Course Syllabus

1. Program of Study   Bachelor of Science Program
   Faculty   Mahidol University International College

2. Course Code   ICSC 303
   Course Title   Statistics

3. Number of Credits   4 (4-0-8) (Lecture/Lab/Self-study)

4. Prerequisite*s*   ICNS 102 or equivalent

5. Type of Course   Core science course

6. Trimester/ Academic Year   1st and 3rd trimester/ 2004

7. Course condition   **-**

8. Course Description
   Statistical ideas and concepts, probability and conditional probability, distribution functions, expected value, estimators, good estimators and hypothesis testing.

9. Course Objectives
   After successful completion of this course, students should be able to
1. understand the statistical ideas and concepts.
2. differentiate the probability and conditional probability.
3. explain the distribution functions, expected value, estimators, good estimators and hypothesis testing.

10. Course Outline

Week	Title	Hours			Instructor
		Lecture	**Lab**	**Self-study**	
1	Chapter 1: Statistics Chapter 2: Probability	4	0	8	Taweeratana
2	Chapter 2: Probability	4	0	8	Taweeratana
3	Chapter 3: Discrete Random Variables	4	0	8	Taweeratana
4	Chapter 4: Continuous Random variables	4	0	8	Taweeratana
5	Chapter 6: Functions of Random Variables Chapter 7: Sampling distributions and Central Limit Theorem	4	0	8	Taweeratana
6	Midterm Examination				Taweeratana

	Chapter 7: Sampling distributions and Central Limit Theorem Chapter 8: Estimation	4	0	8	
7	Chapter 8: Estimation	4	0	8	Taweeratana
8	Chapter 9: Point Estimators and Methods of Estimation	4	0	8	Taweeratana
9	Chapter 10: Hypothesis Testing	4	0	8	Taweeratana
10	Chapter 10: Hypothesis Testing	4	0	8	Taweeratana
11	Chapter 11: Linear Model, Least Squares and Advanced Topics	4	0	8	Taweeratana
	Total	44	0	88	
Final examination					

11. Teaching Method *(s)*

Method of teaching consists of lecturing, assignments, and presentation.

12. Teaching Media

Textbooks, Handouts and LCD projectors.

13. Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

13.1 the ability to understand the statistical ideas and concepts.

13.2 the ability to differentiate the probability and conditional probability.

13.3 the ability to explain the distribution functions, expected value, estimators, good estimators and hypothesis testing.

Students will be evaluated from their total score (out of 100%). Grading system is A, B^+, B, C^+, C, D^+, D, and F.

Ratio of mark

1. Mid-term examination	35%
2. Final examination	35%
3. Quizzes	20%
4. Assignment	10%
Total	100%

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. Reference *(s)*

Wackerly, D.D., Mendenhall III, W., Scheaffer, R.L. Mathematical statistics with applications. 6th Edition. USA. Duxbury, 2002.

16. Instructor *(s)*

Associate Professor Taweeratana Sivadol

17. Course Coordinator

Associate Professor Dr. Prayad Pokethitiyook