

**School of Business & Economics**

**Department of Accounting & Finance**

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| Basic Information | |
| **Course Name:** | **Financial Modeling using Excel** |
| **Course Code**  **& Section No:** | **FIN 455** |
| **Semester:** |  |

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| Instructor & Department Information | |
| 1. **Instructor Name:** | MIRZA FERDOUS |
| 1. **Office Room:** | NAC 972 |
| 1. **Office Hours:** |  |
| 1. **Office Phone:** | X 1757 |
| 1. **Email Address:** | [Mirza.ferdous@northsouth.edu](mailto:Mirza.ferdous@northsouth.edu) |
| 1. **Department:** | Acct & Finance |
| 1. **Links:** |  |

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| Course Information | |
| **Class Time & Location** | |  |  | | --- | --- | | MW 08:00 AM - 09:30 AM | NAC313 | |
| **Course Prerequisite(s)** | FIN 440, FIN 435 |
| **Course Credit Hours** | 3.0 |
| **Course Description** | The objective of this course is to equip students with the frameworks, tools, and methodologies necessary to build and/or be an educated user of quantitative models for financial decision making. The course will cover in-depth techniques of financial modeling used in practical scenarios. Modeling and simulation techniques will be done primarily based on MS Excel. The course is suitable for students seeking a career in finance, but also for students with broader interests who wish to strengthen their general modeling skills. |
| **Student Learning Outcomes** | Upon the successful completion of this course, a student will be able to:  (1) Understand and perform basic and advanced financial calculations such as PB, DPB, NPV, IRR, MIRR, WACC and etc.  (2) Use corporate valuation techniques to determine corporation and investment values, and use Pro-forma financial modeling techniques necessary for valuation.  (3) Use portfolio models to calculate efficient portfolios, variance-covariance matrix, estimate betas and security market lines, and the learn application techniques of Black- Litterman approach to portfolio optimization.  (4) Use Monte Carlo methods to perform stock price simulations, investment simulations and understand and calculate Value at Risk.  (5) Learn and use advanced MS Excel functions and techniques necessary to create useful financial models |

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| Required Text Book | | | | |
| **Author** | **Title** | **Edition & Year** | **Publisher** | **ISBN** |
| Simon Benninga | Financial Modeling | 4th Edition | MIT Press |  |

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| Required Calculator |
| Texas Instrument BAII Plus Professional |
| Required Software |
| MS EXCEL – 2010 or higher |

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| Teaching Strategy |
| The class will be conducted through various activities including presentation of concepts and situations, discussion and exchanges of ideas, student initiative and active involvement, cases reflecting real world context, and project. Students are expected to actively involve and to take initiative for their own learning experience. A significant portion of the course will be taught using MS Excel. |

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| Makeup policy |
| There is no make-up policy. Students must present all required cases on time as scheduled and attend the presentation in due time. |

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| Assessment Strategy and Grading Scheme | |
| **Grading tool** | **Points** |
| Attendance & Participation | 10% |
| Quiz 1,2,3 | 10% |
| Project 1 | 25% |
| Project 2 | 25% |
| Assignments 1,2,3 | 10% |
| Presentation/Interview | 20% |

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| Course Syllabus | | |
| **Week 1** | Day 1 | Class Introduction and Introduction and overview of MS Excel |
| Day 2 | Chapter 1: Basic Financial Calculations and Chapter 2: Corporate Valuation Overview |
| **Week 2** | Day 1 | Chapter 2 (Contd.) and Chapter 3: Calculating Weighted Average Cost of Capital |
| Day 2 | Chapter 3(Contd.) |
| **Week 3** | Day 1 | Chapter 4: Valuation Based on Consolidated Statement of Cash Flows |
| Day 2 | Chapter 5: Pro-Forma Financial Statement Modeling |
| **Week 4** | Day 1 | Chapter 6: Building a Pro-forma Model (The case of caterpillar) |
| Day 2 | Chapter 8: Portfolio Models – Introduction and Chapter 9 – Calculating Efficient Portfolios |
| **Week 5** | Day 1 | Chapter 9(Contd.) |
| Day 2 | Chapter 10: Calculating Variance- Covariance Matrix & Chapter 11: Estimating Beta and Security Market Line |
| **Week 6** | Day 1 | Chapter 13: The Black-Litterman Approach to Portfolio Optimization |
| Day 2 | Chapter 14: Event Studies |
| **Week 7** | Day 1 | Chapter 20: Bond Duration and Chapter 21: Immunization Strategies |
| Day 2 | Chapter 24: Generating and Using Random Number and Chapter 25: Introduction to Monte Carlo Methods |
| **Week 8** | Day 1 | Chapter 25: (Contd.) |
| Day 2 | Chapter 26: Simulating Stock Prices |
| **Week 9** | Day 1 | Chapter 27: Monte Carlo Simulation for Investment |
| Day 2 | Chapter 27: Contd. |
| **Week 10** | Day 1 | Chapter 28: Value at Risk |
| Day 2 | Excel Techniques |
| **Week 11:** | Day 1 | Excel Techniques |
| Day 2 | Excel Techniques |

\*\*Two classes have been kept free to be used for presentation