



JOHN CABOT UNIVERSITY

COURSE CODE: "MA 299"
COURSE NAME: "Calculus II "
SEMESTER & YEAR: **Sample Summer Syllabus**

TOTAL NO. OF CONTACT HOURS: 45

CREDITS: 3

PREREQUISITES: Prerequisite: MA 198 with a grade of C- or above

COURSE DESCRIPTION:

This course builds on the fundamentals of the calculus of one variable, and includes infinite series, power series, differential equations of first and second order, numerical integration, and an analysis of improper integrals. It also covers the calculus of several variables: limits, partial derivatives, and multiple integrals.

SUMMARY OF COURSE CONTENT:

The course is a further development of calculus at a more advanced level. After covering traditional topics such as techniques of integration, differential equations and the study of several variables, attention is given to applications (constrained optimization, Lagrange multipliers, Numerical approximation, Taylor series, etc.).

LEARNING OUTCOMES:

The student will learn how to use classic Calculus techniques to analyze functions, models, and learn optimization methods.

TEXTBOOK:

| Book Title | Author | Publisher | ISBN number | Library Call Number | Comments |
|--------------------------------|---------------|------------------------------|----------------|---------------------|----------|
| Essential Calculus 2nd Edition | James Stewart | Brooks/Cole Cengage Learning | 978-1133112297 | | |

ASSESSMENT METHODS:

| Assignment | Guidelines | Weight |
|--------------|--|--------|
| Homework | Daily Assignments to prepare for Exams | 10% |
| Quizzes | | 20% |
| Midterm Exam | | 30% |
| Final Exam | Comprehensive | 40% |

SCHEDULE

| Session | Session Focus |
|---------|---|
| Week 1 | Techniques and Applications of Integration Chapters 6 & 7 |
| Week 2 | Sequences and Series Chapter 9. |
| Week 3 | Vectors and Geometry Chapter 10 |
| Week 4 | Partial Derivatives Chapter 11 |
| Week 5 | Multiple Integrals and Line Integrals Chapters 12 & 13. |