

# IDSD 4200 - SUSTAINABLE DESIGN STUDIO

Credits: 3

Students in this junior-level course gain the technical and practical knowledge and skills necessary to design large-scale work environments based on human productivity and business organizations and their goals. Emphasis is on advanced programming, space planning, furniture, finish and equipment specification, and building system integration while adhering to fire and safety codes and ADA requirements as part of design development and presentation. As part of the Sustainable Design Specialization, coursework must be completed using the sustainable knowledge and strategies obtained to date. Upon successful completion of this course, students will have the ability to formulate and communicate a comprehensive design for a work environment based on research and advanced problem-solving strategies.

Prerequisites: IDSD 3200 - Sustainable Design Strategies + Technologies, and IDSD 3845 - Sustainable Hospitality Design

Notes: (Formerly ID 3810 Sustainable Design Studio)

Course Learning Outcomes	Exceeding	Meeting	Developing	Not meeting	Program Outcomes	Institutional Outcomes	CIDA Standards
Apply knowledge and skills learned to solve progressively complex design problems.	Solves progressively complex design problems.	Synthesizes progressively complex design problems.	Analyzes progressively complex design problems.	Does not solve progressively complex design problems.	ID5 DESIGN PROCESS	Design Competence, Critical Thinking	CIDA Standard 8. Design Process
Apply knowledge and skills learned to identify and define issues relevant to the design problem.	Analyzes issues relevant to the design problem.	Identifies and defines issues relevant to the design problem.	Recalls issues relevant to the design problem.	Does not identify or define issues relevant to the design problem.	ID5 DESIGN PROCESS	Design Competence, Critical Thinking	CIDA Standard 8. Design Process
Understand the importance of evaluating the relevance and reliability of information and research impacting design solutions.	Creates designs informed by relevant and reliable information and research.	Evaluates the relevance and reliability of information and research impacting design solutions.	Analyzes information and research impacting design solutions.	Does not understand the importance of evaluating the relevance and reliability of information and research impacting design solutions.	ID5 DESIGN PROCESS	Design Competence, Critical Thinking	CIDA Standard 8. Design Process
Recognize the environmental impact of illumination strategies and decisions.	Analyzes the environmental impact of illumination strategies and decisions.	Recognizes the environmental impact of illumination strategies and decisions.	Identifies some environmental impacts of illumination strategies and decisions.	Does not recognize the environmental impact of illumination strategies and decisions.	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 how furnishings, objects, materials, and finishes work together to support the design intent.	Analyze how furnishings, objects, materials, and finishes work together to support the design intent.	Understand how furnishings, objects, materials, and finishes work together to support the design intent.	Recognize how furnishings, objects, materials, and finishes work together to support the design intent.	Does not understand how furnishings, objects, materials, and finishes work together to support the design intent.	ID10 PRODUCTS + MATERIALS	Design Competence, Critical Thinking	CIDA Standard 13. Products and Materials
Understand that design decisions relating to acoustics, thermal comfort, and indoor air quality impact human wellbeing and the environment.	Apply design decisions that relate to acoustics, thermal comfort, and indoor air quality to impact human wellbeing and the environment.	Understand that design decisions relating to acoustics, thermal comfort, and indoor air quality impact human wellbeing and the environment.	Recognize that design decisions relating to acoustics, thermal comfort, and indoor air quality impact human wellbeing and the environment.	Does not understand that design decisions relating to acoustics, thermal comfort, and indoor air quality impact human wellbeing and the environment.	ID11 ENVIRONMENTAL SYSTEMS + HUMAN WELLBEING	Design Competence, Critical Thinking	CIDA Standard 14. Environmental Systems and Comfort
Understand the principles of indoor air quality.	Apply the principles of indoor air quality.	Understand the principles of indoor air quality.	Recognize the principles of indoor air quality.	Does not understand the principles of indoor air quality.	ID11 ENVIRONMENTAL SYSTEMS + HUMAN WELLBEING	Design Competence, Critical Thinking	CIDA Standard 14. Environmental Systems and Comfort
Understand how the selection and application of products and systems impact indoor air quality.	Apply a critical selection and creative application of products and systems impact indoor air quality.	Understand how the selection and application of products and systems impact indoor air quality.	Recognize how the selection and application of products and systems impact indoor air quality.	Does not understand how the selection and application of products and systems impact indoor air quality.	ID11 ENVIRONMENTAL SYSTEMS + HUMAN WELLBEING	Design Competence, Critical Thinking	CIDA Standard 14. Environmental Systems and Comfort
Recognize the environmental impact of construction.	Understands the environmental impact of construction.	Recognizes the environmental impact of construction.	Recalls some elements of the environmental impact of construction.	Does not recognize the environmental impact of construction.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by base-building structural systems and construction methods.	Evaluates how design solutions affect and are impacted by base-building structural systems and construction methods.	Understands how design solutions affect and are impacted by base-building structural systems and construction methods.	Recognizes that design solutions affect and are impacted by base-building structural systems and construction methods.	Does not understand how design solutions affect and are impacted by base-building structural systems and construction methods.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by interior systems, construction, and installation methods.	Evaluates how design solutions affect and are impacted by interior systems, construction, and installation methods.	Understands how design solutions affect and are impacted by interior systems, construction, and installation methods.	Recognizes that design solutions affect and are impacted by interior systems, construction, and installation methods.	Does not understand how design solutions affect and are impacted by interior systems, construction, and installation methods.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by detailing and specification of interior construction materials, products, and finishes.	Evaluates how design solutions affect and are impacted by detailing and specification of interior construction materials, products, and finishes.	Understands how design solutions affect and are impacted by detailing and specification of interior construction materials, products, and finishes.	Recognizes that design solutions affect and are impacted by detailing and specification of interior construction materials, products, and finishes.	Does not understand how design solutions affect and are impacted by detailing and specification of interior construction materials, products, and finishes.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by the integration of building systems including electrical (such as power, data, lighting, telecommunications, audio visual) and mechanical (such as HVAC, plumbing, and sprinklers).	Evaluates how design solutions affect and are impacted by the integration of building systems including electrical (such as power, data, lighting, telecommunications, audio visual) and mechanical (such as HVAC, plumbing, and sprinklers).	Understands how design solutions affect and are impacted by the integration of building systems including electrical (such as power, data, lighting, telecommunications, audio visual) and mechanical (such as HVAC, plumbing, and sprinklers).	Recognizes that design solutions affect and are impacted by the integration of building systems including electrical (such as power, data, lighting, telecommunications, audio visual) and mechanical (such as HVAC, plumbing, and sprinklers).	Does not understand how design solutions affect and are impacted by the integration of building systems including electrical (such as power, data, lighting, telecommunications, audio visual) and mechanical (such as HVAC, plumbing, and sprinklers).	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by monitoring systems pertaining to energy, security, and building controls systems.	Evaluates how design solutions affect and are impacted by monitoring systems pertaining to energy, security, and building controls systems.	Understands how design solutions affect and are impacted by monitoring systems pertaining to energy, security, and building controls systems.	Recognizes that design solutions affect and are impacted by monitoring systems pertaining to energy, security, and building controls systems.	Does not understand how design solutions affect and are impacted by monitoring systems pertaining to energy, security, and building controls systems.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction
Understand how design solutions affect and are impacted by vertical and horizontal systems of transport and circulation such as stairs, elevators, or escalators.	Evaluates how design solutions affect and are impacted by vertical and horizontal systems of transport and circulation such as stairs, elevators, or escalators.	Understands how design solutions affect and are impacted by vertical and horizontal systems of transport and circulation such as stairs, elevators, or escalators.	Recognizes that design solutions affect and are impacted by vertical and horizontal systems of transport and circulation such as stairs, elevators, or escalators.	Does not understand how design solutions affect and are impacted by vertical and horizontal systems of transport and circulation such as stairs, elevators, or escalators.	ID12 CONSTRUCTION	Design Competence	CIDA Standard 15. Construction