



Course Code and Course Title	SCIN 101 Creative Thinking and Innovation วิชา ๑๐๑ การคิดสร้างสรรค์และนวัตกรรม
Number of Credits	2 (2-0-4)
Curriculum and Course Type	Program of Study Bachelor's Degree Program in of Bioinnovation (International Program, Multidisciplinary Program) Course Type Basic Major Course
Course Coordinator	Stefan Schreier, Ph.D Address: School of Bioinnovation and Bio-based Product Intelligent, Faculty of Science, Mahidol University Tel: n/a email: stefan.scr@mahidol.edu
Semester/Year of Study	Academic Year 2023, 1 st Semester (1/2023) / First Year
Prerequisite	None
Co-requisite	None
Day/Time/Study Site Location	SC1-155 Monday / 1.30PM-3.30PM / S9 Faculty of Science, Mahidol University, Salaya Campus (On-site)
Date of Latest Revision	18 th July 2023

Course Learning Outcomes (CLOs)

After successful completion of this course, students are able to

1. explain concepts of invention and innovation;
2. understand the importance of consistently and skillfully using creative thinking and innovation to comprehend situations, issues, and problems confronted with;
3. and to comprehend the process of translating an idea into the market.

Course Description

Process thinking, creative thinking, innovation, problem solving methodology, innovation to learning, applications of creative thinking and innovation to daily life and evaluation of innovation; start-up and spin-off innovation.

Credit Hours / Trimester

Theory (Hours)	Addition Class (Hours)	Laboratory/Field trip/ Internship (Hours)	Self-study (Hours)
30 Hours/Semester (2 Hours x 15 Weeks)	-	-	60 Hours/Semester (4 Hours x 15 Weeks)

Number of Hours per Week for Individual Advice

1 hour per week or student requirement during prescribed date and time



Evaluation of the CLOs

Course Learning Outcomes		Measurement Method		
		Class Attendance, Participation and Behavior in Class	Written Exam	Class Project
CLO1	detail differences in creative thinking, invention and innovation and practice this knowledge in daily life.	5%	25%	
CLO2	Evaluate innovation in aspects of novelty and market potential.	10%	25%	
CLO3	Collaboratively design and conduct project in solving problem and/or daily life and learning			35%
Total		15%	50%	35%

Measurement and evaluation

After completion of the evaluation process each student is assigned a criterion-referenced grade (as shown in the table below). Evaluation and achievement will be justified according to Faculty and University code, conducted by grading system of A, B+, B, C+, C, D and F. To pass this course, student must earn a grade of a least D.

Total Percentage of Evaluation	Below 50	50-54.99	55-59.99	60-64.99	65-69.99	70-74.99	75-79.99	80-100
Grade	F	D	D+	C	C+	B	B+	A

Teaching staff:

Code	Name	Email
SS	Stefan Schreier R3/8- SC 3 Building N (MUSC-Salaya)	Stefan.scr@mahidol.edu



Teaching Schedule 1st Semester of Academic Year 2023

Week	Topic	Hours	Teaching methods/ multimedia		Instructor
			Laboratory	Self-study	
1 8th Aug	Introduction of course discipline and class orientation. Investigating the lecture purpose.	2	0	4	Dr. Stefan Schreier
2 14th Aug	What is creative thinking?	2	0	4	Dr. Stefan Schreier
3 21st Aug	Innovative Mindset	2	0	4	Dr. Stefan Schreier
4 28th Aug	Activities for promoting creative thinking skills.	2	0	4	Dr. Stefan Schreier
5 4th Sept	Method of idea potentiation and practice	2	0	4	Dr. Stefan Schreier
6 11th Sept	Creative thinking practice/ Divergent thinking	2	0	4	Dr. Stefan Schreier
7 18th Sept	Creative Problem Solving I	2	0	4	Dr. Stefan Schreier
8 25th Sept	Creative Problem Solving II	2	0	4	Dr. Stefan Schreier
Mid Term Examination					
9 9th Oct	What is innovation? Mechanics of innovation I	2	0	4	Dr. Stefan Schreier
10 16th Oct	What is innovation? Mechanics of innovation II	2	0	4	Dr. Stefan Schreier
11 30st Oct	From creative thinking to innovation I	2	0	4	Dr. Stefan Schreier
12 6th Nov	From creative thinking to innovation II				
13 13th Nov	Innovation and entrepreneurship	2	0	4	Dr. Stefan Schreier
14 20st Nov	World changing innovations				
15 27th Nov	Innovation for sustainable development	2	0	4	Dr. Stefan Schreier
Final examination*					

* Tentatively, Monday, 1.30PM-3.30PM, Faculty of Science, Mahidol University, Salaya Campus