



<b>Course Code and Course Title</b>	SCIN 101 Creative Thinking and Innovation วิชา ๑๐๑ การคิดสร้างสรรค์และนวัตกรรม
<b>Number of Credits</b>	2 (2-0-4)
<b>Curriculum and Course Type</b>	Program of Study Bachelor's Degree Program in of Bioinnovation (International Program, Multidisciplinary Program) Course Type Basic Major Course
<b>Course Coordinator</b>	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
<b>Semester/Year of Study</b>	Academic Year 2022, 1 <sup>st</sup> Semester (1/2022) / First Year
<b>Prerequisite</b>	None
<b>Co-requisite</b>	None
<b>Day/Time/Study Site Location</b>	MC1-15 Monday / 1.30PM-3.30PM / S9 Faculty of Science, Mahidol University, Salaya Campus (ONLINE/On-site)
<b>Date of Latest Revision</b>	21 <sup>st</sup> June 2022

### 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%
<b>Total</b>		<b>15%</b>	<b>50%</b>	<b>35%</b>

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 justifying 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 1<sup>st</sup> Semester of Academic Year 2020**

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 15Aug	What is creative thinking?	2	0	4	Dr. Stefan Schreier
3 22Aug	Innovative Mindset	2	0	4	Dr. Stefan Schreier
4 29 Aug	Activities for promoting creative thinking skills.	2	0	4	Dr. Stefan Schreier
5 5 Sept	Method of idea potentiation and practice	2	0	4	Dr. Stefan Schreier
6 12 Sept	Creative thinking practice/ Divergent thinking	2	0	4	Dr. Stefan Schreier
7 19 Sept	Creative Problem Solving I	2	0	4	Dr. Stefan Schreier
8 26 Sept	Creative Problem Solving II	2	0	4	Dr. Stefan Schreier
<b>Mid Term Examination</b>					
9 10 Oct	What is innovation? Mechanics of innovation I	2	0	4	Dr. Stefan Schreier
10 17 Oct	What is innovation? Mechanics of innovation II	2	0	4	Dr. Stefan Schreier
11 24 Oct	From creative thinking to innovation I	2	0	4	Dr. Stefan Schreier
12 31 Oct	From creative thinking to innovation II	2	0	4	Dr. Stefan Schreier
13 7 Nov	Innovation and entrepreneurship	2	0	4	Dr. Stefan Schreier
14 14 Nov	World changing innovations	2	0	4	Dr. Stefan Schreier
15 23 Nov	Innovation for sustainable development	2	0	4	Dr. Stefan Schreier
<b>Final Examination *</b>					

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