| **CLASS INFORMATION** | Benedictine University Graduate Business Programs  
**MSF 643 A - Financial Mathematics**  
Fall 2016  
October 8th – December 10th  
Saturdays, 10 AM – 1 PM  
Classroom: Refer to MyBenU |
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<td><strong>COURSE PREREQUISITE</strong></td>
<td>None (Although some experience in college math is helpful)</td>
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| **INSTRUCTOR INFORMATION** | Michael Modica, PhD.  
Email: mmodica@ben.edu  
Office Hours by Appointment |
| **COURSE OBJECTIVES** | This course is designed to give students the knowledge and skills required for valuing assets through the discounting of cash flows and portfolio management of several different financial assets. As a result of this course, you will be expected to:  
- Describe the no arbitrage framework for modeling asset values  
- Calculate the values of a call and put option  
- Develop a one-step model  
- Describe the relationship between risk and return  
- Calculate simple interest  
- Find the value of a zero-coupon bond  
- Understand the purpose of continuous compounding interest  
- Develop a two-security portfolio  
- Understand the framework of the Capital Asset Pricing Model (CAPM)  
- Apply portfolio management to a multi-asset portfolio  
- Develop a two-step binomial model  
- Apply discrete time models to asset pricing  
- Describe continuous time models to asset pricing  
- Understand the framework of the Weiner Process and Ito’s Lemma |
| **CLASS OVERVIEW & GRADING** | No information provided by the instructor. |
| **REQUIRED TEXT** | Title: Mathematics for Finance: An Intro to Financial Engineering  
Author: Capinski & Tomasz  
Publisher: Springer  
ISBN: 9780857290816 |
| | Day of the Quants (DOQ) by Michael Modica (on D2L and free CD) |
| **IMPORTANT REMINDERS** | Students are expected to check the class Desire2Learn (D2L) site prior to the first night of class and on an on-going basis. |
| **PRE-CLASS ASSIGNMENT** | No information provided by the instructor. |