

COURSE SYLLABUS

1. **Program of Study** Bachelor of Science (Chemistry)
Faculty International College, Mahidol University
2. **Course Code** ICCH 443
Course Title Special Topics in Inorganic Chemistry
3. **Number of Credits** 2 (2-0-4) (**Lecture/Lab/Self-study**)
4. **Prerequisites** ICCH 442
5. **Type of Course** Elective major course
6. **Semester / Academic Year:**
Third trimester 2006-2007
7. **Course Conditions:** Number of students between 20-30
8. **Course Description:**
Detailed study the chemistries of transition metals, organometallic chemistry and inorganic chains, rings and clusters.
9. **Course Objectives:**
After successful completion of this course, students should be able to
 - 9.1 understand the concepts and theories of selected, specialised topics in inorganic chemistry;
 - 9.2 understand the concepts and theories of organometallic chemistry;
 - 9.3 apply to research in inorganic chemistry and organometallic chemistry.

10. Course Outline

Week	Topics	Hours			Instructor
		Lecture	Lab	Self-study	
1	Coordination chemistry: theory	2	-	4	Dr. Radchada Buntem
2	Coordination chemistry: theory	2	-	4	Dr. Radchada Buntem
3	Coordination chemistry: structure	2	-	4	Dr. Radchada Buntem
4	Coordination chemistry: structure	2	-	4	Dr. Radchada Buntem
5	Coordination chemistry: kinetics, mechanisms, reactions	2	-	4	Dr. Radchada Buntem
6	Chemistry of the	2	-	4	Dr. Radchada

	transition metals				Buntem
7	Organometallic chemistry	2	-	4	Dr. Radchada Buntem
8	Organometallic chemistry	2	-	4	Dr. Radchada Buntem
9	Organometallic chemistry	2	-	4	Dr. Radchada Buntem
10	Inorganic chains, rings, cages and clusters	2	-	4	Dr. Radchada Buntem
11	Inorganic chains, rings, cages and clusters	2	-	4	Dr. Radchada Buntem
12	Inorganic chemistry in Biological chemistry	2	-	4	Dr. Radchada Buntem
	Total	24	-	48	

11. Teaching Methods:

- 11.1 Lecturing
- 11.2 Self-study
- 11.3 Group discussion and presentation

12. Teaching Media:

Transparencies, handouts and lecturing from boards.

13. Measurement and Evaluation of Student Achievement:

Student achievement is measured and evaluated by

- 13.1 the ability in understanding the concepts and theories of selected, specialised topics in inorganic chemistry;
- 13.2 the ability in understanding the concepts and theories of organometallic chemistry;
- 13.3 the ability to apply to research in inorganic chemistry and organometallic chemistry.

Student's achievement will be graded according to the College and University standard using the symbols: A, B+, B, C+, C, D+, D and F. Students must attend at least 80% of the total class hours of this course.

Assessment made from the set-forward criteria: student who gets 85% and above will have Grade A.

A minimum of;

Midterm examination	40%
Final examination	50%
Quizzes	10%

14. Course Evaluation:

- 14.1 Students' achievement as indicated in number 13 above.
- 14.2 Students' satisfaction towards teaching and learning of the course using questionnaires.

15. References:

Huheey, J.E., Keiter, E.A. and Keiter, R.L. **Inorganic Chemistry Principles of Structures and Reactivity**, 4th Edition, USA: Harper Collins College Publishers; 1993.

Atkins, P., Overton, T., Rourke, J., Weller, M. and Armstrong, F. **Shriver & Atkins Inorganic Chemistry** 4th Edition, UK: Oxford University Press; 2006.

Douglas, B., McDaniel, D.H. and Alexander, J.T. **Concepts and Models of Inorganic Chemistry**, 2nd Edition, USA: John Wiley & Sons; 1983

Collman, J.P., Hegedus, L.S., Norton, J.R. and Finke, R.G. **Principles and Applications of Organotransition Metal Chemistry**, USA: University Science Books; 1987.

16. Instructors:

Dr. Radchada Buntem

17. Course Coordinator:

Dr. Pakorn Bovonsombat

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