UNIVERSITY OF TEXAS RIO GRANDE VALLEY
Online Course Syllabus

GENERAL COURSE INFORMATION

COURSE NUMBER: INFS 6350

COURSE TITLE: Foundation of Business Analytics

PREREQUISITE: None

COURSE START DATE: Feb 27, 2019

COURSE END DATE: Apr 17, 2019

REQUIRED READING: Students are required to read all materials available at the Blackboard Learn site for this course on mycourses.utrgv.edu.


Software: Most of the computer-based assignments will be done via a remote server on which the instructor has requested individual accounts for the class. You do not need to install your own SQL Server software. Yet you need to have Microsoft Office installed on your own computer (available in “vSoftware” under my.utrgv.edu).

Facilitator Information

Name: Jun Sun, PhD
Title: Professor of Information Systems
College of Business and Entrepreneurship, University of Texas Rio Grande Valley
Time Zone: U.S. Central
Email Address: jun.sun@utrgv.edu

Facilitator Availability

I am available from 9AM-9PM Central Time on most days, but attempt to reserve sometime during weekends for my family. During the week I am online most of the time during that timeframe. On Saturdays I tend to be online in the morning only, and on Sundays I tend to be online in the evening only. If these times are not convenient for you, please let me know and I will be happy to accommodate your schedule if at all possible. I provide you with these times to make it easier to communicate with me, not to limit our contact and want you to know that, should you need to contact me outside these time frames, you should not hesitate to do so.
Facilitator Bio

I am posting my online biography in a separate note in the course discussion forum to give you more information about me. I look forward to reading your biographies and getting to know you.

Words of Welcome

Greetings from the facilitator of this course. I jointed the former UTPA in 2006 and am now a full professor of information systems at UTRGV. I had 4 years of industry experience before getting my master’s and doctoral degrees at the Texas A&M University. Yes, I am aggie but not a huge football fan (I like tennis and swimming though). I am looking forward to working with you to explore the exciting field of health informatics. I know it is challenging but you are not alone: everyone here is on the same board to help and learn from each other.

Course Objectives

**COURSE DESCRIPTION:**

This course focuses on the characteristics, uses, and design strategies for IT-enabled managerial decision support. Data-oriented methods for business intelligence and organizational decision making are emphasized. Technology context includes an overview of business intelligence framework, business process management and application-based business analytic and reporting. Specific techniques include business reporting using pivot tables, extraction, cleaning and querying of business data. Application areas include healthcare, retailing and manufacturing etc.

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<th>Course Learning Objectives</th>
<th>Map to MBA Learning Goals</th>
<th>Assessment Methods</th>
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<td>1. An Appreciation for the Role of Business in a Free Enterprise System</td>
<td>Students will apply business intelligence techniques on big data to obtain useful insights for decision support in organizations.</td>
<td>1. Leadership 2. Oral &amp; Written Communication</td>
<td>Successful completion of weekly group projects with rotating leadership; Compilation of project reports; Group presentation of final report and peer evaluation.</td>
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<td>2. Critical Thinking and Problem-Solving</td>
<td>Students will demonstrate effective analytic and modeling skills to solve business problems.</td>
<td>3. Critical Analysis and Decision-Making</td>
<td>Successful completion of individual assignments; Participation in class discussions on weekly topics.</td>
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TOPICS AND OBJECTIVES

Week 1: Business Intelligence and Decision Support

In this module, you are going to get familiar with the basic concepts of business intelligence and explore how it can be used to support business decision making.

Upon completion of this module, the students will be able to:

• convert raw data into useful information to support business decisions with at least 80% accuracy according to assignment rubric in individual assignments.

• appraise the roles of business intelligence (BI) in business decision making with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.

• devise business scenarios in which business intelligence (BI) can be applied with at least 15 points out of 20 possible total points according to project rubric in unit group project.

Week 2: Data Summarization

In this module, you are going to summarize data and obtain useful information to address business issues.

Upon completion of this module, the students will be able to:

• apply pivot table and pivot chart to summarize raw data for business decision support with at least 80% accuracy according to assignment rubric in individual assignments.

• appraise data summarization methods for business decision support in the real world with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.

• design pivot table and pivot chart to support decision-making for certain business scenarios with at least 15 points out of 20 possible total points according to project rubric in unit group project.

Week 3: Data Storage and Retrieval

In this module, you are going to use databases to store and retrieve business data to automate daily operations.

Upon completion of this module, the students will be able to:

• utilize relational database to handle business data with at least 80% accuracy according to assignment rubric in individual assignments.

• appraise the use of relational database in daily business operations with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.

• design database structures to capture certain business transactions with at least 15 points out of 20 possible total points according to project rubric in unit group project.
**Week 4: Data Warehousing**

In this module, you are going to use data warehousing to capture and process business information for decision support.

Upon completion of this module, the students will be able to:

- utilize data warehousing to organize business data with at least 80% accuracy according to assignment rubric in individual assignments.
- appraise the use of data warehousing for the facilitation of business decision support with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.
- design data warehouse structures to organize business data with at least 15 points out of 20 possible total points according to project rubric in unit group project.

**Week 5: Information Organization**

In this module, you are going to develop and utilize online analytic processing (OLAP) cubes to get structured information from data warehouse/mart.

Upon completion of this module, the students will be able to:

- apply online analytic processing (OLAP) cubes to present meaningful business information with at least 80% accuracy according to assignment rubric in individual assignments.
- appraise OLAP cubism for business decision support with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.
- design OLAP cubes to present business information with at least 15 points out of 20 possible total points according to project rubric in unit group project.

**Week 6: Data Mining**

In this module, you are going to obtain value-added insights using data mining on data warehouse/mart.

Upon completion of this module, the students will be able to:

- apply data mining to extract useful business information from large amount of data with at least 80% accuracy according to assignment rubric in individual assignments.
- appraise the use of data mining for business decision support with at least 15 points out of 20 possible total points according to discussion rubric in unit forum discussion.
- design data mining methods to obtain business insights with at least 15 points out of 20 possible total points according to project rubric in unit group project.

**Week 7: Intelligence System Integration**

In this module, you are going to develop and present the conceptual design of an integrated business intelligence system in a team as well as evaluate the designs that other teams present.
Upon completion of this module, the students will be able to:

- integrate the database, data warehouse, OLAP, data mining and presentation modules into the conceptual design of business intelligence system with at least 15 points out of 20 possible total points according to project rubric in group project presentation and final project report.

- evaluate the design of the integrated business intelligence system with at least 15 points out of 20 possible total points according to discussion rubric in presentation evaluation forum discussion.

**The Online Weekly Schedule**

Electronic weeks begin on Wednesday and end on Tuesday.

Day 1 - Wednesday
Day 2 - Thursday
Day 3 - Friday
Day 4 - Saturday
Day 5 - Sunday
Day 6 – Monday
Day 7 - Tuesday

**Where to Go to Class: Your Online Course Areas**

**Main Forum:** This is the discussion forum for the whole course where we share questions, answers and feedbacks related to the course. It has read-and-write access for everyone.

**Unit Forum:** This is discussion forum for each week where we will discuss the topics assigned. It has read-and-write access for everyone.

**Chat Room:** Please use this channel to communicate with your classmates or the facilitator on a one-to-one synchronous manner. Just select the one that you want to chat with from the list showing who are currently logged in, and start the chat by typing in a message.

**Course Materials:** This is a read-only board, which means you can read messages here but cannot send any. This is where I will post the course syllabus and materials.

**Groups:** You will be assigned to one of the groups to work on the group project in each week.
TECHNICAL REQUIREMENTS

Computer Hardware

To participate in this online course, you should have easy access to a computer less than 5-years old with high-speed internet connection via cable modem, LAN or DSL. To ensure you are using a supported browser and have required plug-ins please refer to Supported Browsers, Plugins & Operating Systems for Blackboard Learn from Blackboards resource page.

Student Technical Skills

You are expected to be proficient with installing and using basic computer applications and have the ability to send and receive email attachments.

Software

- Microsoft’s Internet Explorer (latest version)
- Mozilla’s Firefox (latest version; Macintosh or Windows)
- Adobe’s Flash Player & Reader plug-in (latest version).
- Virus protection
- Microsoft Office

Technical Assistance

If you need technical assistance at any time during the course or to report a problem with Blackboard you can:

- Visit the Blackboard Student Help Site
- Center for Online Learning and Teaching Technology (COLTT)
  - Brownsville: 956-882-6792 - Rusteberg 108
  - Edinburg: 956-665-5327 - Education Complex (EDCC) 2.202
  - Toll Free: 1-866-654-4555
  - Hours: M-F 7:30 AM-6:00 PM
  - Email: colthelp@utrgv.edu
  - Submit a Helpdesk Ticket

COURSE ORGANIZATION & ONLINE TOOLS

Course Structure

This course will be delivered entirely online through the course management system Blackboard Learn. You will use your UTRGV account to login to the course from the My UTRGV site and under applications click on Blackboard Learn.
Learning Modules

The course is organized into modules of instruction by week, as outlined in the Course Schedule and Due Dates below. Each week is listed by its main topic and contains required readings, mini lectures, quizzes, discussion forum assignments, hand-on exercises, and collaborative assignments that you complete working in teams.

Note: Most materials used in conjunction with the course are subject to copyright protection.

Discussion Forums

You will find the following discussion forums in the course Blackboard site:

- General Help: Post any questions or comments you may have about course mechanics or technical issues to this forum.
- Forums related to collaborative and discussion assignments, as described in Learning Module sections

Forums versus Email

If you have a question about course content or mechanics, I encourage you to post it to the General Help discussion forums. Doing so gives students in the course an opportunity to help one another and allows everyone to benefit from answers to your questions. Of course, don’t hesitate to email me directly if your concern is of a personal nature.

My role in discussion forums is that of a facilitator. I will occasionally correct misconceptions and/or redirect conversations that need redirecting. I may also post comments following the completion of discussion indicating my general impressions of the comments and conclusions.

Assignments

Unless indicated otherwise in Weekly materials, you will submit an assignment (e.g. quiz, discussion, exercise, report etc.) to its respective assignments area. The due dates in Assignments match the due dates in the schedule below.

Collaborate

In addition to the learning activities noted above, I will also hold Live sessions using Collaborate during the semester at dates and times to be announced. For more information about Collaborate, visit Blackboards website Collaborate Handouts For Participants