

IDSD 4881 - SENIOR PROJECT I: SUSTAINABLE DESIGN RESEARCH

Credits: 2

In the first of the three-part senior project sequence, students will develop an understanding of research methodologies and information gathering for application to their senior design project. Emphasis is on the compilation and analysis of research critical to the identification of specific problems using evidence-based design strategies within sociocultural, behavioral, historical, and environmental systems contexts. Upon successful completion of this course, students will have researched, compiled, and analyzed all information relevant to their senior design project and developed preliminary design concepts for the beginning application of research for their commercial project. The students will complete an organized professional reference source that includes a detailed project proposal, programming analysis, and preliminary schematics defending the project proposal.

Prerequisites: IDSD 3845 - Sustainable Hospitality Design, IDSD 3870 - Sustainable Office Design, ID 3715 - Building Information Modeling; Revit

Notes: (Formerly IDSD 4840 Design Research - Sustainable Design)

| Course Learning Outcomes | Exceeding | Meeting | Developing | Not meeting | Program Outcomes | Institutional Outcomes | CIDA Standards |
|---|--|---|--|---|-------------------------------|---|--|
| Understand theories related to the impact of the built environment on human experience, behavior, and performance. | Applies theories related to the impact of the built environment on human experience, behavior, and performance. | Understands theories related to the impact of the built environment on human experience, behavior, and performance. | Recalls theories related to the impact of the built environment on human experience, behavior, and performance. | Does not understand theories related to the impact of the built environment on human experience, behavior, and performance. | ID4 HUMAN-CENTERED DESIGN | Cultural Competence, Design Competence, Critical Thinking | CIDA Standard 7. Human-Centered Design |
| Gather and apply human-centered evidence. | Applies human-centered evidence to designs. | Demonstrates the ability to gather and apply human-centered evidence. | Demonstrates the ability to gather and apply some human-centered evidence but research is not thorough nor critical. | Does not demonstrate the ability to gather and apply human-centered evidence. | ID4 HUMAN-CENTERED DESIGN | Cultural Competence, Design Competence, Critical Thinking | CIDA Standard 7. Human-Centered Design |
| Analyze and synthesize human perception and behavior patterns to inform design solutions. | Creates design solutions informed by human perception and behavior patterns. | Demonstrates the ability to analyze and synthesize human perception and behavior patterns to inform design solutions. | Explains human perception and behavior patterns to inform design solutions. | Does not demonstrate the ability to analyze and synthesize human perception and behavior patterns to inform design solutions. | ID4 HUMAN-CENTERED DESIGN | Cultural Competence, Design Competence, Critical Thinking | CIDA Standard 7. Human-Centered Design |
| Demonstrate active listening skills in the context of professional collaboration. | Demonstrates active and critical listening skills in the context of professional collaboration. Employs professional discretion in engagement and collaboration. | Demonstrates active listening skills in the context of professional collaboration. | Demonstrates listening skills in the context of professional collaboration; however, does not demonstrate consistent engagement. | Does not demonstrate active listening skills in the context of professional collaboration. | ID6 COMMUNICATION | Communication Competence | CIDA Standard 9. Communication |
| Recognize a range of sources for information and research about color. | Analyzes a range of sources for information and research about color. | Recognizes a range of sources for information and research about color. | Identifies some sources for information and research about color. | Does not recognize a range of sources for information and research about color. | ID9 LIGHT + COLOR | Design Competence, Critical Thinking | CIDA Standard 12. Light and Color |
| Understand how light and color in the interior environment impact health, safety, and wellbeing. | Applies light and color in the interior environment to creatively and critically impact health, safety, and wellbeing. | Understands how light and color in the interior environment impact health, safety, and wellbeing. | Identifies some ways in which light and color in the interior environment impact health, safety, and wellbeing. | Does not understand how light and color in the interior environment impact health, safety, and wellbeing. | ID9 LIGHT + COLOR | Design Competence, Critical Thinking | CIDA Standard 12. Light and Color |
| Understand color terminology. | Applies color terminology. | Understands color terminology. | Recognizes color terminology. | Does not understand color terminology. | ID9 LIGHT + COLOR | Design Competence, Critical Thinking | CIDA Standard 12. Light and Color |
| Understand appropriate design or specification of products and materials in relation to project criteria and human and environmental wellbeing. | Evaluates appropriate design or specification of products and materials in relation to project criteria and human and environmental wellbeing. | Demonstrates an understanding of appropriate design or specification of products and materials in relation to project criteria and human and environmental wellbeing. | Recognizes the appropriate design or specification of products and materials but not always in relation to project criteria and human and environmental wellbeing. | Does not demonstrate an understanding of appropriate design or specification of products and materials in relation to project criteria and human and environmental wellbeing. | ID10 PRODUCTS + MATERIALS | Design Competence, Critical Thinking | CIDA Standard 13. Products and Materials |
| Design and specify a broad range of appropriate products, materials, objects, and elements in support of the design intent. | Evaluate a broad range of appropriate products, materials, objects, and elements in support of the design intent. | Design and specifies a broad range of appropriate products, materials, objects, and elements in support of the design intent. | Design and specifies some appropriate products, materials, objects, and elements in support of the design intent. | Does not design or specify a broad range of appropriate products, materials, objects, and elements in support of the design intent. | ID10 PRODUCTS + MATERIALS | Design Competence, Critical Thinking | CIDA Standard 13. Products and Materials |
| Recognize the origins and intent of laws, codes, and standards. | Analyzes the origins and intent of laws, codes, and standards. | Demonstrates an awareness of the origins and intent of laws, codes, and standards. | Recognizes some the origins and intent of laws, codes, and standards. | Does not demonstrate an awareness of the origins and intent of laws, codes, and standards. | ID13 REGULATIONS + GUIDELINES | Design Competence | CIDA Standard 16. Regulations and Guidelines |
| Understand standards and guidelines related to sustainability and wellness. | Analyzes the standards and guidelines related to sustainability and wellness. | Understands the standards and guidelines related to sustainability and wellness. | Recognizes some of the standards and guidelines related to sustainability and wellness. | Does not understand the standards and guidelines related to sustainability and wellness. | ID13 REGULATIONS + GUIDELINES | Design Competence | CIDA Standard 16. Regulations and Guidelines |
| Understand sector-specific regulations and guidelines related to construction, products, and materials. | Analyzes sector-specific regulations and guidelines related to construction, products, and materials. | Understands sector-specific regulations and guidelines related to construction, products, and materials. | Recognizes some of the sector-specific regulations and guidelines related to construction, products, and materials. | Does not understand sector-specific regulations and guidelines related to construction, products, and materials. | ID13 REGULATIONS + GUIDELINES | Design Competence | CIDA Standard 16. Regulations and Guidelines |
| Apply federal, state/provincial, and local codes including fire and life safety. | Analyzes federal, state/provincial, and local codes including fire and life safety. | Applies federal, state/provincial, and local codes including fire and life safety. | Understands federal, state/provincial, and local codes including fire and life safety. | Does not apply federal, state/provincial, and local codes including fire and life safety. | ID13 REGULATIONS + GUIDELINES | Design Competence | CIDA Standard 16. Regulations and Guidelines |
| Apply barrier-free and accessibility regulations and guidelines. | Analyzes barrier-free and accessibility regulations and guidelines. | Applies barrier-free and accessibility regulations and guidelines. | Understands barrier-free and accessibility regulations and guidelines. | Does not apply barrier-free and accessibility regulations and guidelines. | ID13 REGULATIONS + GUIDELINES | Design Competence | CIDA Standard 16. Regulations and Guidelines |