



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor  
 Course Title: Internship for Innovation and Entrepreneurship I Faculty of Science  
 Course Code: SCIN 203 School of Bioinnovation and Bio-based Product Intelligence (SCIN)

<b>Course Code and Course Title</b>	English SCIN 203 Internship for Innovation and Entrepreneurship I Thai วิชา ๒๐๓ การฝึกปฏิบัติงาน และการศึกษาดูงานเสริมสร้าง ประสบการณ์ทางนวัตกรรม และวิสาหกิจ ๑
<b>Number of Credits</b>	3 (0-9-3)
<b>Curriculum and Course Type</b>	Program of Bachelor's Degree Program in Science and Technology (International Program, Multidisciplinary Program) Course Type Compulsory Course
<b>Course Coordinator</b>	Assoc. Prof. Kanyaratt Supaibulwatana, Ph.D. Address: - <b>SC1-154</b> , Faculty of Science, Mahidol University, Salaya - <b>B.400 Rm.</b> , 4 <sup>th</sup> FL., B. Bld. Faculty of Science, Mahidol University, 272 Rama VI Road, Bangkok 10400 Tel. 02-201-5470- 1; e-mail: kanyaratt.sup@mahidol.ac.th
<b>Semester/Year of Study</b>	Academic Year 2024, 1 <sup>st</sup> Semester (1/2024) / 2 <sup>nd</sup> Year Students
<b>Prerequisite</b>	None
<b>Co-requisite</b>	None
<b>Day/Time/Study Site Location</b>	- Wednesday / 12.30 – 17.00 h onsite (online, occasionally) - Date & times (special training for employability and future skills) as mentioned in the course schedule, as condition of pre-course schedule. Appointment for class is possibly modified (TBA). Faculty of Science, Mahidol University, Phaya Thai Campus
<b>Date of Latest Revision</b>	19 July 2024

### Course Learning Outcomes (CLOs)

After successful completion of this course, students are able to

1. Explain the concept of innovation and entrepreneurship.
2. Understand the useful of science and technology in creating of innovation and understand the production and problem that happened.
3. Working with team and inspect activities from the best practice, failure or mistake of team work.
4. Assess the benefits, opportunities, and challenges of innovator in professional way. The employability skills and future skills would be emphasized.
5. Practice skills of critical thinking, create and analyze question, solve problem, discussion and presentation.

### Course Description

Principles and process of field study and field professional practicum on management of public R&D organizations and private enterprises; invention and quality product development; innovation management of community enterprise and community business; entrepreneurship effect on community, economic and public society; evaluation; hold a seminar to report the results of internship program.



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor  
 Course Title: Internship for Innovation and Entrepreneurship I Faculty of Science  
 Course Code: SCIN 203 School of Bioinnovation and Bio-based Product Intelligence (SCIN)

### Credit Hours / Trimester

Theory (Hours)	Addition Class (Hours)	Training/Workshop/Field trip/ Internship/Conference (Hours)	Self-study (Hours)
55 Hours/Semester	- Onsite, hybrid - Online, webinar	80 Hours/Semester	150 Hours/Semester

Number of Hours per Week for Individual Advice

3 hours per 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 / tests	Assignment	
CLO1 Experience and understand real working situation from the field trip / industrial plant studies.	15%	-	15%	30%
CLO2 Analyze cases concerning creative thinking and innovation from training and workshop.	25%	15%	10%	50%
CLO3 Collaboratively conduct projects on topics of field trip/internship.	10%	-	10%	20%
Total	50%	15%	35%	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



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor

Course Title: Internship for Innovation and Entrepreneurship I

Faculty of Science

Course Code: SCIN 203

School of Bioinnovation and Bio-based Product Intelligence (SCIN)

### Teaching staff & Coordinator of Training, Workshop and Industrial Plant Study:

Code	Name	Email
KS	Assoc.Prof. Dr. Kanyaratt Supaibulwatana (Course Coordinator) N.107, N. Bld. (MUSC-Payathai)	Kanyaratt.sup@mahidol.ac.th
AR	Assist.Prof. Dr. Adisak Romsang K.610, K. Bld. (MUSC-Payathai)	adisak.rom@mahidol.ac.th
SA	Assist.Prof. Dr. Somkid Amornsamankul M.204/5, M. Bld. (MUSC-Payathai)	somkid.amo@mahidol.ac.th
SU	Assist.Prof. Dr. Suntaree Unhapipat B.205/1, B. Bld. (MUSC-Payathai)	suntaree.unh@mahidol.ac.th
TK	Dr. Thitisilp Kijchavengkul	thitisilp.kij@mahidol.ac.th
WL	Assist.Prof. Dr. Wasakorn Laesanklang B.203/1, B. Bld. (MUSC-Payathai)	wasakorn.lae@mahidol.ac.th
WT	Assoc.Prof. Dr. Wannapong Triampo R.3/1, SC. Bld. (MUSC-Salaya)	wtriampo@gmail.com
BH	Dr. Banpot Horbanluekit Invited Speakers from NSTDA	banpot2hbk@gmail.com
NS	Ms. Nathayanan Somphod (B.Sc. Officer for program coordinator)	nathayanan.som@mahidol.edu
NC	Ms. Napason Chabang	napason.cha@mahidol.edu
WC	Ms. Wannisa Chuekong	wannisa.chu@mahidol.edu
	Invited Speakers (private company, research units and other organizations)	



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor

Course Title: Internship for Innovation and Entrepreneurship I

Faculty of Science

Course Code: SCIN 203

School of Bioinnovation and Bio-based Product Intelligence (SCIN)

### Course Schedule SCIN 203 (Semester 1 / Academic Year 2024)

No.	Date	Training Workshop and Field Trip	Number of Hours			Instructor
			Lecture/ Conf.	Lab./Trip/ Workshop	Self- study	
1	7 Aug. 2024	- Introduction and class assignment of internship program - Specification and skills require for field training and working experiences	3	-	6	KS
2	14 Aug. 2024	- Field Trip 1: Industrial Plant Study	-	3	1.5	KS NC WC
		- Conclusion and discussion – Lesson Learn from Field trip 1	3	-	6	
3	28 Aug. 2024	- The importance of writing an application and creating a resume - why a resume is important to have, the different types of resumes and actionable resume tips - Professional biodata/profile	3	-	6	KS
4	4 Sept. 2024	- Industrial innovation concept of IDE (Industrial Design Engineering)	3	-	6	BH
5	11 Sept. 2024	- A Management tools for formulating of innovation-driven corporate strategies, analyzing market demands, and evaluating enterprise technology capabilities.	3	-	6	BH
6	18 Sept. 2024	- Design of production structures to suit market demands, concept of process standards (standardization) and production efficiency indicators (Quality cost Delivery)	3	-	6	BH
7	25 Sept. 2024	- Group practice of IDE	1	3	3	BH
8*	9 Oct. 2024	09.00-12.00 / 13.00-16.00 Occupational Health and Safety – OHS 1 (MDL, K. Bld., MUSC-Phaya Thai)	6	-	12	AR



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor

Course Title: Internship for Innovation and Entrepreneurship I

Faculty of Science

Course Code: SCIN 203

School of Bioinnovation and Bio-based Product Intelligence (SCIN)

No.	Date	Topic	Number of Hours			Instructor
			Lecture Conf.	Lab./Trip/ Workshop	Self-study	
9*	16 Oct. 2024	13.00-16.00 Occupational Health and Safety – OHS 2 (MDL, K. Bld., MUSC-Phaya Thai)	3	-	6	AR
10*	30 Oct. 2024	13.00-16.00 Occupational Health and Safety – OHS 3 (MDL, K. Bld., MUSC-Phaya Thai)	3	-	6	AR
11	6 Nov. 2024	Field Trip 2: Industrial Plant Study	-	3	1.5	KS NC WC
		Conclusion and discussion – Lesson Learn from Field trip 1	3	-	6	
12	13 Nov. 2024	Field Trip 3: Industrial Plant Study	-	4	2	KS NC WC
		Conclusion and discussion – Lesson Learn from Field trip 3	3	-	6	
13	27 Nov. 2024	Experimental design and modeling for Bioinnovation research	3	-	6	TK
14*	Monday 16 Dec. 2024	10.00-12.00 Using Spreadsheet Functions to manage data	2	-	4	SA
15*		13.30-15.30 Essential Descriptive Statistics	2	-	4	SU
16*	Tuesday 17 Dec. 2024	10.00-12.00 Essential Inferential Statistics	2	-	4	SU
17*		13.30-15.30 - Fundamental and basic of optimization problems	2	-	4	WL
18*	Wednesday 18 Dec. 2024	10.00-12.00 Using Excel solver to solve optimization problems	2	-	4	WL
19*		13.30-15.30 Introduction to Big Data	2	-	4	SA
20	Thursday 19 Dec. 2024	Design thinking and digital fabrication 'Future skills and trend of startup (IMAKE Innovation, MBK Center, Phaya Thai Rd, Bangkok)	3	3	8	WT



Program: Bioinnovation (International Program, Multidisciplinary Program) Program Level  Bachelor  Master  Doctor

Course Title: Internship for Innovation and Entrepreneurship I

Faculty of Science

Course Code: SCIN 203

School of Bioinnovation and Bio-based Product Intelligence (SCIN)

No.	Date	Topic	Number of Hours			Instructor
			Lecture Conf.	Lab./Trip/ Workshop	Self-study	
21	TBA	Conclusion of the training, workshop and internship program	3	-	6	KS
22	TBA	Internships/Participation/Case Studies (This opportunity is only open occasionally on a voluntary basis)	0	64	32	KS
Total			55	80	150	

**\*Note**

The classroom of Topic no. 8– 10 are arranged at MDL, K. Bld., MUSC-Phaya Thai

The classroom of Topic no. 14 – 19 are arranged at R-204 Rm., MUSC- Phaya Thai.