

COURSE SYLLABUS

1. **Program of Study** Bachelor of Science (Chemistry)
Faculty International College, Mahidol University
2. **Course Code** ICCH 461
Course Title Medicinal Chemistry
3. **Number of Credits** 4 (4-0-8) (Lecture/Lab/Self-study)
4. **Prerequisites** ICCH 221 & 222
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:**
Introduction to pharmacological chemistry; application of organic chemistry to pharmacology and to the synthesis of drugs; chemical mediators; chemotherapy.
9. **Course Objectives:**
After successful completion of this course, students should be able to
9.1 understand the concepts of medicinal or pharmacological chemistry;
9.2 understand pharmacokinetics and drug design strategies;
9.3 enhance the understanding of biological sciences and biochemistry.

10. Course Outline

Week	Topics	Hours			Instructor
		Lecture	Lab	Self-study	
1	General principles	2	-	4	Dr. Sirirat Chookriengkai
2	Chemical mediators	4	-	8	Dr. Sirirat Chookriengkai
3	Basic principles of chemotherapy	4	-	8	Dr. Sirirat Chookriengkai
4	Cancer chemotherapy	4	-	8	Dr. Sirirat Chookriengkai
5	Antibacterial agents	4	-	8	Dr. Sirirat Chookriengkai
6	Antiviral drugs	4	-	8	Dr. Sirirat Chookriengkai
7	Antifungal drugs	4	-	8	Dr. Sirirat Chookriengkai
8	Antiprotozoal drugs	4	-	8	Dr. Sirirat

					Chookriengkai
9	Anthelmintic drugs	4	-	8	Dr. Sirirat Chookriengkai
10	Non-therapeutic drugs	4	-	8	Dr. Sirirat Chookriengkai
11	Harmful effects of drugs	4	-	8	Dr. Sirirat Chookriengkai
12	Selected topics from current pharmacological concerns	2	-	4	Dr. Sirirat Chookriengkai
	Total	44	-	88	

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 of medicinal or pharmacological chemistry;
- 13.2 the ability in understanding pharmacokinetics and drug design strategies;
- 13.3 the ability to enhance the understanding of biological sciences and biochemistry.

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 suggestive minimum of;

Midterm examination	40%
Final examination	50%
Quizzes	10%

13. 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.

14. References:

Patrick, G.L. **An Introduction to Medicinal Chemistry**, 3rd Edition, UK: Oxford University Press; 2005.

Rang, H.P. and Dale, M.M. **Pharmacology**, 2nd Edition, USA: Longman; 1991.

16. Instructors:

Dr. Sirirat Chookriengkai

17. Course Coordinator:

Dr. Pakorn Bovonsombat

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