COURSE DETAIL

VARIATIONAL CALCULUS

Country
Mexico

Host Institution
National Autonomous University of Mexico

Program(s)
National Autonomous University of Mexico

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Physics Mathematics

UCEAP Course Number
142

UCEAP Course Suffix

UCEAP Official Title
VARIATIONAL CALCULUS

UCEAP Transcript Title
VARIATIONL CALCULUS

UCEAP Quarter Units
7.50

UCEAP Semester Units
5.00

Course Description

This course offers an introduction to the techniques of locating critical points in infinite-dimensional spaces in order to understand the variational formulations of mechanics in physics, including the principles of minimum action that give rise to the Euler-Lagrange equations and the Hamilton-Jacobi equation. Topics include: calculation in spaces of functions; necessary conditions; change of variables-- Hamilton-Jacobi; sufficient conditions.

Language(s) of Instruction
Spanish

Host Institution Course Number
0083

Host Institution Course Title
VARIATIONAL CALCULUS

Host Institution Campus
CIUDAD UNIVERSITARIA

Host Institution Faculty
FACULTAD DE CIENCIAS

Host Institution Degree

Host Institution Department
MATEMATICAS

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