Tecnológico de Monterrey

PLANES DE ESTUDIO

MA2009
Mathematics III

SPANISH

CIP: 270101 Mathematics, General.   **C-L-U:** 3-0-8

Academic department that offers it:

Mathematics

Graduate Programs who offer them:

3 IAB11, 3 IIN12, 3 ITM11, 3 LCQ11, 3 IBN11, 3 IBT11, 3 IDA11, 3 IC 11, 3 IDS11, 3 IFI11, 3 IIA11, 3 IID12, 3 IIS11, 3 IMA11, 3 IMD11, 3 IME11, 3 IMI11, 3 IMT11, 3 INCQ13, 3 INT11, 3 IQA11, 3 IQP11, 3 ISC11, 3 ISD11, 3 ITC11, 3 ITE11, 3 ITIC11, 3 ITS11 Certificates

Requirement:

(MA1017)

Equivalence:

MA2002

General aim of the course:

Upon completion of this course, students will be able to use the concepts of gradient, rotational and divergence in a critical manner to study the nature of vector fields; use line, surface and volume integrals to solve problems involving vector fields; recognize the extensions of the Fundamental Theorem of Calculus for one variable and multiple variables: Stokes' Theorem, Gauss Theorem and the Fundamental Theorem for Line Integrals.

Teaching and learning tecniques:

Collaborative learning

Bibliography:

BOOKS FOR CONSULTATION:
* Larson, Hostetler, Edwards, Cálculo con Geometría Analítica, México: McGraw-Hill, 1995,
* Purcell, Varberg, Rigdon, Cálculo, México: Pearson Educación, 2010,
* Stewart, Calculus Early Transcendentals, Belmont, CA: Thomson Brooks/Cole, 2010,
* Thomas, Cálculo. Varias Variables, México: Pearson Educación,
* Salinas, Alanis, Pulido, Santos, Escobedo y Garza, Elementos del Cálculo de Funciones de Varias Variables, Publicación interna ITESM, Campus Monterrey,

Professor´s profile:

Master Degree in Computational Sciences; Master Degree in the area of Engineering; Master Degree in Physics; Master Degree in Mathematics; Doctoral Degree in Computational Sciences; Doctoral Degree in the area of Engineering; Doctoral Degree in Physics; Doctoral Degree in Mathematics