UCC Document # 122
College Document # COAS 067
Review Type: ___Edit ___ Exp ___Full

CATALOG YEAR 2012-2013

COLLEGE/SCHOOL/SECTION: _____

Course: Add: ___ Delete: ___
(check all that apply) Change: Number ___ Title ___ SCH ___ Description __x_ Prerequisite _____
Changes are in red.

Justification for Description Change
The current description is too terse for MATH 4350.

MATH 4350
Partial Differential Equations. Three semester hours. (SP)

Theory of partial differential equations and boundary value problems with applications to the physical sciences and engineering. Detailed analysis of the wave equation, the heat equation, and the potential equation. Numerical methods to solving partial differential equations will also be discussed. Prerequisite: Math 3330.

MATH 4350 in current catalog: Fourier series, the Heat, Wave and Potential equations. Problems in several dimensions. Prerequisite: MATH 3330.

Approvals:	Signature	Date
Chair Department Curriculum Committee	Qingwen Ni Digitally signed by Qingwen Ni DN: cn=Qingwen Ni, o=TAMIU, ou=TAMIU, email=qni@tamiu.edu, c=US Date: 2012.11.07 14:48:02 -06'00'	
Chair Department	Rafic Bachnak Digitally signed by Rafic Bachnak DN: cn=Rafic Bachnak, o=TAMIU, ou=EMAP, email=rbachnak@tamiu.edu, c=US Date: 2012.11.08 12:06:40 -06'00'	
Chair College Curriculum Committee	Kevin Lindberg Digitally signed by Kevin Lindberg DN: cn=Kevin Lindberg, o=COAS, ou=COAS Dean's Office, email=klindberg@tamiu.edu, c=US Date: 2012.12.19 09:22:58 -06'00'	
Dean	Kevin Lindberg Digitally signed by Kevin Lindberg DN: cn=Kevin Lindberg, o=COAS, ou=COAS Dean's Office, email=klindberg@tamiu.edu, c=US Date: 2013.01.28 09:53:53 -06'00'	

Trevino, Mary T.

From: Goonatilake, Hoonandara R
Sent: Friday, February 08, 2013 11:13 AM
To: Trevino, Mary T.
Cc: Bachnak, Rafic A
Subject: SLO's for Math 4350-102, Partial Differential Equations

Dear Mary,

SLO's for Math 4350-102, *Partial Differential Equations* are listed below as requested by UCC this morning.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

- Derive the heat, wave, and potential equations with various boundary conditions;
- Classify partial differential equations;
- Determine the existence, uniqueness, and well-posedness of a solution and if an analytic solution can be obtained, select the appropriate technique for constructing the solution;
- Utilize technology tools to find geometric, graphical and numeric techniques for the analysis of solutions;
- Determine the essentials of Fourier series to solve partial differential equations;
- Use the method of separation of variables for solving heat, wave, and potential equations with various boundary conditions;

Thanks,
Rohitha Goonatilake