



School of Bioinnovation and Bio-based Product Intelligence (SCIN)  
 Program in Bioinnovation (International Program, Multidisciplinary Program)  
 Course: SCIN 304 Strategic Management of Innovation

Degree  Bachelor  Master  Doctoral  
 Faculty of Science

<b>Course Code and Course Title</b>	English Thai	SCIN 304 Strategic Management of Innovation วททว ๓๐๔ การจัดการนวัตกรรมเชิงกลยุทธ์
<b>Number of Credits</b>	2 (2-0-4)	
<b>Curriculum and Course Type</b>	Program of Study Bachelor's Degree Program in Science and Technology (International Program, Multidisciplinary Program) Course Type Specific Courses	
<b>Course Coordinator</b>	Assoc. Prof. Sittiwat Lertsiri, Ph.D. Address: Department of Biotechnology, Faculty of Science, Mahidol University Tel: 0-2201-5301 email: Sittiwat.ler@mahidol.edu	
<b>Semester/Year of Study</b>	Academic Year 2020 First Semester (1/2020) / Third Year	
<b>Prerequisite</b>	None	
<b>Co-requisite</b>	None	
<b>Day/Time/Study Site Location</b>	Thursday / 9.00AM-11.00AM at Salaya campus (Regular time)	
<b>Date of Latest Revision</b>	26 July 2022	

**Course Learning Outcomes (CLOs)**

After successful completion of this course, students be able to:

1. Explore and manage the impact of innovation.
2. Evaluate and find the opportunities for the commercialization of innovation.
3. Apply their prior learning in various situation.
4. Know how to protect their innovation.

**Course Description**

Strategic management of innovation; types of innovation and patterns of change in technology and market; SWOT and PEST analysis; creating and implementing a product development strategy; design thinking; managing the new product development process and teams; strategic control and corporate governance; management of intellectual property.

**Credit Hours / Trimester**

Theory (Hours)	Addition Class (Hours)	Laboratory/Field trip/ Internship (Hours)	Self-study (Hours)
30 Hours/Semester (2 Hours x 14 Weeks)	None	None	60 Hours/Semester (4 Hours x 14 Weeks)

**Number of Hours per Week for Individual Advice**

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



**Evaluation of the CLOs**

Course Learning Outcomes	Measurement Method			Weight (%)
	Class Attendance, Participation and Behavior in Class	Written Exam	Class Project	
<b>CLO1</b> Explore and manage the effect of innovation.	5%	20%	-	25%
<b>CLO2</b> Evaluate and find the opportunities for the commercialization of innovation.	5%	25%	-	30%
<b>CLO3</b> Apply their prior learning in various situation.	5%	15%	5%	25%
<b>CLO4</b> Know how to protect their innovation.	5%	15%		20%
<b>Total</b>	<b>20%</b>	<b>75%</b>	<b>5%</b>	<b>100%</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
SL	Course coordinator Assoc. Prof. Sittiwat Lertsiri BT.101, BT. Bld. (MUSC-Phayathai)	Sittiwat.ler@mahidol.edu
KS	Assoc. Prof. Kanyaratt Supaibulwatana N.107, N. Bld. (MUSC-Phayathai)	Kanyaratt.sup@mahidol.ac.th
TT	Dr. Thantawat Theeranan BT.110, N. BT. Bld. (MUSC-Phayathai)	
DP	Assoc. Prof. Duanghathai Pentrakoon Faculty of Science, Chulalongkorn University	
SP	Sorakrit Phruthanontachai Bangkok Bank PLC (BBL)	
JJ	Jittrapon Jirakulsomchoke National Innovation Agency (NIA)	jittrapon.j@nia.or.th



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### Teaching Schedule 1<sup>st</sup> Semester of Academic Year 2021

Thursday 9.00AM-11.00AM at Salaya campus (regular schedule)

Week	Date	Topic	Number of Hours		Instructor
			Lecture	Laboratory	
1	11 Aug 2022	-Introduction -Definition of innovation	2	0	SL
2	18 Aug 2022	-Types and sources of innovation -Technology lifecycle	2	0	SL
3	25 Aug 2022	-Process of innovation	2	0	SL
4	1 Sep 2022	-Strategy in management of technology and innovation	2	0	SL
5	15 Sep 2022	-Product development: case study in food industry	2	0	SL
6	16 Sep 2022 14.00-16.00 (B400 Phayathai)	-Drug discovery	2	0	TT
7	23 Sep 2022 14.00-16.00 (B400 Phayathai)	-Intellectual property management	2	0	DP
8	30 Sep 2022 14.00-16.00 (B400 Phayathai)	-Technology-based entrepreneurship -Setting up deep-tech startup -Business model canvas	2	0	SP
9	<b>(3 to 7 Oct 2021) Midterm Examination</b>				
10	20 Oct 2022	-Open innovation	2	0	SL
11	28 Oct 2022 14.00-16.00 (B400 Phayathai)	-Contribution of public entities to innovation and technology development	2	0	JJ (To be confirmed)
12	3 Nov 2022 14.00-16.00 (B400 Phayathai)	-Discussion: Innovation driven enterprise	2	0	SP
13	10 Nov 2022	-Design thinking & Ecosystem for innovation	2	0	KS
14	17 Nov 2022	-Strategic control and good governance	2	0	KS
15	24 Nov 2022	-Case study and discussion	2	0	KS
16	<b>(6 to 16 Dec 2022) Final Examination</b>				