# Design Studies 10, 20, 30

*Design Studies is a component of the CTS Program in Media, Design, and Communications Arts.* CTS courses are competency-based instructional units defined by learning outcomes that identify what a student is expected to know and be able to do. Courses include outcomes with practical applications, and each course represents approximately 25 hours of access to instruction.

The focus of the MDC cluster is for students to develop and apply important knowledge, skills and attitudes so they can provide well designed and aesthetically effective communication solutions. Some courses require one or more prerequisites, which are essential for maintaining safety standards, appropriate instructional sequence and articulation with post-secondary programs. CTS courses can be selected by students in an exploratory fashion, or they can be taken as part of an intentional pathway.

**Levels of Achievement**

Courses are organized into three levels of achievement: **introductory, intermediate** and **advanced**. Levels of achievement are not indicators of grade levels. As students progress through the levels, they will be expected to meet higher standards and to demonstrate an increased degree of competence in both the general and specific outcomes.

**Introductory** level courses help students build daily living skills and form the basis for further learning. Introductory courses prepare students for further experiences in the cluster, pathway or occupational area.

**Intermediate** level courses build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the cluster.

**Advanced** level courses refine expertise and help prepare students for entry into the workplace or a related post-secondary program defined within the cluster.

## Assessment Criteria (http://www.learnalberta.ca/content/ctf/CTF_Assessment_tool.pdf)

The final course mark in **Design Studies** will be based on the portfolio of the student's semester work. All modules will contribute to the final mark and will have equal weighting. There is no final exam.

As all courses in the program require a portfolio of artwork and graphics, students will be marked on the completeness of the portfolio and how well each piece of artwork/graphic fulfills the criteria as listed per course.

Firstly, students must submit a portfolio; secondly all required pieces must be in said portfolio, and finally each piece will be marked based on **Visibility (20%), Suitability (10%), Clarity (10%)**, and **overall Artistic Esthetics (60%)**.

NOTE: If no project is submitted, it is obvious that the "Success" and "Artistic" criteria cannot be assessed, hence student will be awarded a "Non-compliant" mark of "zero". See next section for additional information.

## Attendance, Missing or Incomplete Work

Regular attendance and punctuality is mandatory. It is the student's responsibility to obtain and learn any materials missed when absent. If a student is to absent him-/herself from class for any reason, such absence will be documented. If it is deemed that such absences become regular occurrences on the part of a particular student, there can be consequences especially if it leads to a deterioration of student work and progress.

The primary purpose of student assessment and evaluation is to ***support student learning*** and to have all students improve their performance. Student work is considered missing or incomplete if it is not handed in on the due date either because the student does not have the work or because the student is absent (unexcused), or if it is partially completed on the due date but not ready for submission.

The following process will be followed in the case of missing or incomplete student work unless otherwise stated in the Program of Studies:

1. The student must meet with the teacher at an agreed upon time. The purpose of the meeting is to:

a: Check student progress and determine why the assignment is missing or incomplete
b: Provide help or assistance to the student
c: Set a revised due date to hand in the missing or incomplete work within a reasonable amount of time, as determined by the teacher, that reflects the nature of the assignment
d: Make a documented plan for completing the assignment. The plan may include such things as:
   i) Staying in at lunch, on a spare, or after school
   ii) A timeline for completing the work

   iii) Missing or incomplete work may be recorded in PowerSchool as Not Handed In ("NHI") with a value of zero until the terms of the arrangement between teacher and student are met. If the terms of the agreement are not met, a 'reluctant zero' will be granted for the assignment.

   iv) Upon receiving the completed work or at the expiration of the prearranged agreement, a mark indicating achievement earned (without

penalty) must be recorded OR, in the case of the work still being missing or incomplete, the "NHI" *may* be changed to a zero (0).

## Student Success Centre (SSC)

New, beginning this school year, is the establishment of the Student Success Centre. If the situation (where the student has repeatedly refused or will not complete any course work) is not resolved, students with missing and incomplete work will be sent to the Student Success Centre for additional opportunities to complete missing assessments. The teacher will communicate with the SSC, who will expect the student to attend the SSC to complete the work. The session at the SSC will run for 47 minutes, and the student must stay for the duration. If the student misses the scheduled time in the SSC, they may be referred to administration to discuss the consequences of this choice moving forward.

The Student Success Centre will be held in the same space as E-Campus and will be available for students to complete school work/assessments/assignments.

## Academic Dishonesty

Cheating is a serious offense and will NOT be tolerated. Cheating also includes possession of materials not allowed in an examination room or area (e.g. cell phones).

Plagiarism is a serious violation of academic integrity. Offering the work of another as one's own without proper acknowledgement is plagiarism. Therefore, any student who fails to give appropriate credit for ideas or material he or she takes from another, whether it is a fellow student or a published resource writer, is guilty of plagiarism.

Any circumstance of academic dishonesty will be dealt with by the classroom teacher in consultation with subject area Coordinators. In instances of repeated offenses, a referral to administration will be made.

## Cell Phones and Other Hand-held Electronic Devices

A cell phone is a distraction to learning and it is a school policy that use of cell phones in the classroom as well outside of the classroom during a schedule class is prohibited. Cell phones will be left in front of class upon start of instruction and they will be returned upon the sounding of the "end-of-class" bell.

Though it is possible to monitor the non-use of electronic devices in class difficult it may be with over thirty students in the class, such is not the case when the student is out of the classroom. This is why devices must be surrendered at beginning of class.

# Course Listings

The expectations are listed for each of the courses.

## Design Studies 10: The Introductory Courses

### DES1010: Sketch, Draw & Model

**(This module is mandatory; students will not start other modules prior to its completion).**

**Description:** Students are introduced to observational sketching, drawing and modelling, and to a selection of basic materials and tools and their uses. Students also develop skills that can be applied to the field of design. The main focus of this module is on hand-drawings of various objects: perspective, front, rear, side, top, and bottom views.

**Outcomes:** The student will:

- **1. sketch, draw and model natural and manufactured three-dimensional (3-D) objects**
  - **1.1** draw real objects; e.g., human forms, natural and manufactured objects, artifacts from different materials with differing textures and reflective properties
  - **1.2** demonstrate various sketching and drawing styles used in different contexts; e.g., gesture, contour, tonal, isometric, perspective
- **2. use manual sketching, drawing and modelling materials and tools effectively**
  - **2.1** recognize appropriate sketching, drawing and modelling tools
  - **2.3** use and maintain tools and materials in a safe and appropriate manner
  - **2.4** use appropriate scale

**Evaluation:**

Student will submit a portfolio of his/artwork of at least 10 different objects, either in color or B&W. The subject matter must be presented in a timely fashion, at a rate of one topic per week.

### DES1020: The Design Process

**Description:** Students develop an understanding of design problems through research and select, generate and evaluate possible solutions.

**Outcomes:** The student will:

- **1. identify the steps in the design process**
  - **1.1** recognize and apply the components of the design process, including:
    - **1.1.1** identifying the problem or need (design brief)
    - **1.1.2** researching the problem
    - **1.1.3** generating ideas and visualizing potential solutions

    - **1.2** identify the elements; e.g., line, shape (2-D) or form (3-D), colour, texture, depth (perspective), light, direction (motion), mass (visual weight), tone (black and white) or value (colour), space (positive and negative)

- **2. apply the steps in the design process through production of a designed solution**
    - **2.1** follow the design process to create solutions for one or more 2-D or 3-D projects
    - **2.2** select and use appropriate tools and materials as outlined in the design brief
    - **2.3** effectively communicate intentions and decision making related to the design project; e.g., form, function, aesthetics
    - **2.4** use and maintain tools and materials in a safe and appropriate manner

- **3. present a portfolio-ready drawing, rendering or model that the student produced**
    - **3.1** present sketches, drawings and/or models for assessment
    - **3.2** maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing and modelling activities

### Evaluation:

Student will submit a portfolio of his/artwork of at least 10 different logos. The student will be introduced to Adobe Illustrator and all work will be completed with this program.

The logos must first be hand-drawn, with notes to explain the relationship of the design to its intended function.

The subject matter must be presented in a timely fashion, at a rate of one topic per week.

## DES1030: 2-D Design 1

**Description:** Students develop skills and techniques for 2-D design by using tools, materials and processes common to 2-D design to complete a variety of project activities.

**Supporting Courses:**

- COM1005: Visual Composition
- DES1010: Sketch, Draw & Model

**Outcomes:** The student will:

- **1. identify and practise 2-D design techniques within the parameters of a design brief to appropriate scale; e.g., layout, grids, typography, assembly drawing**

- **2. identify and use tools and materials common to 2-D design; e.g., card stock, paints, markers, cutting tools, CAD and graphic software**
    - **2.1** demonstrate basic skills using tools and materials
    - **2.2** select and use appropriate tools and materials as outlined in the design bri

- **5. produce and present a portfolio-ready drawing, image or rendering**
    - **5.1** present sketches or drawings for assessment
    - **5.2** maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing activities
    - **5.3** explain intentions and decision making related to the application of elements and principles of design

# Design Studies 20: Introduction to CAD

## DES1040: 3-D Design 1

**Description:** Students develop skills and techniques for 3-D design by using tools, materials and processes common to 3-D design to complete a variety of project activities.

**Supporting Courses:**

- COM1005: Visual Composition
- DES1010: Sketch, Draw & Model

**Outcomes:** The student will:

- **1. identify and practise 3-D design techniques within the parameters of a design brief to appropriate scale; e.g., process, production and presentation**
    - **1.1** use terminology associated with the techniques learned
    - **1.2** demonstrate various techniques to provide design solutions; e.g., packaging, garment, architectural model
- **2. identify and use tools and materials common to 3-D design; e.g., modelling software, foam core board, fabric, wood**
    - **2.1** demonstrate basic skills using tools and materials
    - **2.2** select and use appropriate tools and materials as outlined in the design brief
    - **2.3** use and maintain tools and materials in a safe and appropriate manner

## DES2035: 2-D Design 2

**Prerequisite:** DES1030: 2-D Design 1

**Description:** Students continue to develop skills and techniques for 2-D design by using tools, materials and processes common to 2-D design to complete a variety of project activities.

**Outcomes:** The student will:

- **1. plan and produce solutions to 2-D design briefs**
    - **1.1** apply the design process to solve a 2-D design problem; e.g., floor plan, wrought iron gate, stained glass window, clothing pattern
    - **1.2** select and use appropriate tools and materials as outlined in the design brief
    - **1.3** use and maintain tools and materials in a safe and appropriate manner
- **2. incorporate the elements and principles of design to achieve the design solution**
    - **2.1** apply techniques, tools, materials and other resources in design solution; e.g., tone, texture and colour, markers and paints, images, typeface, drawing, layout, measuring, notation, rendering, assembly drawing and correct use of tools

- **2.2** use mathematical and/or scientific principles as they apply to design projects assigned; e.g., organization of visual space, measurement of internal space, borders, columns, use of scale
- **2.3** experiment with one or more elements (e.g., colour, line, shape) and/or principles (e.g., rhythm, balance) to achieve desired effects

- **3. produce and present a portfolio-ready drawing, image or rendering**
  - **3.1** participate in interim critiques; e.g., self, peer, instructor
  - **3.2** discuss intentions and decision making related to the application of the elements and principles of design
  - **3.3** present sketches or drawings for assessment
  - **3.4** maintain a design folder, journal or sketchbook as part of the portfolio of ongoing observational drawing activities

# DES2045: 3-D Design 2

**Prerequisite:** DES1040: 3-D Design 1

**Description:** Students continue to develop skills and techniques for 3-D design by using tools, materials and processes common to 3-D design to complete a variety of project activities.

**Outcomes:** The student will:

- **1. plan and produce solutions to 3-D design briefs**
  - **1.1** select and use appropriate tools and materials as outlined in the design brief
  - **1.2** apply the design process to solve a 3-D design problem; e.g., software modelling, cutting, joining, bending, measuring
  - **1.3** use and maintain tools and materials in a safe and appropriate manner

- **2. incorporate the elements and principles of design to achieve the design solution**
  - **2.1** apply techniques, tools, materials and other resources in design solution; e.g., tone, texture and colour, markers and paints, images, typeface, drawing, layout, measuring, notation, rendering, assembly drawing and correct use of tools
  - **2.2** use mathematical and/or scientific principles as they apply to design projects assigned; e.g., organization of visual space, measurement of internal space, borders, columns, use of scale
  - **2.3** experiment with one or more elements (e.g., colour, line, shape) and/or principles (e.g., rhythm, balance) to achieve desired effects

- **3. produce and present a portfolio-ready drawing, image or rendering**
  - **3.1** participate in interim critiques; e.g., self, peer, instructor
  - **3.2** discuss intentions and decision making related to the application of elements and

principles of design
- **3.3** present images and/or model(s) for assessment
- **3.4** maintain a design folder, journal or sketchbook as part of the portfolio of ongoing activities that illustrates skill building

# DES2060: Evolution of Design

**Description:** Students develop a historical framework and study the importance and relevance of design within a cultural context by examining past and contemporary examples of designed artifacts.

**Outcomes:** The student will:

- **1. demonstrate knowledge of historical and contemporary design resources**
  - **1.1** describe historical influences in design
  - **1.2** identify and explain the relationship between a design solution in the past and a current design solution (e.g., buildings, graphics, fashion and transportation) including the influence of cultural, global, ethical and environmental conditions on the solution
  - **1.3** maintain a design journal/sketchbook of the project

- **2. present research findings**
  - **2.1** prepare a presentation of research findings; e.g., a research paper, a media presentation, graphic illustrations
  - **2.2** use tools, materials and other resources appropriate for the presentation; e.g., computer, software, display materials
  - **2.3** prepare for and actively participate in a final presentation and critique describing the area of study and findings

- **3. include the presentation in a portfolio**
  - **3.1** participate in a final critique
  - **3.2** use appropriate terminology within the design context

# DES2065: Technical Design 2

**Prerequisite:** DES1060: Technical Design & Drafting 1

**Description:** Students refine skills and techniques to present appropriate drawings and/or model(s) for visualizing and illustrating solutions to design problems.

**Outcomes:** The student will:

- **1. demonstrate intermediate skills by producing pictorial drawings (e.g., isometric, oblique, one- and two-point perspective, technical flats) including rendering styles and techniques**
  - **1.1** select appropriate drawing types and styles and use them to accurately illustrate

potential design solutions
    - **1.2** select and use appropriate tools and materials as outlined in each design brief

- **2. present a pictorial representation complete with surface developments and renderings to a client**
    - **2.1** assess client needs based on design brief; e.g., time management, cost, technology available, aesthetics
    - **2.2** produce a presentation plan for approval; e.g., what style of images and modelling meets client needs set out in the design brief
    - **2.3** construct, critique and revise presentation
    - **2.4** present a solution to the client

- **3. include the design solution in a portfolio**
    - **3.1** participate in interim critiques; e.g., self, peer, instructor
    - **3.2** discuss intentions and decision making related to the application of elements and principles of design

# Design Studies 30: Exploring Careers in Design

## DES3035: 2-D Design 3

**Prerequisite:** DES2035: 2-D Design 2

**Description:** Students apply theories, skills and techniques to resolve complex 2-D design problems. Emphasis is placed on exploring shape, composition, aesthetics, cultural context, materials, processes and systems, while addressing social responsibility and environmental stewardship.

**Outcomes:** The student will:

- **1. produce an advanced 2-D design solution for an advanced level design brief**
    - **1.1** identify a problem considering architecture, landscape architecture, industrial design, engineering or interior design, and write a design brief
    - **1.2** identify and accommodate human factors commonly affected by design solutions
    - **1.3** describe the impact regarding shape, composition and aesthetics of the solution on the stakeholders; e.g., cultural, psychological and physiological
    - **1.4** identify and select materials based on their properties and justify their use in the context of the design solution
    - **1.5** identify and select production processes and justify their use in the context of the design solution
    - **1.6** consider environmental stewardship

- **2. select t he most appropriate solution based on the design brief**

    - **2.1** assess intentions and decision making related to the application of elements and principles of design
    - **2.2** participate in interim critiques; e.g., self, peer, instructor, client

- **3. construct presentation for design solution**
    - **3.1** prepare a detailed plan for the construction and presentation of the design solution; e.g., write up, sequential diagram, safety concerns, cost and material sheet
    - **3.2** secure approval to begin the design solution
    - **3.3** identify and use techniques, tools, materials and other resources as outlined in the plan for presenting the design solution

# DES3045: 3-D Design 3

**Description:** Students apply theories, skills and techniques appropriate to 3-D design. Students will deal with such aspects as shaping, massing, proportion, scale, contrast, colour, texture and finish within the context of complex 3-D design projects. Students are introduced to cultural, symbolic and human factors, principles and ergonomic considerations.

**Outcomes:** The student will:

- **1. analyze 3-D design projects/products; e.g., displays, exhibits, dramatic sets, products, packaging, furniture, lighting, interface, new technology**
    - **1.1** discuss the strengths and weakness of the projects/products
    - **1.2** evaluate based on set criteria; e.g., usefulness, aesthetic, function, form, material use
    - **1.3** consider symbolic and cultural connotations to make aesthetic judgments about projects/products

- **2. plan advanced level designed solutions for 3-D design problem**
    - **2.1** identify a problem considering architecture, landscape architecture, industrial design, engineering or interior design, and write a design brief
    - **2.2** identify and accommodate human factors commonly affected by design solutions
    - **2.3** describe the impact regarding shape, composition and aesthetics of the solution on the stakeholders; e.g., cultural, psychological and physiological
    - **2.4** consider environmental stewardship

- **3. construct 3-D design for design solution**
    - **3.1** prepare a detailed plan for the construction and presentation of the design solution/prototype; e.g., write up, sequential diagram, safety concerns, cost and material sheet

    - **3.2** secure approval to begin the design solution
    - **3.3** identify and use techniques, tools, materials and other resources as outlined in the

plan for presenting the design solution
    - **3.4** demonstrate appropriate use of elements, principles and considerations common to 3-D design

# DES3095: Architectural Design

**Description:** Students translate architectural design concepts into graphic images, and then convert those images into technical drawings and specifications that result in the creation of the built environment.

**Supporting Courses:**

- DES3055: CAD 3
- DES3075: Technical Drafting 3
- ENS2210: Sustainable Building Design & Construction

**Outcomes:** The student will:

- **1. identify a client need and create an architectural design brief**
    - **1.1** investigate architectural design meeting human, environmental and cultural needs
    - **1.2** consider residential or commercial requirements, including:
        - **1.2.1** materials
        - **1.2.2** appropriate codes; e.g., building code, zoning, fire, accessibility
        - **1.2.3** styles
        - **1.2.4** environment
        - **1.2.5** client needs

- **2. produce an architectural design that addresses human and/or environmental needs**
    - **2.1** structure a plan for resolution; e.g., concept drawings, thumbnail sketch
    - **2.2** produce architectural drawings, including:
        - **2.2.1** detailed floor plan
        - **2.2.2** elevations
        - **2.2.3** building section
    - **2.3** demonstrate organization and management of personal learning with minimal external direction, in both individual and cooperative learning situations
    - **2.4** consider environmental stewardship in proposed design

- **3. present and describe the solution based on the needs outlined in the design brief**

- **4. include the design solution in a portfolio**
    - **4.1** participate in a final critique
    - **4.2** use appropriate terminology within the context
    - **4.3** include examples of the plan for resolution in a portfolio

# DES3105: Engineering Design

**Prerequisite:** DES2055: CAD 2 ***OR*** DES2075: Technical Drafting 2

**Description:** Students develop complex explanatory drawings for civil, mechanical, structural or electrical systems. This is a skill-building course with an emphasis on explanatory line drawings suitable for presentation and assembly.

**Supporting Courses:**

- DES3055: CAD 3
- DES3075: Technical Drafting 3
- ENS2210: Sustainable Building Design & Construction

**Outcomes:** The student will:

- **1. identify a client need and create an engineering design brief**
    - **1.1** investigate engineering design meeting human, environmental and cultural needs
    - **1.2** consider personal and industrial requirements, including:
        - **1.2.1** appropriate codes; e.g., Canadian Standards Association (CSA), Underwriters Laboratory (UL), building code
        - **1.2.2** materials
        - **1.2.3** schematics
        - **1.2.4** schedules
        - **1.2.5** environment
        - **1.2.6** client needs

- **2. produce a design solution that addresses human and/or environmental needs**
    - **2.1** structure a plan for resolution; e.g., concept drawings, thumbnail sketch
    - **2.2** produce engineering drawings according to the needs set in the design brief, including:
        - **2.2.1** assembly
        - **2.2.2** exploded views
        - **2.2.3** cut-away
        - **2.2.4** detail
        - **2.2.5** revolutions
        - **2.2.6** section
        - **2.2.7** stretchout

    - **2.3** demonstrate organization and management of personal learning with minimal external direction, in both individual and cooperative learning situations
    - **2.4** consider environmental stewardship in proposed design

- **3. present and describe the solution based on the needs outlined in the design brief**

- **4. include the design solution in a portfolio**
    - **4.1** participate in a final critique
    - **4.2** use appropriate terminology within the context
    - **4.3** include examples of the plan for resolution in a portfolio

# DES3115: Industrial Design

**Prerequisite:** DES2055: CAD 2 ***OR*** DES2075: Technical Drafting 2

**Description:** Industrial design incorporates innovation, aesthetics, functional requirements, technology and ergonomics into a product in order to better meet the needs of the user. Students work creatively with design problems to analyze, propose and produce solutions using contemporary materials, techniques and finishes. The resulting presentations are both professional and unique.

**Supporting Courses:**

- DES3055: CAD 3
- DES3075: Technical Drafting 3
- ENS2210: Sustainable Building Design & Construction

**Outcomes:** The student will:

- **1. identify a client need and create a brief for a designed product** 
    - **1.1** investigate industrial design meeting human, environmental and cultural needs
    - **1.2** consider personal or industrial requirements, including:
        - **1.2.1** materials
        - **1.2.2** ergonomics
        - **1.2.3** environmental impact; e.g., sustainability, packaging, resources
        - **1.2.4** function
        - **1.2.5** aesthetic
        - **1.2.6** client needs

- **2. produce a design solution that addresses human and/or environmental needs**
    - **2.1** structure a plan for resolution; e.g., concept drawings, thumbnail sketches
    - **2.2** produce technical drawings according to the needs set in the design brief, including:
        - **2.2.1** assembly drawings
        - **2.2.2** orthographic
        - **2.2.3** detail drawing
        - **2.2.4** rendered perspective
        - **2.2.5** section
        - **2.2.6** axonometric
    - **2.3** demonstrate organization and management of personal learning with minimal external direction, in both individual and cooperative learning situations
    - **2.4** consider environmental stewardship in proposed design

- **3. present and describe the solution based on the needs outlined in the design brief**

- **4. include the design solution in a portfolio**
    - **4.1** participate in a final critique
    - **4.2** use appropriate terminology within the context
    - **4.3** include examples of the plan for resolution in a portfolio

# DES3125: Interior Design

**Prerequisite:** DES2055: CAD 2 ***OR*** DES2075: Technical Drafting 2

**Description:** Students learn to consider form and space when developing interior design solutions specific to human and/or environmental needs. Students assess solutions on the basis of functional and aesthetic considerations and appropriateness within the human environment. The design process is applied to solve abstract and realistic interior design problems.

**Supporting Courses:**

- DES3055: CAD 3
- DES3075: Technical Drafting 3
- ENS2210: Sustainable Building Design & Construction

**Outcomes:** The student will:

- **1. identify a client need and create an interior design brief**
    - **1.1** investigate interior design that meets human, environmental and cultural needs
    - **1.2** consider residential or commercial requirements, including:

        - **1.2.1** current materials
        - **1.2.2** appropriate codes; e.g., building code, zoning, fire
        - **1.2.3** styles
        - **1.2.4** colour theory
        - **1.2.5** lighting; e.g., mood, principles of illumination, lighting sources
        - **1.2.6** traffic flow
        - **1.2.7** environment
        - **1.2.8** client needs

- **2. produce an interior design that addresses human and/or environmental needs**
    - **2.1** structure a plan for resolution; e.g., concept drawings, thumbnail sketch
    - **2.2** produce appropriate interior drawings according to the needs set in the design brief, including:
        - **2.2.1** floor plan, complete with furnishings
        - **2.2.2** rendered elevations
        - **2.2.3** rendered perspectives
        - **2.2.4** lighting plan
    - **2.3** produce a materials sample board; e.g., colour swatches, textures, material swatches
    - **2.4** demonstrate organization and management of personal learning with minimal external direction, in both individual and cooperative learning situations
    - **2.5** consider environmental stewardship in proposed design

- **3. present and describe the solution based on the needs outlined in the design brief**

- **4. include the design solution in a portfolio**
    - **4.1** participate in a final critique
    - **4.2** use appropriate terminology within the context
    - **4.3** include examples of the plan for resolution in a portfolio

# DES3135: Landscape Design

**Prerequisite:** DES2055: CAD 2 ***OR*** DES2075: Technical Drafting 2

**Description:** Students learn to consider form and space when producing man-made environments that are ecologically appropriate, functionally successful and aesthetically pleasing. Students learn about the need to establish a balance between use and enjoyment of the land and the conservation and health of the environment. The design process is applied to solve abstract or realistic landscape design problems.

**Supporting Courses:**

- DES3055: CAD 3
- DES3075: Technical Drafting 3
- ENS2210: Sustainable Building Design & Construction

**Outcomes:** The student will:

- **1. identify a client need and create a landscape design brief**
    - **1.1** investigate landscape design that meets human, environmental and cultural needs
    - **1.2** consider residential or commercial requirements, including:
        - **1.2.1** topography
        - **1.2.2** ecology
        - **1.2.3** geographic location
        - **1.2.4** materials/resources
        - **1.2.5** appropriate codes; e.g., building code, zoning, fire
        - **1.2.6** styles; e.g., formal, informal, natural, groomed
        - **1.2.7** environment; e.g., sustainability, xeriscape, reclamation
        - **1.2.8** client needs

- **2. produce a landscape design that addresses human and/or environmental needs**
    - **2.1** structure a plan for resolution; e.g., concept drawings, thumbnail sketch
    - **2.2** produce appropriate landscape drawings according to the needs set in the design brief, including:
        - **2.2.1** site plan; e.g., survey, legal, planting
        - **2.2.2** rendered elevations
        - **2.2.3** rendered perspectives
        - **2.2.4** drainage
    - **2.3** demonstrate organization and management of personal learning with minimal external direction, in both individual and cooperative learning situations
    - **2.4** consider environmental stewardship in proposed design

- **3. present and describe the solution based on the needs outlined in the design brief**

- **4. include the design solution in a portfolio**
    - **4.1** participate in a final critique
    - **4.2** use appropriate terminology within the context
    - **4.3** include examples of the plan for resolution in a portfolio

- **5. identify copyright restrictions and permissions and put them into practice**

- **6. apply consistent and appropriate work station routines**
    - **6.1** demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
    - **6.2** demonstrate security for hardware, software, supplies and personal work

- **7. demonstrate basic competencies**
    - **7.1** demonstrate fundamental skills to:
        - **7.1.1** communicate
        - **7.1.2** manage information
        - **7.1.3** use numbers
        - **7.1.4** think and solve problems
    - **7.2** demonstrate personal management skills to:
        - **7.2.1** demonstrate positive attitudes and behaviours
        - **7.2.2** be responsible
        - **7.2.3** be adaptable
        - **7.2.4** learn continuously
        - **7.2.5** work safely
    - **7.3** demonstrate teamwork skills to:
        - **7.3.1** work with others
        - **7.3.2** participate in projects and tasks

- **8. create a transitional strategy to accommodate personal changes and build personal values**
    - **8.1** identify short-term and long-term goals
    - **8.2** identify steps to achieve goals

# DES3155: Modelling – Virtual

**Prerequisite:** DES2055: CAD 2

**Description:** Students use virtual 3D design concepts as a starting point for developing the skill and knowledge needed to design in virtual space. Students develop an understanding of light, form, texture and shape. These components are explored through digital modelling exercises.

**Outcomes:** The student will:

- **1. identify a client need and create a brief for a designed model**
    - **1.1** determine the type of model best suited to the design brief; e.g., detail, massing, topographic, study, presentation, fly-though, shadow study
    - **1.2** consider materials, scale and cost

- **2. produce a virtual model**
  - **2.1** use correct scale, and workspace and layout techniques
  - **2.2** construct and label elements appropriately
  - **2.3** group elements correctly
  - **2.4** import/export model files using correct scale
  - **2.5** include elements of design in the model with precision and accuracy
  - **2.6** apply materials, textures and colour
  - **2.7** create sources of illumination
  - **2.8** render the model
  - **2.9** output the rendered image

- **3. present the model**

- **4. include the model in a portfolio**
  - **4.1** participate in a final critique
  - **4.2** include images and/or animation of the model in a portfolio