



## 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** :  1<sup>st</sup> Semester  2<sup>nd</sup> Semester Academic Year 2019
6. **Class Schedule & Venue** : Monday, 9.00 – 12:00, 13.30-16.30 (Webex meeting online)  
**Meeting link** : <https://mahidol.webex.com/meet/parisa.nim>
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	Aug 9, 2021	Background of the origin of sediment	Parisa Nimnate Pramote Nontarak
2	Aug 16, 2021	The transportation and deposition	Parisa Nimnate Pramote Nontarak
3	Aug 23, 2021	Texture of sediment and sedimentary rock	Parisa Nimnate Pramote Nontarak
4	Aug 30, 2021	Sedimentary structure	Parisa Nimnate Pramote Nontarak
5	Sep 6, 2021	Siliciclastic sedimentary rocks classification	Parisa Nimnate Pramote Nontarak
6	Sep 13, 2021	Carbonate rocks classification	Parisa Nimnate Pramote Nontarak
7	Sep 20, 2021	Sedimentary rock (carbonaceous)	Parisa Nimnate Pramote Nontarak
8	Sep 27, 2021	Diagenesis	Parisa Nimnate Pramote Nontarak
9	Mid-term Examination (4-8 Oct 2021)		
10	Oct 11, 2021	Depositional environment (Fluvial and alluvial deposit)	Parisa Nimnate
11	Oct 18, 2021	Depositional environment (Aeolian deposit)	Parisa Nimnate
12	Oct 25, 2021	Holiday (no class)	
13	Nov 1, 2021	Depositional environment (Glacial deposit)	Parisa Nimnate
14	Nov 8, 2021	Depositional environment (Delta and estuary deposit)	Parisa Nimnate
15	Nov 15, 2021	Depositional environment (Shallow marine deposit)	Parisa Nimnate

16	Nov 22, 2021	Depositional environment (Deep marine deposit)	Parisa Nimnate
17	Final Examination 29 Nov-10 Dec 2021		

### 11. Course Assessment

No.	Methods / Activities	Regulations	Week	Weight Distribution (%)
11.1	Mid-term exam	Paper test online	9	35
11.2	Final exam	Paper test online	17	40
11.3	Quiz/ Reports / Assignments	Google classroom / Webex meeting presentation		15
11.4	Class participated	Webex meeting		10
			<b>Total</b>	<b>100</b>

### 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.