

Mahidol University International College
Trisemester 1, 2013-2014

1. Course Title: ICMA 215 Calculus
2. Instructor: Associate professor Dr. Pachara Chaisuriya.
Telephone 02-277-0552, mobile 085-511-7081 Email pachara.cha@mahidol.ac.th
3. Number of Credits: 4(4-0-8) (Lecture-Lab-Self study)
4. Prerequisites: ICNS 102 or equivalent
5. Course Description:
Derivatives of logarithmic and exponential functions, techniques of integration, improper integrals and L'Hopitals rules, application of derivatives and integration in life sciences, partial derivatives, infinite series, polar coordinates, parametric equations.
6. Course Objectives: After successful completion of this course, students will be able to
 - 6.1 integrate by using difference techniques;
 - 6.2 understand the concepts of improper integrals, infinite series, etc;
 - 6.3 apply combinations of mathematical skills and techniques in problem solving.
7. Course Outline:

Week	Topics	Hours
1-2 17 Sep -26 Sep	Logarithmic and exponential functions	8
3-5 1 Oct - 17 Oct	Techniques of integration and applications	12
	Test 1	
6 22 Oct - 24 Oct	Improper Integrals and L'Hopital's Rule	4
7 29 Oct -31 Oct	Partial Derivatives	4
8-9 5 Nov - 14 Nov	Infinite series	8
10 19 Nov -21 Nov	Polar coordinates	4
	Test 2	
11 26 Nov - 28 Nov	Parametric equations	4
12	Final Examination	
	Total	44

8. Teaching Method: Lecture and discussion.

9. Text: Howard Anton, Calculus, John Wiley & Sons, Inc

10. Class evaluation: Grading will be based on the following suggestive criteria

10.1 Homework and quizzes 15%

10.2 Test 1 20%

10.3 Test 2 20%

10.4 Term paper 10 %

10.5 Final exam 35 %.

11. References:

11.1 Stewart, James. Calculus. Brooks/Cole

11.2 Thomas, George B and Finney, Ross. Calculus and analytic geometry. Addison-Wesley.