**Graduate Programs—NEW COURSE PROPOSAL**

***DEPARTMENT NAME:***
MATHEMATICAL SCIENCES

***COLLEGE OF:***
SCIENCE

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**RECOMMENDED COURSE IDENTIFICATION:**

- **PREFIX:** __MAA_____  
- **COURSE NUMBER:** ___5105____  
- **LAB CODE** (L or C) _____

*(To obtain a course number, go to www.fau.edu/academic/registrar/UUPCinfo)*

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**COMPLETE COURSE TITLE:**
MULTIVARIABLE ANALYSIS

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**EFFECTIVE DATE**
(first term course will be offered):

- FALL 2008

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**CREDITS:**
3

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**TEXTBOOK INFORMATION:**
Analysis on Manifolds by J. R. Munkres

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**GRADING (SELECT ONLY ONE GRADING OPTION):**
- REGULAR ___X___  
- PASS/FAIL ______  
- SATISFACTORY/UNSATISFACTORY ______

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**COURSE DESCRIPTION, NO MORE THAN 3 LINES:**

Derivative of a function of several variables, Implicit and Inverse Function Theorems, submanifolds of Euclidean space, rank theorem, tangent spaces, the derivative as a linear transformation, differential forms, integration on manifolds, Stoke’s Theorem.

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**PREREQUISITES:**
MAA 4200, MAS 4107

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**COREQUISITES:**

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**OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL):**

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**PREREQUISITES, COREQUISITES & REGISTRATION CONTROLS SHOWN ABOVE WILL BE ENFORCED FOR ALL COURSE SECTIONS**

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**MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE:**
PH.D. IN THE MATHEMATICAL SCIENCES

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Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each.

- **NONE**

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**W. KALIES, WKALIES@FAU.EDU, (561) 297-1107**

Faculty Contact, Email, Complete Phone Number

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**SIGNATURES**

- Approved by: 
  - Department Chair: ____________________________  
  - College Curriculum Chair: ____________________  
  - College Dean: ________________________________  
  - UGPC Chair: _________________________________  
  - Dean, Graduate Studies: ________________________

- Date: 
  - ____________________________  

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**SUPPORTING MATERIALS**

- Syllabus—must include all details as shown in the UGPC Guidelines.
- Written Consent—required from all departments affected.

Go to: www.fau.edu/graduate/gpc/index.php to download this form and guidelines to fill out the form.

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Email this form and syllabus to sfuks@fau.edu and eqirjo@fau.edu one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

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FAUnewcourseUG—Revised June 2007