



Course Code and	SCIN 101 Creative Thinking and Innovation		
Course Title	วทนว 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

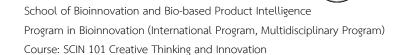
Process thinking, creative thinking, innovation, problem solving methodology, innovation to learning, applications of creative thinking and innovation to daily life and evaluation of innovation; start-up and spin-off innovation.

Credit Hours / Trimester

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



Degree 🗹	Bachelor 🗆 I	Master 🗌 Do	ctoral
		Faculty of So	cience

Evaluation of the CLOs

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

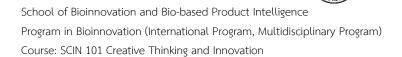
Measurement and evaluation

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+	В	B+	А

Teaching staff:

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



Degree ☑ Bachelor ☐ Master ☐ Doctor	al
Faculty of Science	ce

Teaching Schedule 1st Semester of Academic Year 2023

			Teaching methods/ multimedia		
Week	Topic	Hours	Labora- Self-		Instructor
			tory	study	
1	Introduction of course discipline and	2	0	4	Dr. Stefan
8th Aug	class orientation.				Schreier
	Investigating the lecture purpose.				Serireier
2	What is creative thinking?	2	0	4	Dr. Stefan
14th Aug					Schreier
3	Innovative Mindset	2	0	4	Dr. Stefan
21st Aug					Schreier
4	Activities for promoting creative	2	0	4	D., Ctf
28th	thinking skills.				Dr. Stefan
Aug					Schreier
5	Method of idea potentiation and	2	0	4	Dr. Stefan
4th Sept	practice				Schreier
6	Creative thinking practice/		0	4	Dr. Stefan
11th Sept	Divergent thinking	2			Schreier
7	Creative Problem Solving I		0	4	Dr. Stefan
18th Sept		2			Schreier
8	Creative Problem Solving II	2	0	4	Dr. Stefan
25th Sept					Schreier
<u>'</u>		d Term Examinatio	n		
9	What is innovation? Mechanics of	2	0	4	Dr. Stefan
9th Oct	innovation I		-		Schreier
10	What is innovation? Mechanics of	2	0	4	Dr. Stefan
16th Oct	innovation II	_	· ·		Schreier
11	From creative thinking to innovation I	2	0	4	Jennete.
30st Oct		2	Ü		Dr. Stefan
12	From creative thinking to innovation				Schreier
					Scriber
6th Nov	Innovation and entrepreneurship	2	0	4	
13	imovation and entrepreneurship	۷	0	4	D., Cl. C
13th Nov	lw III i i i i				Dr. Stefan
14	World changing innovations				Schreier
20st Nov					
15	Innovation for sustainable	2	0	4	Dr. Stefan
27th Nov	development				Schreier

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