

SCSI 211 Chemical Safety and Hazardous Waste management (3 credits)

Summer Session/Academic Year 2025

Instructors: Asst. Prof. Dr. Manthana Jariyaboon (manthana.jar@mahidol.ac.th)

Dr. Tinnakorn Tiensing (tinnakorn.tie@mahidol.ac.th) – Course Coordinator

Class code: 5fw27eif

Room: SC2-159

Schedule:

Date	Time	Topic	Instructor	
Wed 3 June	No class (Queen Suthida's Birthday)			
Thu 4 June	9.30 – 12.30 p.m.	Introduction/Classification and Labelling	Dr. Manthana	
	13.30 – 16.30 p.m.	Safety Activity		
Fri 5 June	9.30 – 12.30 p.m.	GHS-based labelling / GHS-based hazardous substance classification (physical hazards, health hazards, environment hazards)		
	13.30 – 16.30 p.m.	Safety Activity		
Wed 10 June	9.30 – 12.30 p.m.	Safety Data Sheet (SDS)		
Thu 11 June	9.30 – 12.30 p.m.	Storage of Hazardous Substances and Laboratory Waste Management		
	13.30 – 16.30 p.m.	Safety Activity		
Fri 12 June	9.30 – 12.30 p.m.	Emergency Response / Q&A		
	13.30 – 16.30 p.m.	Exam		
Wed 17 June	9.30 – 12.30 p.m.	Hazardous chemicals		Dr. Tinnakorn
Thu 18 June	9.30 – 12.30 p.m.	Regulations and laws related to hazardous chemicals		
	13.30 – 16.30 p.m.	Safety Activity		
Fri 19 June	9.30 – 12.30 p.m.	Chemical and waste management system		
	13.30 – 16.30 p.m.	Safety Activity		
Wed 24 June	9.30 – 12.30 p.m.	Chemical risk management		
Thu 25 June	9.30 – 12.30 p.m.	Case studies on chemical accidents involving hazardous substances		
	13.30 – 16.30 p.m.	Exam		

* The topic is subject to change as appropriate.

Evaluation:

homework/assignment/presentation/activity in class	35%
Attendance	15%
Quiz	25%
Exam.....	25%
Total	100%

Grade:

Score	Symbols
80 - 100	O (Outstanding)
50 - 79	S (Satisfactory)
0 - 49	U (Unsatisfactory)

References:

- 1) Globally Harmonized System of Classification and Labelling of Chemical (GHS), 10th edition, United Nation, New York and Geneva, 2023.
- 2) Laboratory Safety Assessment Manual, Revised Edition No. 2. Bangkok: Environmental Research Institute, Chulalongkorn University, 2015.
- 3) Laboratory Safety Guidelines, ESPREL. Bangkok: National Research Council of Thailand, 2012.
- 4) Chemical Safety Guidelines, COSHEM. Mahidol University, 2012.
- 5) Thai Industrial Standard TIS 2677: Laboratory Chemical Safety Management Systems, Part 1–2015 and Part 2–2015.
- 6) Handbook on Risk Management Report Preparation for Factories Handling Hazardous Substances. Bangkok: Department of Industrial Works, 2014.
- 7) Royal Gazette, Volume 129, Special Section 48 Ngor: Ministry of Industry Notification on the Hazard Classification and Communication System of Hazardous Substances B.E. 2555 (2012), 12 March 2012, pages 15–43.