Design)	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 665.C LO.S.1	Develop interior design solutions using sustainable material selection methodologies that consider environmental quality, functional performance, and code compliance	S.1(التصميم برنامج الداخلى Interior Design)	Primary: Project or Research (Individual or Group) Additional: Presentations (Individual or Group)	Formative: Presentation (Individual or Group) (Rubric) Summative: Project Assessment (Rubric)
IND 665.C LO.S.2	Analyze the ecological impact and technical performance of reused and recycled building materials to	S.3(التصميم برنامج الداخلى Interior Design)	Primary: Interactive Lecture \ Demonstration Additional: Discussion (or similar active	Formative: Research Assessment (Rubric) Summative: Case Study (Individual or Group) (Rubric)

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	inform sustainable design documentation		learning strategies)	
3.0	**Values, Autonomy, and Responsibility**			
IND 665.C LO.V.1	Participate actively in class discussions to demonstrate understanding and advocacy of sustainable design practices and material life cycles	V.1(التصميم برنامج الداخلى Interior Design)	Primary: Discussion (or similar active learning strategies) Additional: Group Work (competitive or cooperative / Online or F2F)	Formative: Observation (Instructor/ Students/ Committee) (Rubric) Summative: Oral Exam or Interview (Rubric)
IND 665.C LO.V.2	Contribute to class discussions by reflecting on the global context of material production and its ethical implications within the interior design process	V.1(التصميم برنامج الداخلى Interior Design)	Primary: Independent Study or Research Additional: Discussion (or similar active learning strategies)	Formative: Case Study (Individual or Group) Summative: Student Portfolio
IND 665.C LO.V.3	Participate in class discussions to evaluate and reflect on the energy consumption and material usage impacts of interior design projects	V.1(التصميم برنامج الداخلى Interior Design)	Primary: Discussion (or similar active learning strategies) Additional: Group Project or Research	Formative: Observation (Instructor/ Students/ Committee) (Rubric) Summative: Oral Exam or Interview (Rubric)

C. Course Content

No.	List of Topics	Contact Hours
1	Introduction: - Review of fundamental finishing materials (from Finishing Materials I). - Definition of sustainability and its relevance in design. - Environmental impacts of traditional finishing materials. - The role of interior designers in promoting sustainability.	2
2	Green Building Standards & Certifications: - Overview of LEED, BREEAM, WELL, Cradle-to-Cradle, and Living Building Challenge. - Material transparency and Environmental Product Declarations (EPDs). - Case studies of certified green projects.	2
3	Life Cycle Assessment (LCA) & Material Impact: - Understanding embodied energy and carbon footprint. - Sustainable sourcing and supply chain considerations. - Tools and methods for conducting an LCA in interior design.	2
4	Natural & Renewable Finishing Materials: - Sustainably harvested wood (FSC-certified), bamboo, and cork. - Clay-based plasters, natural stone, and earth finishes. - Hemp Crete and other bio-based construction materials.	2
5	Bio-Based & Biodegradable Finishing Materials: - Mycelium-based materials, algae-based finishes, and plant-based resins. - Biodegradable paints, coatings, and adhesives. - Innovations in bio-composites for interiors.	2
6	Case Study Review: Traditional vs. Sustainable Materials: - Comparison of material properties, costs, and environmental benefits. - Group discussion on real-world examples of sustainable interiors.	2
7	Recycled & Upcycled Finishing Materials: - Reclaimed wood, salvaged metal, and repurposed stone. - Upcycling in interior design: creative reuse and adaptive reuse. - Challenges in using reclaimed materials in interiors.	2
8	Recycled Content Materials & Circular Economy: - Recycled glass surfaces, composite materials from waste.	2

	- Plastic waste in flooring, wall panels, and decorative elements. - Circular design principles for material longevity.	
9	Low-VOC & Non-Toxic Materials for Healthier Interiors: - The impact of volatile organic compounds (VOCs) on indoor air quality. - Low-VOC and VOC-free paints, adhesives, and finishes. - Formaldehyde-free wood products and natural insulation.	2
10	Acoustic & Thermal Sustainable Solutions: - Natural fiber insulation: wool, hemp, cellulose. - Acoustic panels made from recycled and organic materials. - Energy-efficient glazing and smart window coatings.	2
11	Smart & Self-Sustaining Materials: - Self-healing materials, bio-responsive surfaces, and AI-integrated finishes. - Phase-change materials for thermal regulation. - High-performance energy-efficient flooring solutions.	2
12	Sustainable Waterproofing & Moisture-Resistant Materials: - Eco-friendly waterproofing systems and breathable finishes. - Permeable concrete and its use in interiors. - Water-resistant coatings with minimal environmental impact.	2
13	Adaptive & Regenerative Materials: - Living walls and green roofs for interior spaces. - Solar-integrated surfaces and energy-harvesting materials. - Regenerative materials that improve air quality.	2
14	The Role of AI & Digital Tools in Sustainable Material Selection: - AI-driven sustainability analysis in material sourcing. - Digital platforms and databases for eco-material selection. - Parametric design for minimizing material waste.	2
15	Cultural & Ethical Considerations in Material Selection: - Ethical material sourcing and fair-trade principles. - Indigenous and traditional eco-friendly materials. - The social impact of sustainable design choices.	2
Total		**30**

D. Students Assessment Activities

No.	Assessment Activities*	Assessment Timing (in Week No.)	Percentage of Total Assessment Score
1	Research Assessment (Rubric) + Case Study (Individual or Group) (Rubric)	3rd	5%
2	Student Portfolio + Case Study (Individual or Group)	15th	5%
3	Project Assessment (Rubric)	13th	5%
4	Written Exam (Midterm Exam) (MCQ or Essay / F2F or Online)	8th & 10th	25%
5	Written Exam (Final Exam) (MCQ or Essay / F2F or Online)	16th	45%
6	Quiz (Online or F2F)	5th	5%
7	Presentation (Individual or Group) (Rubric)	7th	5%
8	Observation (Instructor/ Students/ Committee) (Rubric) + Oral Exam or Interview (Rubric)	12th	5%
			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	- Malin, Nadav., "Environmentally Responsible Building Materials Selection," pp. 117-130, in Kibert's Reshaping the Built Environment. Ecology, Ethics and Environment, 1999. - Materials for Interior Environments by Bingelli, C., 2008 John Wiley & Sons. - Green Building Materials: A Guide to Product Selection and Specification, By Ross Spiegel, Dru Meadows, 2010. - LEED Materials: A Resource Guide to Green Building, USGBC, 2010.
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.)	Lecture Hall, Studio Hall.
Technology Equipment (Projector, Smart Board, Software)	Computer, Electric Wiring, Data Show.
Other Equipment (Depending on the nature of the specialty)	Computer for each student with AutoCAD installed (Students' Laptops).

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