



Course Syllabus (Academic Year 2021)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

- Course No. and Title:** KACB 203 Earth Science
Credit (study hours): 2 (1-1-0)
- Program Name:** Bachelor of Science in Conservation Biology
- Course Module:** Gen.Edu. course Core course Elective course
- Pre/co-requisite:** -
- Semester:** 1stsemester 2ndsemester 3rdsemester
- Class Schedule & Venue:** 09:00-12:00 hrs., Room....., Mahidol University, Kanchanaburi Campus
- Course Coordinator:** Lect. Paiphan Paejaroen Tel. 081-2557694, Email: paiphan.pae@mahidol.edu

7. Course Description:

อวกาศ ระบบสุริยจักรวาล ดาวเคราะห์โลกและดวงจันทร์ การเคลื่อนที่ของแผ่นเปลือกโลก ทวีปจร โครงสร้างภายในของโลก หินและแร่ธาตุ ดิน แหล่งน้ำเค็มและน้ำจืด ชั้นบรรยากาศ ชีวาลัย และระบบโลกในหัวข้อที่สำคัญ เช่น ฝนและปริมาณน้ำฝน การไหลเวียนของมหาสมุทร ภูมิอากาศและสภาพภูมิอากาศ แผ่นดินไหว สึนามิ การระเบิดของภูเขาไฟ และช่วงเวลาทางธรณีวิทยาและชีววิทยา

Space, the solar system, the planet Earth and the moon, plate tectonics, continental drift; the Earth's interior structure, rocks and minerals, soils, seawater and freshwater resources, atmosphere, biosphere, and topics in the Earth system such as precipitation and rainfall, ocean circulation, climate and weather, earthquake, tsunami, volcanic eruption, and the geological and biological timeline.

8. Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs
		Specific	Generic	Knowledge	
8.1	Explain the origin of the solar system and Earth				1, 2
8.2	Describe the component and system on Earth				1
8.3	Explain plate tectonics, earthquakes, volcanic eruptions, and tsunami				2, 5
8.4	Explain the mechanism of Earth's system affected on the diversity of biosphere				2, 3, 5

9. Class Instructor List

9.1	Paiphan Paejaroen	081-255-7694	paiphan.pae@mahidol.edu
9.2	Sampan Tongnunui	064-789-5949	sampan.ton@mahidol.ac.th

9.3	Weerachon Sawanproh	093-339-0526	weerachon.saw@mahidol.ac.th
9.4	Sutatcha Hongsresawat	098-575-5911	sutatcha.hon@mahidol.ac.th
9.5	Pramote Nontarak	088-496-9366	pmntr@hotmail.com

10. Course Outline

Day	Date	Contents	CLOs	Instructor(s)
1	13 Aug 21	Introduction to Earth Science	4	Paiphan
2	20 Aug 21	Geologic time	4	Paiphan
3	27 Aug 21	Earth in space and Near-Earth Object (NEOs)	1, 2	Paiphan
4	3 Sep 21	Geology of the Earth	2, 4	Weerachon
5	10 Sep 21	Earthquakes	3, 4	Sutatcha
6	*18 Sep 21 (9.00-12.00 am)	Plate tectonics	3, 4	Pramote
	*18 Sep 21 (1.00-4.00 pm)	Volcanoes and other mountains	3, 4	Pramote
7	*25 Sep 21 (9.00-12.00 am)	Rocks and minerals	3	Pramote
	*25 Sep 21 (1.00-4.00 pm)	Weathering and soils Landslides and Slope failure	3	Pramote
8	Midterm Examination (4-9 October 2021)			
9	15 Oct 21	Streams and floods	2, 4	Sampan
10	22 Oct 21	No Class (Chulalongkorn's day)		
11	29 Oct 21	Groundwater and wetlands	2, 4	Sampan
12	5 Nov 21	Oceans and coastline	2, 4	Sampan
13	12 Nov 21	Atmosphere	2, 4	Weerachon

Day	Date	Contents	CLOs	Instructor(s)
14	19 Nov 21	Weather and climate systems	2, 4	Weerachon
15	26 Nov 21	Global Change	4	Paiphan
16	Final Examination (29 November-10 December 2021)			

*Class makeup

No.	Methods / Activities	Regulations	CLOs	Week	Weight Distribution (%)
11.1	Midterm Examination	2-hour exam (other regulations will be announced in the class later)	1-4	1-7	55
11.2	Final Examination	2-hour exam (other regulations will be announced in the class later)	1-4	9-15	35
11.3	Reports / Assignments	Group report and assignment about Earth system	1-4	1-8, 10-16	10
TOTAL					100

*** If the students attend in the class less than 80%, they will be announced to disqualification for the course examination. Thus, the unexpected matters bring to an absence in the class, please contact course coordinator to fill in the application form and attached the evidence of absence.

11. Grading System

Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	≥ 80 %	B	70 – 74.99%	C	60 – 64.99%	D	50 – 54.99%
B+	75 – 79.99%	C+	65 – 69.99%	D+	55 – 59.99%	F	< 50 %

Norm-referenced evaluation

*if use both criterion and norm-referenced evaluation, please tick two boxes.

12. References and resources

- McConnell, D., Steer, D., Knight, C. and Owens, K. (2015). The Good Earth: Introduction to Earth Science (third edition). McGraw-Hill Education. 536 pp.