

Outcomes Goals by Studio

ENDS 105 (ARCH 1403) Design Foundations I. (2-4). Credit 4. I, S

Visual and functional design principles; development of skills in perception, thought and craft as they apply to the formation of two- and three-dimensional relationships; design attitudes and environmental awareness. Prerequisite: Classification in environmental design, construction science or landscape architecture.*

Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.</p>
Graphical:	<p>Able to sketch from physical models and actual spaces.</p> <p>Able to select and deploy physical media in service of conceptual goals and communication needs.</p> <p>Able to construct accurate orthographic and perspective drawings</p>
Digital:	<p>Able to use web-based tools for course registration</p> <p>Able to use email systems for communications to and from the university and faculty</p> <p>Able to use web-based research tools through the university library to support design studio projects.</p>
Sustainable:	<p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Is aware of designer's role in addressing issues of sustainability</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Is capable of choosing/making appropriate connections between materials used in models and prototypes.</p> <p>Is able to choose and procure materials for models and prototypes based on conceptual needs of the project.</p> <p>Understands the risks and hazards associated with materials and processes and works to reduce risks through training in appropriate venue (shop or studio) for tool and solvent-based chemical process uses.</p>
Contextual:	<p>Is aware of the dimensions of context designers operate within;</p> <ul style="list-style-type: none">• Physical/constructed• Natural/climatic• Social/physiological/psychological• Cultural <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p>
Theoretical:	<p>Is aware that differences in form, space, material selection, lighting in architecture are related to the point of view of the design team.</p>
Historical:	<p>Is aware that differences in form, space, material selection and lighting in architecture related to point of view can be better understood when their development is studied across time and cultures.</p>

ENDS 106 Design Foundations II. (1-6). Credit 4. II, S

Approaches to problem identification and problem solving emphasizing an awareness of human, physical and cultural factors influencing design; reinforcement of visual and verbal communication as applied to the design process. Prerequisite: ENDS 105.*

Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.</p>
Graphical:	<p>Able to sketch from physical models and actual spaces.</p> <p>Able to sketch from their inner conception to make ideas visible for development</p> <p>Able to select and deploy physical media in service of conceptual goals and communication needs.</p> <p>Able to construct accurate isometric and axonometric drawings</p>
Digital:	<p>Able to use web-based tools for collaboration</p> <p>Able to use chat software to support distance and remote reviews</p> <p>Able to use web-based research tools through the university library to support design studio projects.</p>
Sustainable:	<p>Is able to present the sustainable aspects of their studio projects</p> <p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Is aware of designer's role in addressing issues of sustainability</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Is capable of choosing/making appropriate connections between materials used in models and prototypes.</p> <p>Is able to choose and procure materials for models and prototypes based on conceptual needs of the project.</p> <p>Understands the risks and hazards associated with materials and processes and works to reduce risks through training in appropriate venue (shop or studio) for tool and solvent-based chemical process uses.</p>
Contextual:	<p>Is aware of the dimensions of context designers operate within;</p> <ul style="list-style-type: none">• Physical/constructed• Natural/climatic• Social/physiological/psychological• Cultural <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p> <p>Is able to complete a basic graphic inventory of a physical site's attributes</p>
Theoretical:	<p>Is aware that differences in form, space, material selection, lighting in architecture are related to the point of view of the design team.</p> <p>Is able to cite major theoretical frameworks appropriate to the ideas/concepts employed in their studio work.</p>
Historical:	<p>Is aware that differences in form, space, material selection and lighting in architecture related to point of view can be better understood when their development is studied across time and cultures.</p> <p>Is able to present key examples of ideas and concepts employed in studio projects from historical sources.</p>

ARCH 205. Architecture Design I. (2-6). Credit 4.

Issues and methods in designing environments for human habitation and well-being; projects addressing site, functional planning, spatial ordering, form generation through a recognition of the synthesis of space, structure, use and context; reinforcement of appropriate graphic and model building techniques. Prerequisites: ENDS 105, 106, 115, 116.*

Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.</p>
Graphical:	<p>Able to sketch from physical models and actual spaces.</p> <p>Able to select and deploy physical media in service of conceptual goals and communication needs.</p> <p>Able to construct accurate orthographic and perspective drawings</p> <p>Able to stage, capture, process photographs of models for presentation.</p>
Digital:	<p>Able develop basic geometries and spaces in 3d modeling programs;</p> <p>Able to develop walk-through animations of spaces using 3d modeling programs.</p> <p>Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.</p> <p>Able to deploy image processing and page layout/desktop publishing software to design and print presentations and portfolios of studio projects</p> <p>Able to use web-based research tools through the university library to support design studio projects.</p>
Functional:	<p>Able to conduct basic inventory of spaces and space needs for simple structures.</p> <p>Able to conduct basic user inventory of characteristics and needs for simple structures</p> <p>Aware of the fundamental aspects of the Americans with Disabilities Act and their implications for design.</p> <p>Able to design basic accommodations for vehicular access and parking</p> <p>Able to make hierarchical and sequential arrangements of spaces for simple structures.</p> <p>Able to document intentions towards spaces and their use in written form as annotation to presentation documents</p>
Sustainable:	<p>Able to deploy basic strategies for building orientation on site for solar access and control.</p> <p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Is able to deploy fundamental strategies for sustainability in simple structures.</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Is aware of the basic materials and characteristics used in construction (wood, steel, concrete, masonry, glass)</p> <p>Is aware of structural principles for spanning and supporting simple structures.</p> <p>Is aware of fundamental space conditioning strategies</p>

- Contextual: Able to document and diagram basic aspects of context designers operate within;
- Physical/constructed
 - Natural/climatic
 - Social/physiological/psychological
 - Cultural
- Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.
- Able to make design decisions in projects addressing aspects of context described above.
- Theoretical: Able to operate from a point of view capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.
- Historical: Able to present key examples of the development of form, space, material selection and lighting in architecture across time and cultures.

ARCH 206. Architecture Design II. (2-6). Credit 4.

Fundamental issues of innovative design processes and creation explored through the creative use of past, present and future materials, tools, and technologies; with an emphasis upon the research of materials, methods, scale, craft and technique as instruments of design, fabrication, and production. Prerequisites: ENDS 105, 106, 115, 116.*

Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Able to design and craft connections between materials appropriate to the material and tools in service of the design and concept.</p> <p>Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.</p>
Graphical:	<p>Able to sketch from physical models and actual spaces.</p> <p>Able to select and deploy physical media in service of conceptual goals and communication needs.</p> <p>Able to construct accurate axonometric or isometric drawings to explain stages of fabrication</p> <p>Able to construct accurate building sections to present the spaces and substance enclosing the spaces in projects.</p> <p>Able to stage, capture, process photographs of models for presentation.</p>
Digital:	<p>Able develop basic geometries and spaces in 3d modeling programs;</p> <p>Able to develop walk-through animations of spaces using 3d modeling programs.</p> <p>Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.</p> <p>Able to deploy image processing and page layout/desktop publishing software to design and print presentations of studio projects</p> <p>Able to use web-based research tools through the university library to support design studio projects.</p>
Functional:	<p>Able to conduct basic inventory of spaces and space needs for simple structures.</p> <p>Able to conduct basic user inventory of characteristics and needs for simple structures</p> <p>Aware of the fundamental aspects of the Americans with Disabilities Act and their implications for design.</p> <p>Able to design basic accommodations for vehicular access and parking</p> <p>Able to make hierarchical and sequential arrangements of spaces for simple structures.</p>
Sustainable:	<p>Able to deploy basic strategies for building orientation on site for solar access and control.</p> <p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Is able to deploy fundamental strategies for sustainability in simple structures.</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Is aware of the basic materials and characteristics used in construction (wood, steel, concrete, masonry, glass)</p>

Is making initial efforts to include structural systems and elements in projects.

Is making initial efforts to include space-conditioning systems in projects.

- Contextual:
- Able to document and diagram basic aspects of context designers operate within;
- Physical/constructed
 - Natural/climatic
 - Social/physiological/psychological
 - Cultural
- Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.
- Able to make design decisions in projects addressing aspects of context described above.
- Theoretical:
- Able to operate from a point of view capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.
- Able to present key documents establishing theoretical point of view in architecture and is conversant in major aspects of theory.
- Historical:
- Able to present and be conversant about key examples of the development of form, space, material selection and lighting in architecture across time and cultures.

ARCH 207. Architecture Design I. (1-6). Credit 4.

Technology as medium for design planning and communication; impact and influence of technology on architectural design process; investigation of computing theories, systems, methods and current and future trends through creative thinking and innovation design, problem solving and creation with the use of digital media. Prerequisites: ENDS 105, 106, 115, 116.*

- Physical:** Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.
- Able to design and craft connections between materials appropriate to the material and tools in service of the design and concept.
- Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.
- Graphical:** Able to sketch from physical models and actual spaces.
Able to select and deploy physical media in service of conceptual goals and communication needs.
Able to stage, capture, process photographs of models for presentation.
- Digital:** Able develop basic geometries and spaces in 3d modeling programs
Able to develop walk-through animations of spaces using 3d modeling programs.
Able to exchange basic geometry information between 3d modeling programs
Able to model topography/terrain in 3d modeling applications
Able to extract data for analysis of design performance from 3d model (floor areas, material quantities, ecotect)
Able to conduct seasonal shading/shadow study using ray-tracing
Able to conduct more advanced lighting studies using radiosity engines
Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.
Able to deploy image processing and page layout/desktop publishing software to design and print presentations of studio projects
Able to use web-based research tools through the university library to support design studio projects.
Able to design and deploy strategies for file backup and management
- Functional:** Able to conduct basic inventory of spaces and space needs for simple structures.
Able to conduct basic user inventory of characteristics and needs for simple structures
Aware of the fundamental aspects of the Americans with Disabilities Act and their implications for design.
Able to design basic accommodations for vehicular access and parking
Able to make hierarchical and sequential arrangements of spaces for simple structures.
- Sustainable:** Able to deploy basic strategies for building orientation on site for solar access and control.
Shows respect for environment and resources as evidenced by materials use, recycling and disposal.
Is able to deploy fundamental strategies for sustainability in simple structures.
Is aware of actions that may be taken as an individual to address issues of sustainability.

Technical:	<p>Is aware of the basic materials and characteristics used in construction (wood, steel, concrete, masonry, glass)</p> <p>Is making initial efforts to include structural systems and elements in projects.</p> <p>Is making initial efforts to include space-conditioning systems in projects.</p>
Contextual:	<p>Able to document and diagram basic aspects of context designers operate within;</p> <ul style="list-style-type: none"> • Physical/constructed • Natural/climatic • Social/physiological/psychological • Cultural <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p> <p>Able to make design decisions in projects addressing aspects of context described above.</p>
Theoretical:	<p>Able to operate from a point of view capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.</p> <p>Able to present key documents establishing theoretical point of view in architecture and is conversant in major aspects of theory.</p>
Historical:	<p>Able to present and be conversant about key examples of the development of form, space, material selection and lighting in architecture across time and cultures.</p>

ARCH 305. Architectural Design III. (2-6). Credit 5.

Theory and practice of architecture as art and science; study of function, structure and form in site and building design through an analytical approach to programming, design methods, problem identification, case studies and problem resolution; exercises in identifying various conditions and forces associated with a variety of building types and the generation of a range of design solutions. Prerequisites: Upper-level classification in environmental design, construction science or landscape architecture; ARCH 205 or 207; ARCH 206; ARCH 249; ARCH 250.*

- Physical: Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.
- Able to design and craft connections between materials appropriate to the material and tools in service of the design and concept.
- Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.
- Graphical: Able to diagram programmatic relationships between spaces, users, and activities in spaces.
- Able to diagram the spatial and human interactions in urban settings
- Able to diagram the urban structure within the area of the project site
- Able to sketch from urban environments, physical models and building spaces.
- Able to select and deploy physical media in service of conceptual goals and communication needs.
- Able to construct accurate axonometric or isometric drawings to explain stages of fabrication
- Able to construct accurate building sections to present the spaces and substance enclosing the spaces in projects.
- Able to stage, capture, process photographs of models for presentation.
- Digital: Able to use video to document urban conditions and integrate them into project presentations.
- Able develop basic geometries and spaces in 3d modeling programs
- Able to develop walk-through animations of spaces using 3d modeling programs.
- Able to conduct seasonal shading/shadow study using ray-tracing
- Able to conduct more advanced lighting studies using radiosity engines
- Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.
- Able to deploy image processing and page layout/desktop publishing software to design and print presentations of studio projects
- Able to use web-based research tools through the university library to support design studio projects.
- Able to design and deploy strategies for file backup and management
- Functional: Able to conduct basic inventory of spaces and space needs for buildings.
- Able to conduct basic user inventory of characteristics and needs for buildings.
- Able to make initial estimation of building systems space requirements.
- Able to generate space sizes based on use, furniture and equipment sizes, accessible clearances, and knowledge of human social distances.
- Able to write a design program based on
- Able to incorporate fundamental aspects of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) to make barrier free studio project designs.
- Able to design basic accommodations for vehicular access and parking

	Able to make hierarchical and sequential arrangements of spaces (servant & served) for buildings.
Sustainable:	<p>Able to deploy space development and systems/materials strategies for solar access and control.</p> <p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Able to incorporate a range of strategies (material, energy, water, air quality) for sustainability in buildings.</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Able to make selections of primary materials and systems (structural, environmental) based on knowledge of their characteristics to support the design and concept.</p> <p>Able to deploy structural systems and elements in projects as seen in building sections, framing plans and wall sections.</p> <p>Able to deploy space-conditioning systems and elements in projects as seen in building sections, systems diagrams, plans and wall sections</p>
Contextual:	<p>Able to analyze and understand the problems and opportunities presented by the project context as demonstrated in;</p> <ul style="list-style-type: none"> • Reaction to historic structures and land use patterns (scale, proportion, setback) • Reaction to contemporary issues in adjacent/adjoining land uses • Design to support a high quality of life (health, interaction, safety, diversity) <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p> <p>Able to make design decisions in projects addressing aspects of context described above.</p>
Theoretical:	<p>Able to articulate a point of view, grounded in published theory, capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.</p> <p>Able to present key documents establishing theoretical point of view in architecture and is conversant in major aspects of theory.</p>
Historical:	<p>Able to present and be conversant about key examples of the development of form, space, material selection and lighting in architecture across time and cultures.</p>

ARCH 405. Architectural Design IV. (1-6). Credit 4

Architectural Design IV. (1-6). Credit 4. I A comprehensive design studio focused on the integration of design theory with functionally sustainable environmental and structural systems; consideration of a project from site analysis and programming through design detailing. Concurrent enrollment in ARCH 431 and ARCH 435. Prerequisites: Upper level classification in the BED Architectural Studies Option; ARCH 305; CARC 301 or ENDS 494.*

Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Able to design and craft connections between materials appropriate to the material and tools in service of the design and concept.</p>
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Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.

- Graphical: Able to diagram programmatic relationships between spaces, users, and activities in spaces.
Able to diagram the spatial and human interactions in urban settings
Able to diagram the urban structure in the vicinity of the project site
Able to sketch from urban environments, physical models and building spaces.
Able to select and deploy physical media in service of conceptual goals and communication needs.
Able to construct accurate axonometric or isometric drawings to explain organization and interaction of architectural conditions, program and site.
Able to construct accurate building sections to present the spaces and substance enclosing the spaces in projects.
Able to stage, capture, process photographs of models for presentation.
- Digital: Able to use video to document urban conditions and integrate them into project presentations.
Able develop basic geometries and spaces in 3d modeling programs
Able to develop walk-through animations of spaces using 3d modeling programs.
Able to conduct seasonal shading/shadow study using ray-tracing simulators.
Able to conduct more advanced lighting studies using radiosity engines
Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.
Able to integrate image processing and page layout/desktop publishing software to design and print presentations of studio projects
Able to use web-based research tools through the university library to support design studio projects.
Able to design and deploy strategies for file backup and management
- Functional: Able to conduct basic inventory of spaces equipment, furnishings and space needs for buildings.
Able to conduct basic user inventory of characteristics and needs for buildings.
Able to make initial estimation of building systems space requirements.
Able to generate space sizes based on use, furniture and equipment sizes, accessible clearances, and knowledge of human social distances.
Able to write a design program based on inventory, functional adjacencies, environmental needs, furnishings and equipment and summarize the same.
Able to incorporate fundamental aspects of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) to make barrier free studio project designs.
Able to evaluate and select internal circulation structures and integrate these with life safety and accessibility requirements.
Able to design basic accommodations for vehicular access and parking
Able to make hierarchical and sequential arrangements of spaces (servant & served) for buildings.
- Sustainable: Able to evaluate climate data, solar geometry, and site characteristics to identify problems and opportunities throughout the calendar year.
Able to deploy space development and design/systems/materials strategies for solar access and control.
Shows respect for environment and resources as evidenced by materials use, recycling and disposal.

	<p>Able to incorporate a range of strategies (material, energy, water, air quality) for sustainability in buildings.</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>
Technical:	<p>Able to make selections of primary materials and systems (structural, environmental) based on knowledge of their characteristics to support the design and concept.</p> <p>Able to deploy structural systems and elements in projects as seen in building sections, framing plans and wall sections.</p> <p>Able to select and deploy materials and strategies for managing heat and moisture flows at the building envelope.</p> <p>Able to deploy space-conditioning strategies (active or passive,) systems and elements in projects as seen in building sections, systems diagrams, plans and wall sections</p>
Contextual:	<p>Able to analyze and understand the problems and opportunities presented by the project context as demonstrated in;</p> <ul style="list-style-type: none"> • Reaction to historic structures and land use patterns (scale, proportion, setback) • Reaction to contemporary issues in adjacent/adjoining land uses • Design to support a high quality of life (health, interaction, safety, diversity) <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p> <p>Able to make design decisions in projects addressing aspects of context described above.</p>
Theoretical:	<p>Able to articulate a point of view, grounded in published theory, capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.</p> <p>Able to present key documents establishing theoretical point of view in architecture and is conversant in major aspects of theory.</p>
Historical:	<p>Able to present and be conversant about key examples of the development of form, structure, space, material selection and lighting in architecture across time and cultures.</p>

ARCH 406. Architectural Design V. (2-6). Credit 5.

	<p>Architecture Design V. (2-6). Credit 5. Topical approaches to design, emphasizing theory and practice of architecture or related disciplines, such as urban design, interior design, health care design, etc. Prerequisites: Upper level classification in the BED Architectural Studies Option; ARCH 405.*</p>
Physical:	<p>Able to select, procure, manipulate, materials for models and prototypes to achieve desired surfaces and edges in service of conceptual goals.</p> <p>Able to design and craft connections between materials appropriate to the material and tools in service of the design and concept.</p> <p>Works safely and ethically; cleans up after themselves, does no damage to state property in the process of their work. Does not expose other studio students to risks and hazards caused by using power tools or solvent-based processes in the design studios, restricts risk and hazardous operations to designated shop areas.</p>
Graphical:	<p>Able to diagram key aspects of theory in the project context.</p>

	<p>Able to diagram programmatic relationships between spaces, users, and activities in spaces.</p> <p>Able to diagram the spatial and human interactions in urban settings</p> <p>Able to diagram the urban structure in the vicinity of the project site</p> <p>Able to sketch from urban environments, physical models and building spaces.</p> <p>Able to select and deploy physical media in service of conceptual goals and communication needs.</p> <p>Able to construct accurate axonometric or isometric drawings to explain organization and interaction of architectural conditions, program and site.</p> <p>Able to construct accurate building sections to present the spaces and substance enclosing the spaces in projects.</p> <p>Able to stage, capture, process photographs of models for presentation.</p>
Digital:	<p>Able to use video to document urban conditions and integrate them into project presentations.</p> <p>Able develop basic geometries and spaces in 3d modeling programs</p> <p>Able to develop walk-through animations of spaces using 3d modeling programs.</p> <p>Able to conduct seasonal shading/shadow study using ray-tracing simulators.</p> <p>Able to conduct more advanced lighting studies using radiosity engines</p> <p>Able to produce and deploy digital files needed for production of model parts by NC tools in the shop.</p> <p>Able to integrate image processing and page layout/desktop publishing software to design and print presentations of studio projects</p> <p>Able to use web-based research tools through the university library to support design studio projects.</p> <p>Able to design and deploy strategies for file backup and management</p>
Functional:	<p>Able to conduct basic inventory of spaces equipment, furnishings and space needs for buildings.</p> <p>Able to conduct basic user inventory of characteristics and needs for buildings.</p> <p>Able to make initial estimation of building systems space requirements.</p> <p>Able to generate space sizes based on use, furniture and equipment sizes, accessible clearances, and knowledge of human social distances.</p> <p>Able to write a design program based on inventory, functional adjacencies, environmental needs, furnishings and equipment and summarize the same.</p> <p>Able to incorporate fundamental aspects of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) to make barrier free studio project designs.</p> <p>Able to evaluate and select internal circulation structures and integrate these with life safety and accessibility requirements.</p> <p>Able to design basic accommodations for vehicular access and parking</p> <p>Able to make hierarchical and sequential arrangements of spaces (servant & served) for buildings.</p>
Sustainable:	<p>Able to evaluate climate data, solar geometry, and site characteristics to identify problems and opportunities throughout the calendar year.</p> <p>Able to deploy space development and design/systems/materials strategies for solar access and control.</p> <p>Shows respect for environment and resources as evidenced by materials use, recycling and disposal.</p> <p>Able to incorporate a range of strategies (material, energy, water, air quality) for sustainability in buildings.</p> <p>Is aware of actions that may be taken as an individual to address issues of sustainability.</p>

Technical:	<p>Able to make selections of primary materials and systems (structural, environmental) based on knowledge of their characteristics to support the design and concept.</p> <p>Able to deploy structural systems and elements in projects as seen in building sections, framing plans and wall sections.</p> <p>Able to select and deploy materials and strategies for managing heat and moisture flows at the building envelope.</p> <p>Able to deploy space-conditioning strategies (active or passive,) systems and elements in projects as seen in building sections, systems diagrams, plans and wall sections</p>
Contextual:	<p>Able to analyze and understand the problems and opportunities presented by the project context as demonstrated in;</p> <ul style="list-style-type: none"> • Reaction to historic structures and land use patterns (scale, proportion, setback) • Reaction to contemporary issues in adjacent/adjoining land uses • Design to support a high quality of life (health, interaction, safety, diversity) <p>Able to make design decisions in projects addressing physiological/psychological aspects of barrier-free use by people.</p> <p>Able to make design decisions in projects addressing aspects of context described above.</p>
Theoretical:	<p>Able to articulate a point of view, grounded in published theory, capable of influencing form, space, material selection, lighting in architecture are related to the point of view of the design team.</p> <p>Able to present key documents establishing theoretical point of view in architecture and is conversant in major aspects of theory.</p>
Historical:	<p>Able to present and be conversant about key examples of the development of form, structure, space, material selection and lighting in architecture across time and cultures.</p>