

SCME 372 Scientific Creativity and Innovation (3 credit)

Academic Year 2022

Class Schedule: Thursday morning afternoons (9:00 – 12:00)

Room: SC1-159

Google Classroom:

<https://classroom.google.com/c/NTgyMzg2MTg2ODEw?cjc=drkst77>

Class code: drkst77

Coordinator: Assoc. Prof. Dakrong Pissuwan (email: dakrong.pis@mahidol.ac.th)

Office: K554, Phayathai campus (by appointment)

Instructors:

Assoc. Prof. Dakrong Pissuwan (email: dakrong.pis@mahidol.ac.th)

Office: K554, Phayathai campus (by appointment)

Assoc. Prof. Kittitat Subannajui (email: kittitat.sub@mahidol.ac.th)

Office: B400, Phayathai campus (by appointment), Phone: 0890888204

Asst. Prof. Toemsak Srihirin (email: toemsak.sri@mahidol.ac.th)

Invited Speakers from industrial and government sections

Course Description: This course aims to inspire students and provide them with an appreciation of how innovation drives advances in scientific research, technological evolution and the generation of new products for the benefit of society. Topics covered include: basic principles of innovation, the aim of innovation in terms of society, science and technology, ten types of innovation, concept integration and complementary innovations, innovation incubation, examples of successful innovation (national and global), basic principles of technology and innovation in relation to technology. Students will gain insights into how innovation drives product development and business efficiency through visiting lectures from company representatives. The effective communication for building innovation will be included.

Grading Policy: Course assessment will be based on the following:

Attendance: 10%

Students must attend all classes for full marks, and 80% of classes overall to pass. Late (> 10 min) will be recorded as absence.

Quizzes and class activities 90% (split between each lecturer as per number of classes)

The final grade given will be based on letter scale (A, B⁺, B, C⁺, C, D⁺, D, F).

Reference Material

1. Keely, L; Walters, H; Pikkell, R; Quinn, B. The Ten Types of Innovation: The Discipline of Building Breakthroughs. Wiley, New Jersey, USA, 2013
2. Other material as indicated by instructors

Class Schedule SCME 372 (Thursday 9:00 – 12:00 pm)

Date	Topic	Instructor
1 .12 Jan 2023	Introduction/Overview of innovation and Creativity	Assoc. Prof. Dakrong Pissuwan
2. 19 Jan 2023	Innovation tools: Intellectual property, technology licensing	Assoc. Prof. Toemsak Sriksirin
3. 26 Jan 2023	Patent & literature searching	Assoc. Prof. Toemsak Sriksirin
4. 2 Feb 2023	Innovation concepts, innovation and society, aims of innovation	Assoc. Prof. Kittitat Subannajui
5. 9 Feb 2023	Ten types of innovation, profit model and network, structure and process of innovation	Assoc. Prof. Kittitat Subannajui
6. 16 Feb 2023	Bundling biomaterials technologies and life	Assoc. Prof. Dakrong Pissuwan
7. 23 Feb 2023	Innovation in Agriculture (from Chia Tai) TBC	Dr. Suthisak Saengtharatip Assoc. Prof. Dakrong Pissuwan
8. 2 Mar 2023	Technology Transfer: From the laboratory bench to commercialization	Assoc. Prof. Dakrong Pissuwan
	Midterm examination 7-10 March 2023	
9.16 Mar 2023	Business Canvas	Assoc. Prof. Dakrong Pissuwan
10. 23 Mar 2023	Innovation in Pharmaceuticals (from GPO) TBC	Dr. Norapat Pesirikan Assoc. Prof. Dakrong Pissuwan
11. 30 Mar 2023	Market orientation to support creativity and Innovation (from Panyapiwat Institute of Management) TBC	-Assistant Prof. Tanya Supornpraditchai Assoc. Prof. Dakrong Pissuwan
12. 20 April 2023	Communication in Innovation (Bank of Thailand)	-Invited speaker Assoc. Prof. Dakrong Pissuwan
13. 27 April 2023	TBA	-Invited speaker Assoc. Prof. Dakrong Pissuwa
14. Arrange date	Group Activity on Innovative Product	Assoc. Prof. Dakrong Pissuwan
15. 11 May 2023	Innovative Product Presentation	Assoc. Prof. Dakrong Pissuwan
	Final examination 1-12 May 2023	