

ENGG1200
Engineering Team Design Experience

Spring 2024

3 Credits

The Engineering Team Design Experience course allows students to explore various areas of engineering in order to design and work towards a final demonstration of their projects before the end of the term. Students in this course will be divided into design teams with a common goal in mind, and experience the workflow of creating a new artifact.

This semester will focus on the workflow of incorporating both 3D modelling and motion capture technology in producing digital media.

Course Description

There will be three main aspects in ENGG1200 this semester:

Engineering Skills

We will introduce fundamental skills in different engineering fields, such as 3D modelling or hands-on prototyping skills; along with exposure to various kinds of advanced technology available.

Design and Creativity

This course will have sessions focusing on design thinking and creativity. They are key to creating practical and interesting products.

Teamwork

Students will work together in teams to realize their common idea of their final project, to have a real-world experience working with a design team,

Course Instructor

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Course Coordinators

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Good Learning Environment and Academic Integrity

All assignments and examinations you submit for grading must represent the results of your own independent efforts. You can discuss methodologies with your classmates, but you must do the work independently. Students who are involved (including the copier and the helper) in an incident of plagiarism will receive a failing grade for the course and the incident will be reported for appropriate disciplinary actions.

Intended Learning Outcomes (ILO)

ILO No.	Description
1	Apply an engineering design approach to: generate ideas, model, analyze, predict and build an innovative object of engineering interest taking into consideration both societal and economic impact
2	Describe appropriate knowledge and behavior for effective and ethical membership on a technical team
3	Communicate effectively with others orally, in writing and by use of sketches/drawings.
4	Develop possible innovative engineering solutions via peer learning and self-initiated learning processes
5	Develop new creativity building techniques and exercises
6	Plan and propose creative solutions for a specific context, informed by engagement with a community group

ENGG 1200 - Engineering Team Design Experience			
Course Schedule - Summer 2023			
Class	Date	Timeslot	Topics
1	2-Feb	1:30-4:20PM	Course Introduction
2	9-Feb	1:30-4:20 PM	Introduction to 3D Modelling in Blender
3	16-Feb	1:30-4:20 PM	
4	23-Feb	1:30-4:20 PM	Virtual Production Workflow
5	1-Mar	1:30-4:20 PM	Creativity and Character Design
6	8-Mar	1:30-4:20 PM	Model Your Character
7	15-Mar	1:30-4:20 PM	Motion Capture System Hands-on Experience
8	22-Mar	1:30-4:20 PM	
9	12-Apr	1:30-4:20 PM	Unreal Engine 5 Application
10	19-Apr	1:30-4:20 PM	
11	26-Apr	1:30-4:20 PM	Basic Animations in Blender
12	3-May	1:30-4:20 PM	Voice Over and Video Editing
13	10-May	1:30-4:20 PM	Final Project Showcase and Reflection

Assessment

	Grading	ILO#
Hands-on Practice	15%	#1, #2, #6
Solution Progress	25%	#3, #5
Design Pitch	10%	#1, #2, #3, #4, #6
Visualization of Ideas	15%	#1, #3, #6
Reflection	15%	#4, #5, #6
Final Project Showcase	20%	#1, #5