

MODULE DES3050: 3-D DESIGN STUDIO 2

Level: Advanced

Theme: Design Skills, Processes and Applications

Prerequisite: None

Module Description: Students are introduced to human factors, principles and considerations; e.g., ergonomics, semantics and semiotics.

Module Parameters: Specialized facilities or equipment may be required depending on the approach taken to 3-D model development and mass production. Sketching, drawing and modelling tools and equipment and access to a computer.

Note: It is recommended that students have access to instruction from an individual with formal, specialized training in product or industrial design and production.

Supporting Module: DES3040 3-D Design Studio 1

Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none">• apply human factors, principles and considerations; i.e., physical, auditory, visual when designing, which results in a three-dimensional product for human use• explain the relationships among the application of human factors, principles and considerations and the articulation (system, sequence) of a product design	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none">• resolution of a teacher- and/or student-specified advanced level three-dimensional project brief. <i>Assessment Tool</i> <i>Project Assessment: Communication and Human Factors (DESPRJ-3B)</i> <i>Standard</i> <i>Performance rating of 2 for each criteria</i>	60
	<ul style="list-style-type: none">• justification of judgements made during designing with respect to human factors and the designed solution, brought forth within the presentation/critique. <i>Assessment Tool</i> <i>Project Assessment: Communication and Human Factors (DESPRJ-3B)</i> <i>Standard</i> <i>Performance rating of 2 for each criteria</i>	20

MODULE DES3050: 3-D DESIGN STUDIO 2 (continued)

Concept	Specific Learner Expectations	Notes
Skills Development	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • select at least three examples of commercially produced products and consider, analyze and describe the human factors aspects of the designs. Identify the elements that are judged to be appropriately resolved in the designs, and those that could be improved. Make suggestions for how improvements could be affected • provide at least three examples of how human factors (e.g., physical, mental, emotional, psychological, ethical cultural) can affect three-dimensional design; e.g., size of products in relation to human anatomy, toys or games of different materials or with different levels of complexity depending on the intended age group, the shape or orientation of a building and its relationship to cultural conventions and expectations. 	<p>Design is done for a purpose. It is important that students realize that products are designed to meet a client's needs. Well-designed products will have a greater chance of success than poorly designed products. Students must recognize this, both as designers and as consumers of design.</p> <p>The impact of design on the social, psychological, emotional and physical well-being of people must be recognized by students and taken into account in their design work.</p>
Applied Problem Solving	<ul style="list-style-type: none"> • analyze one or more three-dimensional design projects; e.g., furniture, hand-tools, interfaces for electronic equipment (e.g., for a photocopier, a radio or personal stereo), control design (e.g., for a shower), design for users with special needs (e.g., seniors, wheelchair users, extraordinary work environment), signage, eye glasses, clothes, shoes, toys, board games, sports equipment, architectural elements, such as entrances, public/private spaces • identify the human factors considerations to be addressed, write a design brief and prepare a plan to complete the project, which would include methodology such as objectives of the project, steps required to achieve the objectives (which might include user testing of ideas with a survey group), the proposed deliverables (e.g., drawings and model[s]) and a time schedule (e.g., a bar chart) 	<p>See notes from 2-D Design Studio modules.</p>

MODULE DES3050: 3-D DESIGN STUDIO 2 (continued)

Concept	Specific Learner Expectations	Notes
Applied Problem Solving (continued)	<i>The student should:</i> <ul style="list-style-type: none">• select and use appropriate materials and tools to explore concepts and to achieve the objectives outlined in the design brief.	
Presentation, Design Journal and Portfolio	<ul style="list-style-type: none">• see Specific Learner Expectations for 2-D Design Studio 1 and 3-D Design Studio 1.	Advanced students should be able to lead a critique session. They should be given opportunity to do so at some point in their advanced level program.