

Course Syllabus
MBMB 647 Research to Business
Academic year 2025

Course ID and Title	MBMB 647 Research to Business ชมชม ๖๔๗ งานวิจัยสู่ธุรกิจ
Course coordinator	Dr.Kittiphong Paiboonsukwong, M.D., Ph.D. Institute of Molecular Biosciences, Mahidol University Tel: 0-2441-9003 to 7 Ext. 1312, 1357 Email: kittiphong.pai@mahidol.ac.th Office: A301 (3 rd floor, wing-A) Lab: C303 (3 rd floor, wing-C) Institute of Molecular Biosciences, Mahidol University
Instructor:	Dr.Kittiphong Paiboonsukwong, M.D., Ph.D.
Support staff:	
Credits:	1 (0-2-1) 7.5+15
Curriculum:	Master of Science Program in Molecular and Integrative Biosciences (elective course) Doctor of Philosophy Program in Molecular and Integrative Biosciences (elective course)
Semester offering:	Second semester
Pre-requisites:	None

Course learning outcomes (CLOs):

By the end of the course, students should be able to:

1. Discuss the fundamental concepts of intellectual properties, innovation and business (**Knowledge**);
2. Demonstrate scientific integrity, responsibility, and safety practices (**Ethics**);
3. Demonstrate critical thinking, teamwork, and interpersonal skills (**Characters**).

4. Effectively communicate laboratory findings through discussions and presentations (**Characters**).

Alignment of Teaching and Assessment Methods to Course Learning Outcomes:

Course Learning Outcomes	Teaching Method	Assessment Method
1. Discuss the fundamental concepts of intellectual properties, innovation and business	1. Discussion	1. Discussion performance
2. Demonstrate scientific integrity, responsibility, and safety practices	1. Discussion	1. Discussion performance
3. Demonstrate critical thinking, teamwork, and interpersonal skills	1. Discussion 3. Group activities	1. Discussion performance
4. Effectively communicate through discussions	1. Discussion	1. Discussion performance

Course description:

Intellectual Properties; Entrepreneurship and Ecosystem for innovation in University; Startup by university students; Professional Excursions in Biotech Industry; Innovation Development in Public Organizations and Private Enterprises; Commercialization of Innovations; Entrepreneurial Management; Regulatory Framework in the Biotech Industry; Trends in Biotechnology Investment; Exploration of Future Business Networking.

ทรัพย์สินทางปัญญา ความเป็นผู้ประกอบการและระบบนิเวศทางธุรกิจในมหาวิทยาลัย สตาร์ทอัพโดยนักศึกษา มหาวิทยาลัยมหิดล การทัศนศึกษาเชิงวิชาชีพในอุตสาหกรรมเทคโนโลยีชีวภาพ การพัฒนานวัตกรรมในองค์กรของรัฐและองค์กรเอกชน การนำนวัตกรรมไปใช้ประโยชน์เชิงพาณิชย์ การจัดการการเป็นผู้ประกอบการ กรอบข้อบังคับในอุตสาหกรรมเทคโนโลยีชีวภาพ แนวโน้มการลงทุนในอุตสาหกรรมเทคโนโลยีชีวภาพ การสำรวจเพื่อความร่วมมือเชิงธุรกิจในอนาคต

Course Schedule (Tentative):

(Classroom **XXX** and Site visit)

	Activities	Description	Time	Instructors and Assistants
Day 1				
1	Lecture/Discussion: Shrimp Business	Shrimp research and how to become entrepreneur will be introduced and discussed.	9.00 – 10.30	Supattra
2	Lecture/Discussion: Allergen Production	Allergen Production and how to become entrepreneur will be introduced and discussed.	10.30 – 12.00	Surapol
Day 2				
1	Lecture/Discussion: Research and Intellectual Property	The concepts of research and intellectual property will be introduced and discussed.	9.00 – 10.30	Staff from iNT
2	Lecture/Discussion: Startup	The concepts and examples of Startup in Mahidol University will be introduced and discussed.	10.30 – 12.00	Staff from iNT
Day 3				
1	Lecture/Discussion: Basic Research and Clinical Research to business	The concepts and examples of Basic Research and Clinical Research to business will be introduced and discussed.	9.00 – 10.30	Suradej
2	Lecture/Discussion: Basic Research and Clinical Research to business II	The concepts and examples of Basic Research and Clinical Research to business will be introduced and discussed	10.30 – 12.00	Naratthapol
3	Lecture/Discussion: Basic Research and Food to business	The concepts and examples of Basic Research and Food to business will be introduced and discussed	13.00 – 16.00	Staff from Institute of Nutrition
Day 4				
1	Site Visit/Discussion: Baiya Phyopharm (CU)	Example of success entrepreneur will be introduced and discussed	9.00 – 12.00	Waranyoo

2	Site Visit/ Discussion : (CU)	Example of success entrepreneur will be introduced and discussed	13.00 – 16.00	Supaart Sirikantaramas
Day 5				
1	Site Visit/Discussion: Microgreen (KMUTT)	Example of success entrepreneur will be introduced and discussed	9.00 – 12.00	Nutthachai
2	Discussion	Reflection and after action review	13.00 – 16.00	KP

Assessment Criteria:

Assessment method		Performance criteria	Scoring rubric
1	Class attendance & participation (40%)	Attendance and punctuality (20%)	Punctually (4) 5 minutes late (3) 10 minutes late (2) 15 minutes late (1) > 20 minutes late or absent (0)
		Participation (20%)	Frequently participates (4) Moderately participates (2-3) Seldom participates (1) Never participates (0)
2	Discussion (60%)	Participation and performance (20%)	Active (4) Fairly active (2-3) Inactive (1)
		Professional and interpersonal skills (responsibility, teamwork, and leadership) (20%)	Excellent (4) Above average (3) Average (2) Needs improvement (1)
		Creative and high-order thinking skills (20%)	Excellent (4) Above average (3) Average (2) Needs improvement (1)

Student's achievement will be graded using symbols: A, B+, B, C+, C, D+, D and F, based on the criteria as follows:

Percentage range	Grade	Description
80-100	A	Excellent

75-79	B+	Very Good
70-74	B	Good
65-69	C+	Fairly Good
60-64	C	Fair
55-59	D+	Poor
50-54	D	Very Poor
0-49	F	Fail

Date of Revision: XXX 20XX