COURSE SYLLABUS
Institute for Innovative Learning, Mahidol University
ILSE 658 Research Seminar in Innovative Learning
Semester 2(2021), 1(1-0-2) credit hours

Course coordinator:
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Instructors:

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Course description:
Current issue concerning research in learning innovation; presentation of selected learning innovation; ethics in using and publishing leaning innovation; organizing academic seminar

Course outcomes:
> At the end of the course, the student will be able

Course learning outcomes	PLO	Sub-ELO
1. To analyze and evaluate research works on development of innovations for learning	2 4 6	2.1, 2.2 4.1 6.3
2. To promote informative discussion between peers and students-instructors in the class	8	8.2
3. To promote effective inquiry and communication skills with and without information technology	7	7.1, 7.2
4. To promote an academic presentation with moral and ethics	1	1.2

Class period:
> Monday 13.30 – 16.30 hr

Venue:
Room: Smart Classroom or Room 109
Online: WebEx Meeting
- https://mahidol.webex.com/mahidol/j.php?MTID=mccc76836dadb91958a476063543ad4c1
- Meeting number: 2640 304 8411　Password: ILSE

(Online learning is also available for oversea students and in any circumstances, a face-to-face meeting is not possible)

Table 1: Course schedule

Week	CLO	Date/Time	Topic	Instructors	Teaching and Learning Approach
1		16 Jan 2023	*Orientation and Introduction*	WK	Discussion
2	1, 2, 3	23 Jan 2023*	*Dare to Change: Innovative Project to Enhance Learning in the 21St Century*	Dr.Chatchadaporn Pinthong	Active lecture, Case study Discussion; Individual analysis using Cornell Note Taking
3	1, 2, 3	2 Feb 2023** (9.00 – 12.00)	*Soft Skills Assessment*	Assoc.Prof.Dr. Thanita Lerdpornkulrat	Active lecture, Discussion; Individual analysis using Cornell Note Taking
4	1, 2, 3	6 Feb 2023	*AI and Metaverse for Science and Medical Education*	Dr.Thanapong Intharah	Active lecture, Workshop; Discussion; Individual analysis using Cornell Note Taking
5	1, 3, 4	13 Feb 2023	*Student's Debate* *Topic will be announced*	NS, PJ, SN, SY, WW, WK	Debate, Discussion
6	1, 2, 3	20 Feb 2023	*Digital Tools for Disruptive Education*	Asst. Prof. Dr.Mores Prachyabrued	Site Visit, Discussion; Individual analysis using Cornell Note Taking
7	1, 2, 3	27 Feb 2023	*Special Topic* To be announced Organized by the Students	Guest Speaker To be announced	Active lecture, Workshop; Case study; Discussion; Individual analysis using Cornell Note Taking
8	1, 3, 4	13 Mar 2023	*Student's Presentation* "Selecting Research in Innovations for Learning"	NS, PJ, SN, SY, WW, WK	Presentation; Discussion

* The seminar will be held from 13.00 – 16.00 hr.

** The seminar will be held on Thursday from 9.00 – 12.00 hr.

Assessments:

- ***Active participation (15 %)***
Students are expected to actively participate, ask question, share ideas and experiences, and/or discuss during class session. They are expected to show cooperative working in the class.
    Note: *1. Rubric to evaluate active participation is presented below in the table 3*

- ***Class assignment (30 %)***
    o Each student is required to analyze issues and to keep a summary (i.e., individual analysis using Cornell Note Taking) which reflects what you have learned regarding the topic identified in each session (W2, W3, W4, W6, W7) (25%).
      Note: *1. Rubric to evaluate individual analysis/summary is presented below in table 4*
      2. All students must submit their individual analysis/summary to the course coordinator within the due date via agreement system

    o Students are also assigned to work regarding to the topic such as moderator and constructing posters for invitation to join the seminar and post on the Facebook page: IL Leaning space (5%).
      Note: *1. Rubric to evaluate class assignment is presented below in table 5*

- ***Teamwork (15%)***
All students are required to organize one seminar session starting by finding the topic, and name of the speaker, communicating to invite the speaker, inviting all lecturers, evaluating the seminar, and also making a conclusion report.
    Note: *1. Rubric to evaluate teamwork is presented below in table 6*

- ***Student presentations (40%) including***
    o ***Debate (20%)***
      Students are required to make a total of 40-min presentation in a debate session. Visual audio and other media have to be included in the debate. Each student has to discuss and participate in the debate.
      Note: *1. Rubric to evaluate the debate is presented below in table 7*

    o ***Second presentation (20%)***
      Students are required to make a 30-min presentation including a 20-min oral presentation about "Selecting at least three research articles in innovations for teaching and learning" and 10-min Q&A. The articles should relate to students' future work. Each student must discuss and give their peer suggestion (at least two comments/suggestions) for improving each other work.
      Note: *1 All students will submit their abstract and three reference articles on 28 February 2023.*
      2 Rubric to evaluate the presentation is presented below in table 8

Evaluation:
Final grade in the course will be determined by the total points earned, that is,
      90-100%   =   A
      80-89%   =   B$^+$

70-79%	=	B
60-69%	=	C^+
50-59%	=	C

In addition, a student's final grade may be higher than the suggested guideline if the student's score is close enough ($< 1\%$ gap) to the next higher score. That is, close scores will likely earn the same final grade.

Appeal:

Please note that any formal appeal made to raise concern about the courses including learning, teaching, and assessment methods, as well as the IL program including facilities and infrastructure can be made through the Education website (https://il.mahidol.ac.th/eng/education/)

Table 2: The alignment between tools/methods and CLOs of the course

Tools/methods	CLO				Percentage (%)
	1	**2**	**3**	**4**	
Active participation		/			15
Class assignment	/		/		30
Team Work		/	/		15
Student Presentation	/		/	/	40

Table 3: Assessment rubric for active participation

Item	1	2	3	4
Attendance and punctuality	Attend class late or leave early (≥ 15 min.)	Attend class late or leave early (not more than 15 min.)	Attend class on time	Attend class early.
Engagement	Never contributes to class by offering ideas and asking questions.	Rarely contributes to class by offering ideas and asking questions.	Proactively contributes to class by offering ideas and asking questions once per class.	Proactively contributes to class by offering ideas and asking questions more than once per class
Listening, questioning, and discussing	Not listening with respect, argues with classmates, and do not consider other ideas. Blocks group form reaching an	Trouble listening respectfully and taking over discussion without letting other people have a turn.	Respectfully listen, discuss and ask questions.	Respectfully listen, discuss and ask questions and helps direct the group in solving the problem.

Table 4: Assessment rubric for Individual analysis/ summary

Topic	1	2	3	4
Content knowledge	The submitted task shows some incorrect or irrelevant information of the topic.	The submitted task shows incomplete information/ not cover the critical message of the topic.	The submitted task is adequate and presents completed information of the topic	The submitted task completely presents information and is well organized. Personal critiques with supportive evidence or questions are also added to the work.
Time	Submit in time			

Table 5: Assessment rubric for class assignment

Aspect	Score	Details
Poster invitation/PR	0	No action
	1	Some information is missing, or the poster is posed late on the Facebook page: IL Leaning space.
	2	The invitation poster contains complete information. The poster is presented on time and in a good manner on the Facebook page: IL Leaning space.
Moderator	0	No action
	1	Some duties of the moderator are missing
	2	All duties of moderator are presented, i.e., opening and closing the seminar /timekeeping/managing the Q&A section.

Updated 27/12/2022

Table 6: Assessment rubric for teamwork

Topic	1	2	3
Group Decision & Planning	A procedure for making decisions is established by the group, but it is not clear, and/or it focuses on individuals.	A clear procedure for making decisions is informally established by the group.	A clear procedure for making decisions is formally established by the group.
Roles & Distribution	The group establishes informal roles for each member. The workload could be distributed more equally.	The group establishes clear and formal roles for each member and distributes the workload equally.	The group establishes and documents clear and formal roles for each member and distributes the workload equally.
Communication	Not all members are engaged. Ideas are not exchanged effectively.	Everyone is engaged most of the time. The exchange of ideas is effective most of the time.	Everyone is fully engaged in the effective exchange of ideas.
Interpersonal Engagement	There is a general atmosphere of respect for group members, but some members of the group do not feel free to ask questions and contribute. Members are generally able to resolve conflicts through open discussions with outside assistance.	There is a general atmosphere of respect for all group members. The majority of group members feel free to ask questions and contribute. Members are generally able to resolve conflicts through open discussion.	Members of the group share a respect for each other. All members of the group feel free to ask questions and contribute. Conflicts are resolved with open dialogue and compromise.
Documents	Most of the required documents need to be improved.	Some documents needed to improve, or some information is missing or late submitted.	All required documents (i.e., project proposal, evaluation questionnaire, and project report) are completed, well organized, and submitted on time.

Table 7: Assessment rubric for debate

Items	Score
Individual Evaluation	
Argument: Relevant reasons in support of the topic	4 points
Rebuttal: Effective-counter arguments	4 points
Understanding the topic: Viewpoints outlined clearly and accurately	3 points
Pieces of evidence: Recently published, convincing, and relevant supporting evidence	3 points
Organization and time management	1 point
Group Evaluation	
Organization: Information was clearly tied to an idea and organized in a tight, logical fashion	2 points
Collaboration: Team-work performed	1 point
Information: The information presented in this debate was clear, accurate, and thorough	1 point
Delivery: Information was presented clearly in an appropriate volume	1 point

Table 8: Assessment rubric for final presentation in the topic relate to innovations for teaching and learning

Topic	1	2	3	4
Presentation of academic, pertinent data, and evidence with ethics	Students express no or weak rationale or irrelevant perspectives on academic information. Students do not use academic articles to support their viewpoints. Students do not show an awareness of ethical issues.	Students provide a weak rationale, but their example or demonstration can help audiences to grab ideas more easily or students provide some irrelevant or inaccurate information. Most viewpoints are unclear. Some out-of-date published articles are used. Students do not fully show an awareness of ethical issues.	Students can show a point to audiences, but an example may not directly hit the particular point, or some details of information are not covered. Some unclear viewpoints are stated. Some out-of-date published articles are used. Students are responsible for working ethically.	Viewpoints are outlined clearly and accurately. Students can well define accurately and relevant points with rationales and/or give clear and relevant examples by using recently published and pertinent data to support viewpoints. Students are responsible for working ethically and professionally.
Content knowledge and answering questions	Students do not appear to understand the teaching approach they selected and can't answer questions.	Students have limited knowledge and have difficulty to answer questions.	Students can answer most questions with explanations and some elaboration relating to the innovation.	Students can demonstrate comprehensive knowledge and answer all questions with explanations and elaboration. Relevant reasons are used to support the topic and effective-counter arguments are presented.
Organization	Audiences have trouble understanding the presentation, and poor organization.	Audiences have trouble following a presentation and awkward organization.	Audiences follow the information presented in a logical order.	Audiences can easily follow the information presented in an interesting and logical order. All information was well organized and presented logically.
Presentation style and a way to communication	Difficult to hear the presentation, no eye contact, and are hard to understand, monotone. No supportive tools. The presentation includes no graphics or graphics that are unrelated to the subject and/or distract from the message. All graphical materials and multimedia are not suited to any idea in the presentation.	Difficult to hear, occasional eye contact, some mumbling, little or no expression nervous, some distracting. A student doesn't explain tables/graphs, uses inappropriate graph type(s), or graphics conflict with conclusions. or students may use tools to support understanding the topic but need more revision. A few images/VDO clips are relevant to the content embedded with meaning toward ideas in the presentation.	Most audiences can hear the presentation. The presenter has eye contact most of the time, and a clear voice, but not as expressive. Using supportive tools but need some modifications such as size, color, quality of images, or graphics. Images/VDO clips are fairly balanced and manifested the connection to the content.	All audiences can hear the presentation, maintains eye contact with audiences, and a clear, expressive voice. Using appropriate supportive tools with appropriate graphics clearly presents information that supports the conclusion and the student accurately explains the graphics during the presentation. All Images/VDO clips are meaningfully relevant to the content.
Time management	Use the time of presentation more than 26 mins.	Use the time of presentation 23 -26 mins.	Use the time of presentation 20 - 23 mins.	Use the time of presentation 18 - 20 mins.

Table 9: The summary the summative assessment method used in this course and the expected learning outcomes (ELOs)

Summative assessment	Sub-ELO/ Key performance indicators								Percentage
	1.2	**2.1**	**2.2**	**4.1**	**6.3**	**7.1**	**7.2**	**8.2**	
Active participation								15	15
Class assignment		5	5	5	5	5	5		30
Team Work						5	5	5	15
Student Presentation	10	5	5	5	5	5	5		40
Total	**10**	**15**	**10**	**10**	**10**	**15**	**15**	**20**	**100**

Table 10: Summary of the expected learning outcomes, teaching and learning approach, and summative assessment method used in the course

PLOs	Sub-PLOs	CLOs	Teaching and Learning Methods							Summative Assessment Methods				Total
			Active lecture	Discussion	Debate	Case study	Workshop	Presentation	Individual analysis report	Active Participation	Class Assignment	Team Work	Student Presentation	
1	**1.2**	**4**		/	/			/	/				10	**10**
2	**2.1**	**1**	/	/	/	/	/	/	/		5		5	**10**
	2.2	**1**	/	/	/	/	/	/	/		5		5	**10**
4	**4.1**	**1**	/	/	/	/	/	/	/		5		5	**10**
6	**6.3**	**1**	/	/	/	/	/	/	/		5		5	**10**
7	**7.1**	**3**	/	/	/	/	/	/	/		5	5	5	**15**
	7.2	**3**	/	/	/	/	/	/	/		5	5	5	**15**
8	**8.2**	**2**	/	/	/	/	/	/	/	15		5		**20**
									Total	**15**	**30**	**15**	**40**	**100**

Table 11: The PLOs and key performance indicators in Academic Year 2022.

PLOs	Key Performance Indicators
PLO 1: Display moral and ethical behavior for science and technology educators	1.1 Display moral and ethical behavior that aligns with the code of conduct for science and technology educators 1.2 Follow the ethical code of conduct in educational research
PLO 2: Apply principle in science and technology education to design and implement learning activities in science and/or technology classes appropriately	2.1 Adopt instructional sciences to improve learning in science and technology education 2.2 Design learning activities for science and/or technology classes 2.3 Implement the designed activities to improve learning in science and technology education 2.4 Assess students' learning achievement
PLO 3: Synthesize solutions to learning problems in the field of study	3.1 Analyze learning problems in the field of study 3.2 Apply PLO 2 to synthesize new ways and/or means to solve the learning problems
PLO 4: Conduct science and technology education research by integrating knowledge in the field of study	4.1 Propose a research project in science and technology education predicated on educational research methodology 4.2 Conduct science and technology education research 4.3 Publish an international peer-reviewed research article
PLO 5: Create innovations in science and technology education consistent to knowledge in the field of study and social contexts	5.1 Display ability to search for existing innovations in science and technology education consistent to knowledge in the field of study 5.2 Analyze strengths and weaknesses of the existing innovation 5.3 Propose ways and/or means to improve the existing innovation 5.4 Use the improved innovation for others' benefits and/or applicable to social contexts
PLO 6: Improve knowledge of oneself	6.1 Classify criteria for self-evaluation 6.2 Reflect oneself against the criteria 6.3 Evaluate oneself validly and reliably 6.4 Use metacognitive processes to improve knowledge of oneself
PLO 7: Display the ability to control and improve oneself	7.1 Display the ability to control oneself 7.2 Display the ability to improve oneself
PLO 8: Display leadership quality and ability to effectively collaborate with others	8.1 Display leadership quality to effectively collaborate with others 8.2 Display ability to effectively collaborate with others

Updated 27/12/2022