

COURSE CONTENT

Course Code	DT2000
Course Title	Basic Principles of Motion
Pre-requisites	NIL
No of AUs	3
Contact Hours	39 Contact Hours

Course Aims

This introductory course will familiarize you with the basic principles that inform all animation practice. You will be introduced to a wide variety of traditional and non-traditional animation styles and the ideas. Through a series of hand drawn exercises, you will gain a practice-based experience of core animation fundamentals. The course is designed to develop your basic skills and to prepare you for more complex application in animation filmmaking.

Intended Learning Outcomes (ILO)

By the end of this course, you should be able to:

1. Describe the fundamental elements of motion as applied to animation.
2. Apply your knowledge of the basic principles of animation to different animation challenges and demonstrate how to communicate a storytelling pose with various media.
3. Creatively apply principles learned in class to develop your own animation.
4. Communicate ideas quickly with gestural meaningful drawing that reflect mood, attitude, weight and composition effectively.
5. Critique your own work and your peers' work in a clear and constructive manner.

Course Content

- **The 12 principles of animation.**
Overview of key concepts and theories around the creation of motion through drawing
Using simple shapes, you will create animations that will focus on different aspect of such principles.
- **How to draw for animation.**
An exploration of your own character design to show your understanding of anatomy, gesture weight, and how you can capture the force that propels gesture and motion in animation.
- **Exploring and understanding pose weight and attitude in relation to human basic locomotion**
Overview of basic concepts in relation to human locomotion. Through the use of a life action and animation examples you will explore the key concept behind the creation of a character basic movement.
- **Transfer the knowledge acquired to your own personal work.**
Through a series of exercises and in-class projects, you will explore different kinds of animation problems pertaining to creating original movement. Developed through lectures, workshops, peer and instructor feedback, you will apply the principles learned to a series of scenarios that deal with movement, weight, staging, and timing.

Assessment (includes both continuous and summative assessment)

Component	Course LO Tested	Related Programme LO	Weighting	Team/Individual
Continuous Assessment 1 Assignments: Based on class activities	1,2,3,4		30%	Individual
Continuous Assessment 2 Participation	5		20%	Individual
Final Project: Create and present in a reel form the work achieved over the 13 weeks	2,3,4		50%	Individual
Total			100%	

Recommended Reading and References

1. Williams, Richard *The Animator's Survival Kit, Expanded Edition: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet Animators*. Faber & Faber, 2009.
2. Blair, Preston. *Cartoon animation* 1994.
3. Whitaker, Harold, and John Halas. *Timing for animation*. CRC Press, 2013.
4. White, Tony. *How to Make Animated Films: Tony White's Masterclass Course on the Traditional Principles of Animation*. Taylor & Francis, 2013.

Course Policies and Student Responsibilities

(1) General

You are expected to complete all assigned activities, assignments, attend all classes punctually and complete all scheduled assignments by due dates. You are expected to take responsibility to follow up with assignments and course related announcements. You are expected to participate in all project critiques, class discussions and activities.

(2) Punctuality

You are expected to be punctual for all classes. If you are more than 30 minutes late, you will be deemed as absent and will not be able to sign in to the attendance register.

(3) Absenteeism

In-class activities and participation make up a significant portion of your course grade. Absence from class without a valid reason will affect your participation grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. There will be no make-up opportunities for in-class activities.

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, and collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Planned Weekly Schedule*

*Subjected to adjustment by instructor according to students' progress, public holidays and unforeseeable circumstances.

Week	Topic	Course LO	Readings/ Activities
1 - 2	<ul style="list-style-type: none">The fundamental animation principles. Overview of key concepts and theories around the creation of believable moving objects. Overview of basic tools of the trade. Creating your own pencil test	1,2,5	Introductory Lecture In-class exercise: introduction to course objective and goals Lecture on Key frames, spacing, squash and stretch, slow in/slow out, arcs, anticipation etc In-class exercise: creation of a bouncing ball animation
3 - 7	<ul style="list-style-type: none">Understanding the figure motion in relation to the environment An exploration of animation examining the purpose of poses attitude, weight, spacing and composition; and how this constitutes the basis of the creative process for animation. Drawing from life outdoor Outdoor activities are planned for this class that will strengthen the observation skills of the student	1,2,5	In-class exercises: creating motion with overlapping objects Lecture: on Complex motion: - Follow through, overlapping and wave action, secondary action etc. - Staging In-class exercise: creating characters that can be animated Lecture: on Complex Motion; the human walk In-class exercise: creating a standard walk and run

8- 13	<ul style="list-style-type: none"> • Exploring exercises Overview of key issues and concepts in relation to creating movement and characters for animation based of life observation, with many examples. Executed through a series of line test exercises that are related to the individual animation principles. • Building a show reel of your own animation Creating a reel of your own animations. Developed through peer/instructor feedback sessions in the course of the semester 	2, 3,4,5	<p>Lecture Sophisticated use of wave actions</p> <ul style="list-style-type: none"> - Weight: - The importance of weight for believable animation - Different approaches to timing <p>The commonality of animation principles through all areas of animation practice:</p> <p>In-class exercise Creating a character head turn around and a basic emotion shift thought facial animation</p> <p>Field Trip: Drawing animals in Motion</p> <p>Final Projects Assemble and design a complex animation demonstrating a character dealing with weight and staging</p> <p>Project Critique lab class where students will receive personalized feedback as they work on their assignments</p> <p>Student Presentations on final show reel</p>
-------	--	----------	--