

## Course Syllabus

1. **Name of Curriculum** Bachelor of Science Program in Environment  
**Faculty/Institute/College** Mahidol University International College, Faculty of Science, Faculty of Environment and Resource Studies, Mahidol University
2. **Course Code** ICEN 402                      **Course Title** Map and Photo Interpretation
3. **Number of Credits** 4 (**Lecture/Lab**) (4-0)
4. **Prerequisite** None
5. **Type of Course** Elective
6. **Trimester / Academic Year**  
First / 2005

### 7. Course Description

The figure and rotation of the earth, great circles, latitude-longitude and time. Introduction to marginal information, map symbol, scale ratio, direction, elevation and relief, position, measurement, and map projection. Interpret the aerial photograph with the naked eyes, pocket and mirror stereoscope. Related technology: Imagery, Geographic Information System (GIS) and Global Positioning System (GPS).

### 8. Course Objectives

Knowledge and understanding of Map and Aerial Photo. Ability to analyze the information/data from Map and Aerial Photo with manual and related technology:

### 9. Course Outline

Week	Topic			Instructor
	Lecture	Hour	Lab	
1	<b>INTRODUCTION</b> <b>PART I : MAP READING</b> 1. The Environment to be Mapped 2. Geographical Data 3. Map Abstraction Process 4. Image Maps	4	-	Ajarn Piyakarn
2	5. Landform Portrayal 6. Attribute and Distribution Maps 7. Statistical maps 8. Time and Maps			Ajarn Piyakarn
3	9. Software for Map Retrieval 10. Maps on the Internet <b>PART II : MAP ANALYSIS</b> 11. Location Reference Systems 12. Direction and Distance	4	-	Ajarn Piyakarn
4	13. Compass and Maps 14. Cartometrics 15. Form and Structure 16. Pattern Comparisons 17. Map Accuracy	4	-	Ajarn Piyakarn
5	<b>QUIZZES</b> 18. GPS and Maps	4	-	Ajarn Piyakarn

Week	Topic				Instructor
	Lecture	Hour	Lab	Hour	
6	<b>MIDTERM EXAM</b> 19. GIS and Map Analysis Software	4	-	4	Ajarn Piyakarn
7	<b>PART III : MAP INTERPRETATION</b> 20. Interpreting the Physical Environment 21. Interpreting the Human Environment	4	-	4	Ajarn Piyakarn
8	22. Interpreting Environmental Interactions 23. Image and Map Interpretation 24. Maps and Reality	4	-	4	Ajarn Piyakarn
9	<b>PART IV : PHOTO INTERPRETATION</b> 25. Basic of Aerial Photo 26 The Principle of Photo interpretation	4	-	4	Ajarn Piyakarn
10	27. Visual interpretation	4	-	4	Ajarn Piyakarn
11	<b>QUIZZES</b> 28. Application of visual interpretation	4	-	4	Ajarn Piyakarn
12	<b>FINAL EXAM</b>	-	-	-	Ajarn Piyakarn

### 10. Teaching Method

1. Lecture
2. Exercises
3. Map and Photo quizzes
4. Self-Study

### 11. Teaching Media

1. Texts and Teaching Materials
2. Transparencies
3. Power Point Presentation
4. Maps and models

### 12. Course Achievement

Course final grade 80-100 % = A, 70-79 % = B, 60-69 % = C, 50-59 % = D  
< 50 = F

### 13. Course Evaluation

- |                          |      |
|--------------------------|------|
| 1. Exercises             | 10 % |
| 2. Map and Photo quizzes | 20 % |
| 3. Midterm Examination   | 30%  |
| 4. Final Examination     | 40%  |

#### 14. References

1. Arnheim, R. 1969. **Visual Thinking**. Berkeley: University of California.
2. Caster, H.W. 1990. **Seeking New Horizon: A Perceptual Approach to Geographic Education**. Montreal: McGill Queen's University.
3. Dent, B.D. 1990. **Cartography: Thematic Map Design**. 2<sup>nd</sup> ed., Dubuque: Wm. C. Brown.
4. Down, R.M., and Stea D. 1977. **Maps in Mind: Reflections on Cognitive Mapping**. New York: Harper & Row Publishers.
5. Keates, J.s., 1996. **Understanding Maps**. 2<sup>nd</sup> ed., Essex : Addison Wesley Longman Ltd.
6. Liben, L.S., Patterson, A.H., and Newcombe, N. 1981. **Spatial Representation and Behavior Across the Life Span Theory and Applications**. New York: The Guildford Press.
7. MacEachren, A.M., 1995. **How Maps Work: Representation, Visualization and Design**. New York: The Guildford Press.
8. Monmonier, M., and Schnell, G.A. 1988. **Map Appreciation**. Englewood Cliffs, NJ: Prentice Hall.
9. Tufte, E.R. 1997. **Visual Explanations: Images and Quantities, Evidence and Narrative**. Cheshire, CT: Graphics Press.
10. Tyner, J. 1992. **Introduction to Thematic Cartography**. Englewood Cliffs, NJ: Prentice Hall.
11. Wilford, J.N. 1992. **The Map Makers: the Story of Great Pioneers in Cartography from Antiquity to the Space Age**. New York: Vintage Books, A Division of Random House.

#### 15. Instructor

Ajarn Piyakarn Teartisup

#### 16. Course Coordinator

Ajarn Piyakarn Teartisup