**Fall 2018: MGT 8803/6754** **Syllabus**

Business Fundamentals for Analytics is designed to provide an introduction to business school content and specifically to ground the student in a foundational understanding of  various business disciplines. This course does not focus specifically on analytics content and but rather presents the material in the form of a MBA survey course to provide students without a business and management background a general introduction to certain core concepts. **IMPORTANT:** **If the student already has an undergraduate degree in business or has successfully taken a college level course in the four business disciplines taught in this course (Financial Accounting, Managerial (or Cost) Accounting, Marketing, and Business Strategy) they should request a waiver from this course.**

The course is delivered entirely on a distance basis using web-based content, including video lessons and on-line forums.

The overall objective of the course is to provide an accelerated introduction to the basics of management and the language of business. The course also provides a framework that will enhance the student’s effectiveness as a manager in the business world.  The course is taught as a series of business disciplinary modules and the professors who teach the modules represent a diversity of functional areas, including financial and managerial accounting, finance, marketing, and business strategy.

Some students may wonder why a introduction to business course is taught as part of a Data Analytics curriculum. As a short explanation a primary role of Data Analytics is to drive better decision-making. By developing a fundamental understanding of the business environment -- finance, marketing, strategy, etc,- students gain a better understanding of the types of issues and decisions, including relevant data requirements, needed to support better decision making. This in turn helps analyst become better analysts in the process of defining problems, defining decision criteria, developing alternatives, identifying analytical models and frameworks, and collecting and analyzing the relevant data.

**Course Modules**

**Accounting Modules**

The Accounting topic will be taught as two subjects or modules  – Financial Accounting which relates to financial reporting and the use of accounting data for internal to the business and external to the business purposes; and managerial accounting, which is the use of accounting data for product costing and management decision-making purposes.

**Financial Accounting**:  Students will be able to read, understand, and analyze GAAP Financial Statements – including The Balance Sheet, Income Statement, and Statement of Cash Flows. Students will also learn how to calculate and use key financial ratios such as Return on Assets (“ROA”), Return on Equity (“ROE”), Return on Investment (“ROI”) and operational metrics such as Inventory Turnover and Average Collection Period. The student will also be introduced to many of the accounting principles that provide for the accounting practices used to properly record all essential business activities.

**Managerial Accounting**:  Students will learn how to use accounting data to determine product costs and to make critical managerial decisions such as make vs. buy; and adding/dropping a business segment. Students will be able to understand differences between departmental and activity based costing and the impacts on product costing. Finally students will understand how to determine as well as explain operational variances from standard.

**Finance Module**

Finance is divided into two modules:

**Finance, Part 1:  Using Financial Analysis Techniques for Decision Making** provides a general introduction to finance and capital structure. Students will understand the differences between accounting profits and economic value added (“EVA”) and the significant of EVA in wealth creation. Students will learn how to calculate cost of capital and how cost of capital factors into investment decisions. Students will also learn how to project cash flows and use Discounted Cash Flow techniques and Cost of Capital to determine the financial attractiveness of future project investments. Other analytical techniques including payback period and Internal Rate of Return ("IRR") will also be reviewed to help the student round out a tool kit for making investment decisions.

**Finance, Part 2:  Entrepreneurial Finance** focuses on various venture valuation methods will be discussed as well as common sources for venture funding. Valuation methods taught include the Comparables Method, The Venture Capital Method, and Net Present Value.

**Marketing Module**

The marketing module will focus on marketing strategy and the development of tactics to create and harvest demand for the firm’s products and services. At the conclusion of this module students will have an understanding of how market research drives customer identification and segmentation, the importance of target marketing and product positioning and how overall marketing objectives are set. Students will also learn the significance of the 4 Ps of marketing – Product, Price, Place, and Promotion - in establishing market plans/tactics for creating demand and a sales pipeline.

**Business Strategy and Innovation Modules**

These modules focus on the development of business strategy and how firms develop competitive advantage in the marketplace. In these modules we discuss innovation as a key strategic weapon: driving firm revenue growth and profitability. Using the AFI framework (Analysis-Formulation-Implementation) students will learn a fundamental approach to developing business strategy at the corporate, strategic business unit (“SBU”)  and functional levels. Subjects include goal setting, external (industry/competitor) and internal (capability/benchmarking) analysis; sources of business competitive advantage; generic business strategies; and business model effects. Also students will understand how to apply systems thinking to align functional strategies to the overall SBU and corporate plans. Students will also learn various techniques for managing innovation where the most effective approach will vary based on the category of innovation  -- sustaining innovation (incremental improvements), efficiency innovation (cost reduction), and radical/disruptive innovation (market creating). The module concludes with a set of lessons on strategy implementation and best practices in change management.

**Course Structure and Topic Sequence**

Each of the modules described above will be taught by a different professor with one professor serving as an overall course coordinator. Each of the modules will consist of a set of topics, with each topic supported by individual lessons. At the close of each topic the student will take a self-assessment quiz which will consist of multiple choice questions, and in some topics, problem solving. The self-assessments are intended to reinforce the students learning experience.

Selected modules will also contain a graded homework assignment (GT Students).  This will be described more fully later in this syllabus.

Each lesson (within a topic) will consist of a short video lecture and reading assignments.  Typically the purpose of the reading assignments is to provide more depth to the materials provided in the video lecture. Readings will consist of materials accessed directly from the class website AND course pack materials that must be acquired separately. The course packs contain copyright protected materials including chapter length excerpts from business textbooks, articles, and business cases. Instruction on purchasing the course pack will be provided later in this syllabus. The (free) non-course pack materials will typically be website links or articles posted directly to the course website in the edX platform.

The module materials, topics, lessons videos, self-assessments, and non-course-pack readings will all be accessible through the course web platform on **edX.**

The topic sequence will be approximately as shown below. Students should try to pace themselves consistent with the timings noted. Week 1 begins on Monday August 20 and the course concludes with the final exam period ending December 12.

|  |  |
| --- | --- |
| Week | Topic |
| 1 | Overview |
| 2 | Financial Accounting |
| 3 | Financial Accounting |
| 4 | Managerial Accounting |
| 5 | Managerial Accounting |
| 6 | Financial Analytical Techniques |
| 7 | Financial Analytical Techniques |
| 8 | Mid-Term Exam Week |
| 9 | Entrepreneurial Finance |
| 10 | Entrepreneurial Finance |
| 11 | Marketing |
| 12 | Marketing |
| 13 | Business Strategy and Innovation |
| 14 | Business Strategy and Innovation |
| 15 | Business Strategy and Innovation |
| 16 | Final Exam Week |

**Student Evaluation**

Student evaluation will be based mainly on individual effort – 2 exams and 4 topic-related homework assignments. Grading will be weighted as follows:

|  |  |
| --- | --- |
| Mid-Term Exam | 40% |
| Final Exam | 40% |
| Homework Assignments | 20% |
|  |  |
| Total | 100% |

More specifics regarding exams, homework assignments, and participation follow.

**Exams**

In order to assess how well class participants understand the concepts presented in the course and to provide feedback for improvement, students will complete a mid-term exam (a 1st half exam) and a final exam (a 2nd half exam).  The mid-term exam will cover Financial Accounting, Managerial Accounting, and Financial Analytical Techniques and must be completed by 11:55pm Monday October 15.  The final exam will NOT be cumulative and will cover Entrepreneurial Finance, Business Strategy and Innovation, and Marketing. The Final exam will be scheduled immediately after the completion of the Business Strategy and Innovation module and students will have until 11:55pm December 12 to complete it. The exams will consist mainly of multiple choice, true/false, and problem-solving questions. Neither exam will be “open book”. No formula sheets or "cheat sheets" will be allowed. Final course grades should be determined by no later than noon December 17.

All materials necessary to prepare for and take the exam are at the course website or can be purchased using the instructions provided at the course website.

**Topic Specific Homework Assignments**

Graded homework assignments will be expected for following course modules – Financial Accounting, Managerial Accounting, Financial Analytical Techniques, and Entrepreneurial Finance. Each assignment will count 5 percent of the final course grade. In total the topic specific homework will count 20% towards the final course grade.

All homework assignments will be problem-solving exercises. Grades will be determined automatically and returned immediately to the student after the homework is complete. Students however will not be able to see correct answers until that particular homework assignment has been closed. Unlike the exams, homework assignments are “open book”, although students **must work independently** and cannot use the forum to solicit answers from other students. Any forum entries regarding the homework assignments should be marked **"private"**. Details for each of the homework assignments including due dates are provided at the course website. Homework assignments not turned in by the due date will result in that homework assignment be given a zero grade.

**Participation**

The course Piazza forum will be used to post questions and observations. Students are invited to contribute questions and comments regarding answers.

**Georgia Tech Honor Code**

As a student at Georgia Tech you are expected to understand and adhere to the schools academic honor code. Full details regarding the honor code can be found at this website: <http://honor.gatech.edu/content/2/the-honor-code>

 By submitting homework assignments and exams the student is agreeing to the following statement:

 “Having read the Georgia Institute of Technology Academic Honor code, I understand and accept my responsibility as a member of the Georgia Tech Community to uphold the Academic Honor Code at all times. In addition, I understand my options for reporting honor violations as detailed in the code.”

**Class Calendar and Schedule**

Students are expected to devote 12 – 14 hours per week to complete the course requirements over the 16-week semester. Time guidelines for each module are provided at the course website. 12 to 14 hours per week on average should provide adequate time to view the lesson videos, read the course pre-read materials, complete the homework assignments (GT Students), and participate in course forum reflections and posted comments. Students, of course, can spend as much time as necessary.  However keep in mind that the student must keep in step with the overall course schedule and be careful not to fall behind.

**Required Course Packs and Other Materials**

**That Need to be Purchased by the Student**

Financial/Managerial Accounting, Marketing and Finance Modules:

* HBSP Course Pack Title: Business Fundamentals for Analytics Fall 2018. Course pack link: [https://hbsp.harvard.edu/import/554059](https://hbsp.harvard.edu/import/527466)

Business Strategy and Innovation Module:

* McGraw-Hill Course Pack Title: Business Strategy and Innovation.  Order Directly from the Link: <https://create.mheducation.com/shop/>  and enter ISBN 9781307201475 in the search field.  **Order prior to the start of the Business Strategy and Innovation module.**

Both course packs are eBooks and will be delivered electronically.