



Course Syllabus (Academic Year 2020)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

1. **Course No. and Title** : KAGS 221 Sedimentology and Laboratory
2. **Credit (study hours)** :2(1-4-4).....
3. **Program Name** : Bachelor of Science in Geoscience
4. **Course Module** : Major course (Term1/year 2)
Pre/co-requisite : KAGS 101 Geology Around Us I
Co-requisite : KAGS 222 Stratigraphy
5. **Class Semester** : 1st Semester 2nd Semester Academic Year 2019
6. **Class Schedule & Venue** : Monday, 9.00 – 13:00, 14.00-16.00 Room 2216
7. **Class Coordinator** : Dr.Parisa Nimnate
 Email : parisa.nim@mahidol.edu

8. Course Description

Basic principle of sedimentology, weathering, transportation and deposition of earth materials as a key to understanding sedimentary process, sedimentary structure and past depositional environments. Examine of sedimentary rock features and compositions as related to origin, dispersion, deposition, diagenesis, classification and general distribution of the sedimentary rock. Laboratory exercises related to lecture, i.e. rock structure, texture, fossils, depositional history of the basin, paleo-features of the basin and sedimentary rock formation.

Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs
		Specific	Generic	Knowledge	
8.1	To understand fundamental of sediment deposition of sedimentary rock that forming in unit	Sedimentary rocks Depositional processes		Rocks Grain size Particles	1
8.2	To explain the relationship of structure and structure of sediment in rock unit			Environments	1,2
8.3	Can be classify sedimentary rock and				

explain the depositional environment related with stratigraphy.				
---	--	--	--	--

9. Class Instructor List

9.1 Name : Miss Parisa Nimnate Contact No. : 0-8799-24245 Email : parisa.nim@mahidol.edu

9.2 Name : Mr. Pramote Nontarak Contact No. : 0-8496-9366 Email : pmntr@hotmail.com

10. Course Outline

Week	Date	Contents	Instructor's Names
1	Jul 6, 2020	Holiday (no class)	-
2	Jul 13, 2020	Background of the origin of sediment	Parisa Nimnate Pramote Nontarak
3	Jul 20, 2020	The transportation and deposition	Parisa Nimnate Pramote Nontarak
4	Jul 27, 2020	Texture of sediment and sedimentary rock	Parisa Nimnate Pramote Nontarak
5	Aug 3, 2020	Sedimentary structure	Parisa Nimnate Pramote Nontarak
6	Aug 10, 2020	Siliciclastic sedimentary rocks classification	Parisa Nimnate Pramote Nontarak
7	Aug 17, 2020	Carbonate rocks classification	Parisa Nimnate Pramote Nontarak
8	Aug 24, 2020	Sedimentary rock (carbonaceous)	Parisa Nimnate Pramote Nontarak
9	Aug 31, 2020	Diagenesis	Parisa Nimnate Pramote Nontarak
10	Mid-term Examination		
11	Sep 14, 2020	Depositional environment (Fluvial and alluvial deposit)	Parisa Nimnate
12	Sep 21, 2020	Depositional environment (Aeolian deposit)	Parisa Nimnate
13	Sep 28, 2020	Depositional environment (Glacial deposit)	Parisa Nimnate
14	Oct 5, 2020	Depositional environment (Delta and estuary deposit)	Parisa Nimnate

15	Oct 12, 2020	Depositional environment (Shallow marine deposit)	Parisa Nimnate
16	Oct 19, 2020	Depositional environment (Deep marine deposit)	Parisa Nimnate
17	Oct 26, 2020	Summary /Sedimentary field trip	Parisa Nimnate Pramote Nontarak
18	Final Examination		

11. Course Assessment

No.	Methods / Activities	Regulations	Week	Weight Distribution (%)
11.1	Mid-term exam	Paper test online	10	35
11.2	Final exam	Paper test online	18	40
11.3	Quiz/ Reports / Assignments	Google classroom		15
11.4	Class participated	Webex meeting		10
			Total	100

12. 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.

13. References

- 1) Boggs Jr., S., 1992, Petrology of sedimentary rocks, Macmillan Publishing Co., New York, 705p.
- 2) Einsele, G., 1992, Sedimentary basins: evolution, facies, and sediment budget, Springer-vevlag Berlin, Heidelberg, 628p.
- 3) Dunbar, C., 1961, Principles of stratigraphy, John Wilson, New York.
- 4) Fritz, W.J. and Moore, J.N., 1988, Basics of physical stratigraphy and sedimentology, John Wiley and Sons Inc., New York, 371p.

- 5) Greensmith, J., 1989, Petrology of the sedimentary rocks, Oxford.
- 6) Krumbein, W.& Sloss, L., 1951, Stratigraphy and sedimentation, W. H. Freeman and Company, San Francisco, 637p.
- 7) Pettijohn, F.J., 1975, Sedimentary rocks (3rd ed.), Parper and Row, New York, 628p.
- 8) Reading, H. G., 1978, Sedimentary environments and facies, Blackwell Scientific Publications, Oxford, 557p.
- 9) Selley, R.C., 1976, An introduction to sedimentology, Academic Press Ltd., London, 408p.
- 10) Tucker, M. E., Sedimentary petrology An introduction, Blackwell Scientific Publications, 252p.
- 11) Weller, J., 1960, Stratigraphic principles and practice, University Book Stall, Delhi, 683p.