

Erindale College

Assessment Period:	2021 S2
Course:	DESIGN & EMERGING TECHNOLOGIES
Unit:	Product Design (1.0)
Accreditation:	A
Year:	12

Unit Goals

- analyse ethical, social and environmental responsibilities of designers
- apply technical knowledge to create a user centred product

Content Description

Design process

- apply design methodology to create and produce a user centred product
- analyse the product for user centred functionality
- understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live

Strategies, methodologies and procedures

- analyse the features of innovation in product design, for example, functionality
- apply creative thinking processes to develop an innovative production, for example, mind
- analyse project, methodologies and risk management strategies
- work independently and/or collaboratively to design products
- manufacture design products using appropriate production techniques
- understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals

Theories, concepts and materials

- apply design ideas to create solutions that consider ergonomics, aesthetics and anthropometrics of products
- use traditional and/or contemporary materials that have the attributes to meet design needs
- apply appropriate construction methods to create user centre product

Contexts

- analyse contemporary, cultural and historical case studies in relation to products, for example, industrial revolution, Bauhaus, informalism, postmodernism, bio-morphism, International style and indigenous influences
- analyse ethical, environmental and social responsibilities of designers

Communication

- communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports
- communicate ideas and insights in a range of appropriate mediums to a variety of audiences
- use design communication skills to present creative design ideas independently and collaboratively, justifying choices
- create and justify a design solution for a product

- justify ideas coherently using appropriate evidence and accurate referencing

Reflection

- reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning
- reflect on final solution as an effective user centred product

Assessment Tasks

Name	Due Date	Weighting
Written - Research task	Friday week 5: 13 August	20%
Practical Application Part A	Friday week 8: 3 September	30%
Practical Application Part B	Friday week 16: 12 November	30%
Design Development	Friday week 16: 12 November	20%

Specific Unit Information

COST OF MATERIALS

There are costs associated with this unit of study, and they are as follows:

A **\$30.00** contribution is asked per semester. This covers the cost of materials, hardware, finishes and consumables.

School Assessment Information

For penalties for late and non-submission of work

See [BSSS Policy and Procedure Manual 4.3.10](#) for further information.

For academic integrity

See [BSSS Policy and Procedure Manual 4.3.12](#) for further information.

For appeals processes

See [BSSS Policy and Procedure Manual 7.2](#) for further information.

For moderation procedures (internal and external)

See [BSSS Policy and Procedure Manual 5](#) for further information.

Achievement Standards for DESIGN & EMERGING TECHNOLOGIES A - Year 12

	<i>A student who achieves an A grade typically</i>	<i>A student who achieves a B grade typically</i>	<i>A student who achieves a C grade typically</i>	<i>A student who achieves a D grade typically</i>	<i>A student who achieves an E grade typically</i>
Knowledge and understanding	<ul style="list-style-type: none"> analyses the design process and explains opportunities, constraints and implications for decision making analyses technology theories, concepts and principles and explains the properties of materials or data or systems to address a need, problem or challenge analyses technologies in a range of contexts and explains ethical and sustainable application thinks critically, drawing on data and information to solve complex problems and analyses opportunities for application of technology 	<ul style="list-style-type: none"> explains the design process and describes opportunities, constraints and implications for decision making explains technology theories, concepts and principles and describes the properties of materials or data or systems to address a need, problem or challenge explains technologies in a range of contexts and describes ethical and sustainable application thinks critically, drawing on data and information to solve problems and explains opportunities for application of technology 	<ul style="list-style-type: none"> describes the design process with reference to opportunities, constraints and implications for decision making describes technology theories, concepts and principles with some reference to properties of materials or data or systems to address a need, problem or challenge describes technologies in a range of contexts with some reference to ethical and sustainable application draws on data and information to solve problems and describes opportunities for application of technology 	<ul style="list-style-type: none"> identifies major features of the design process with little reference to opportunities, constraints and implications for decision making identifies major technology theories, concepts and principles with some reference to properties of materials or data or systems to address a need, problem or challenge identifies major features of technologies with little reference to ethical and sustainable application identifies some opportunities for application of technology with limited use of information and data 	<ul style="list-style-type: none"> identifies some features of the design process with minimal understanding of opportunities, constraints and implications identifies few technology theories, concepts and principles with minimal reference to properties of materials or data or systems to address a need, problem or challenge identifies some features of technologies with no reference to ethical and sustainable application identifies some opportunities for application of technology with little evidence of use of information and data
Skills	<ul style="list-style-type: none"> applies technology concepts, strategies and methodologies with control and precision demonstrating understanding of the historical and cultural context and its impact creates innovative and high-quality design solutions/products using techniques and approaches and justifies ideas coherently critically analyses potential prototypes and solutions evaluating their appropriateness and effectiveness via iterative improvement and review communicates complex ideas and insights effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage and accurate referencing reflects with insight on their own thinking and evaluates inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively 	<ul style="list-style-type: none"> applies technology concepts, strategies and methodologies with control demonstrating understanding of the historical and cultural context and its impact creates quality design solutions/products using techniques and approaches and explains ideas coherently analyses potential prototypes and solutions evaluating their appropriateness and effectiveness via iterative improvement and review communicates ideas effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage and referencing reflects on their own thinking and analyses inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively 	<ul style="list-style-type: none"> applies technology concepts, strategies and methodologies with some control demonstrating understanding of context and its impact creates design solutions/products using some techniques and approaches and explains ideas explains potential prototypes and solutions evaluating their appropriateness and effectiveness via iterative improvement and review communicates ideas appropriately in mediums and explains ideas coherently using appropriate evidence, metalanguage and referencing reflects on their own thinking explains inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively 	<ul style="list-style-type: none"> applies technology concepts, strategies and methodologies with minimal control demonstrating understanding of its impact creates design solutions/products using some techniques and approaches and describes ideas describes analyses potential prototypes and solutions evaluating their appropriateness and effectiveness via iterative improvement and review communicates ideas in mediums and describes ideas with some use of appropriate evidence with minimal use metalanguage and referencing reflects on their own thinking with some reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively 	<ul style="list-style-type: none"> applies technology concepts, strategies and methodologies with limited control demonstrating little evidence of understanding its impact creates design solutions/products using some techniques and approaches and description of ideas identifies potential prototypes and solutions with little or no reference to their appropriateness and effectiveness via iterative improvement and review communicates basic ideas in few mediums and describes ideas with little or no use of appropriate evidence and referencing reflects on their own thinking with little or no reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively