

# Introduction to Learning Technology

2023 Fall Semester

**Tuesdays 10:10-12:00 & Thursdays 10:10-12:00**

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<b>Unit:</b> Dept. of Education and Learning Technology (Required course three credit hours)	<b>Office:</b> Nanda campus N705 (Tel: 03-5715131 ext. 73042)
<b>Classroom:</b> Nanda Campus N202/Virtual classroom	<b>Instructor:</b> Dr. Chun-Min (Arthur) Wang
<b>Office hours:</b> Tuesdays 2-4 pm or by appointment	<b>Email:</b> chunmin@mx.nthu.edu.tw

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## Course Description:

This course aims to explore the history of integrating technology into education, understand the theories behind each application, and get hands-on experience designing and developing digital learning materials. Through lectures, group discussions, in-class activities, and online collaboration, students are expected to learn about learning technology and its applications and investigate related issues and challenges. Additionally, to put theory into practice, students will develop mini-lesson by applying various software and solve real problems by adopting the design thinking approach.

## Course Objectives:

1. Understand the development of learning technology and explore its future directions.
2. Realize the related issues of learning technology and clearly understand these issues.
3. Understand the applications of learning theories when integrating technology into education.
4. Understand the challenges of learning technology.
5. Design and develop digital learning materials for a target audience.
6. Solve real problems by applying learning technology.

## Course Activities :

Lectures, group collaboration, team presentations, discussions, workshops, synchronous and asynchronous online learning.

## Schedule:

Week	Date	Topic	Note	Hours
1	9.12	Introduction of Learning		+1
	9.14	Technology	Grouping	
2	9.19	Reflection on Learning	*Read Article 1 before the class	+2
	9.21	Technology		
3	9.26	Instructional Design Theory		+1
	9.28	No class	* self-intro video due	
4	10.03	Instructional Design Workshop		+2
	10.05			

5	10.10	No class		+1
	10.12	Flipped Classroom	* Mini-lesson topic confirm	
6	10.17	No class: Group working day	* Don't need to attend the class	-2
	10.19			
7	10.24	Design Thinking I		-1
	10.26		*Mini-lesson draft ready	
8	10.31	Design Thinking II	*Read Article 2 * Design thinking topic confirm	0
	11.02	Presentation 1: Mini-lesson	*Assignment 1 due	
9	11.07	PST framework		+1
	11.09	Digital Content Evaluation		
10	11.14	AI in Education		+2
	11.16	Metaverse	*Watch video 1 before the class	
11	11.21	Technology Integration Models	* In-class activities	+3
	11.23			
12	11.28	Online/Mobile Learning	*Synchronous online classes	+2
	11.30	No class		
13	12.05	No class		-1
	12.07			
14	12.12	Presentation 2: PST project	* Assignment 2 due	0
	12.14	No class		
15	12.19	Future of Education		+1
	12.21			
16	12.26	No class		0
	12.28	Final Presentation & Reflection	*Assignment 3 Due	

### Evaluation :

1. Participation and in-class performance: 20 %

Attendance rate, in-class assignments, and activity participation.

2. Assignment 1: Mini-lesson (group project) (30%)

Form a group of 3 or 4. Design and develop a 10-minute video to teach a self-selected topic. The topic needs to be related to learning technology or education in general. The content needs to include parts of motivation initiation, the introduction of core knowledge, the design of learner interaction, exploration of related applications and future directions, and assessment of the learning results.

3. Assignment 2: PST project (group project): 20%

Apply the framework of Pedagogy-Space-Technology to establish a learning space (an actual spot on the NTHU campus). The report needs to include a 3D blueprint and demonstration of technology integration with a particulate pedagogy in this learning space. An automatically play Pecha-Kucha 20\*20 presentation format will be applied in the report.

4. Assignment 3: Design thinking project (group project) 30%

Select one education-related topic/product/solution that could be improved. Each group needs to follow the design thinking procedure, record the whole process, design and develop the prototype, and report the testing results. The project will be evaluated by individual reflection, social responsibility, and innovation. The final presentation should include a 3-minute video, a 10-minute oral report, and a Microsoft Word document report (max ten pages). The instructor and the peers will do the grading.

#### References:

1. Article 1: <https://crossing.cw.com.tw/article/14881>(in Chinese)
2. Article 2: NTU Alpha Team-Rookie's guide (<https://goo.gl/LUbQfz>)
3. Video 1: <https://www.youtube.com/watch?v=gElfIo6uw4g&t=17s>



4. Related learning materials will be provided in class. Students are expected to read the materials before the class.

\* If there is any particular need, please inform the instructor.

5. Besides the regular class time, students must spend extra time working on assignments with group members.
6. The assignments can incorporate AIGC (AI generates content) but should clearly explain how and which parts of the assignments adopted AI.