



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

Course Code and Course Title	English Thai	SCIN 304 Strategic Management of Innovation วททว ๓๐๔ การจัดการนวัตกรรมเชิงกลยุทธ์
Number of Credits	2 (2-0-4)	
Curriculum and Course Type	Program of Study	Bachelor's Degree Program in Science and Technology (International Program, Multidisciplinary Program)
	Course Type	Specific Courses
Course Coordinator	Assoc. Prof. Sittiwat Lertsiri, Ph.D. Address: Department of Biotechnology, Faculty of Science, Mahidol University Tel: 0-2201-5301 email: Sittiwat.ler@mahidol.edu	
Semester/Year of Study	Academic Year 2023 First Semester (1/2023) / Third Year	
Prerequisite	None	
Co-requisite	None	
Day/Time/Study Site Location	Thursday / 9.00AM-11.00AM at Salaya campus (Regular time) Some classes will be held at B400 Phayathai campus on Friday afternoon.	
Date of Latest Revision	19 July 2023	

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



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Evaluation of the CLOs

Course Learning Outcomes	Measurement Method			Weight (%)
	Class Attendance, Participation and Behavior in Class	Written Exam	Class Project	
CLO1 Explore and manage the effect of innovation.	5%	20%	-	25%
CLO2 Evaluate and find the opportunities for the commercialization of innovation.	5%	25%	-	30%
CLO3 Apply their prior learning in various situation.	5%	15%	5%	25%
CLO4 Know how to protect their innovation.	5%	15%		20%
Total	20%	75%	5%	100%

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 1st 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	10 Aug 2023	-Introduction -Definition of innovation	2	0	SL
2	17 Aug 2023	-Types and sources of innovation -Technology lifecycle	2	0	SL
	24 Aug 2023	No class due to AUN-QA activity			
3	31 Aug 2023	-Process of innovation	2	0	SL
4*	8 Sep 2023 (Friday 13.00-15.00 B400 Phayathai)	-Strategy in management of technology and innovation	2	0	SL
5	14 Sep 2023	-Product development: case study in food industry	2	0	SL
6*	22 Sep 2023 (Friday 13.00-15.00 B400 Phayathai)	-Drug discovery	2	0	TT
7*	29 Sep 2023 (Friday 13.00-15.00 B400 Phayathai)	-Intellectual property management	2	0	DP
(2 to 6 Oct 2023) Midterm Examination					
8	12 Oct 2023	-Open innovation	2	0	SL
9*	20 Oct 2023 (Friday 13.00-15.00 B400 Phayathai)	-Technology-based entrepreneurship -Setting up deep-tech startup -Business model canvas	2	0	SP
10	26 Oct 2023	-Discussion: Innovation driven enterprise	2	0	SL
11*	2 Nov 2023 (Friday 13.00-15.00 B400 Phayathai)	-Contribution of public entities to innovation and technology development	2	0	JJ
12	9 Nov 2023	-Design thinking & Ecosystem for innovation	2	0	KS
13	16 Nov 2022	-Strategic control and good governance	2	0	KS
14	23 Nov 2022	-Case study and discussion	2	0	KS
(4 to 15 Dec 2023) Final Examination					

*Classes will be held at B400 Phayathai campus on Friday afternoon, after SCIN392 sessions.