

Course Syllabus (20210116)

Course Information

ITSS 4351	Foundations of Business Intelligence	Spring 2021
Section 001	Tuesday 10:00AM to 12:45PM	Hybrid (Classroom / Blackboard Collaborate) JSoM 1.212
Section 002	Thursday 1:00PM to 3:45PM	Online (Blackboard Collaborate)

Professor Contact Information

Dr Walter Johnston

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Hours by Appointment (remote)

Course Presentation

All class interactions for UTD Fall 2020 will be through a combination of classroom instruction video files uploaded to UTDbbox, and the Blackboard Collaborate video-conferencing system. We will use eLearning for assignment submission and in-class quizzes. All URLs for any non-eLearning materials will be available through a file labeled "classURLs" in the course eLearning homepage.

The Tuesday section (001) has 2 sub-section designations which separate the course enrollees for alternate-week attendance. Given the COVID protocols in place, students enrolled in section 001 are requested to ONLY attend on their designated weeks. All course sections are recorded and will be posted to UTDbbox. All students have the option to attend either section remotely. All students will have the opportunity to participate in class sessions through the Collaborate chat facility or verbally.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Pre-requisites: One of MATH 1326, MATH 2414, or MATH 2419 and one of MATH 2333, OPRE 3333, MATH 2418, MATH 2415, or CS 2305 and ITSS 3300 and ITSS 4300.

Students are expected to have writing materials and a personal laptop or tablet computer available during class. All class sessions are recorded by screen capture (with audio and video) and will be posted on UTDbox shortly after each is completed. Class videos will be named by date and start time with a very short comment. Streaming is limited to the equivalent of a classroom projector presentation with audio to keep the total bandwidth requirement moderate. All posted videos will be in MP4 format. Some presentation materials will be made available as video lectures which can be discussed through email or in class. Students are expected to locate adequate Internet access for use during class sessions.

Course Description

This course aims to introduce students to the basics of Business Intelligence with the help of some of the established tools and techniques. This course is appropriate for a variety of students seeking careers in the development, analysis and consulting aspects of Business Intelligence. With the increasing amount of focus placed on this field, the course can serve as a jumpstart for learning one of the core domains of IT.

The course emphasis is placed on the 'know-how' and 'know-why' -- knowing how and why to extract information and report it both textually and graphically so as to improve business decision-making. Students will also acquire hands-on experience with business intelligence software.

Student Learning Objectives/Outcomes

1. Be aware of the basics of Business Intelligence
 2. Understand why different BI tools are used and they help businesses
 3. Exploration of some of the tools and techniques used in BI. Students will learn about ETL Techniques, Schemas, OLAP, Cubes, Reporting, Dashboards, Analytics and Data Mining Techniques.
 4. Be able to analyze Business challenges and build solutions to those challenges using the elements of BI
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Required Textbooks and Materials

All course materials (handouts, example spreadsheets, etc.) are provided electronically (through eLearning or UTD Box). Students are required to have a laptop computer for use in class. Students encouraged to install covered software on their own computer.

Suggested Course Materials

Readings list and other materials provided through UTD Box. Links to specific folders are provided through initial email and through an eLearning document.

Primary Topics

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|---------------------|--|
| 1) BI Background | History, RDBMS, schema, joins, SQL, select, view |
| 2) Structures | star, snowflake, cube |
| 3) ETL | programming environments, programming languages |
| 4) System Utilities | AWK, SED, GREP, shell |
| 5) Data Summary | Descriptive statistics |
| 6) Reporting | Listing, plots, dashboards, reporting cycles |
| 7) Modeling | Regression, trees, neural networks, OLAP |

Assignments & Academic Calendar

(Topics, Reading Assignments, Due Dates, Exam Dates)

Homework assignments will be made available through eLearning and UTD Box. All homework assignments and and project documents will be submitted through eLearning. There will be 3 exams: 12 March 2021, 30 April 2021, and 7 May 2021. Only the highest 2 of the 3 exams will be used in calculating the course grade.

Grading Policy

Assigned homework and quizzes: 20% total, exams: 80% total. All grades and grade components will be available through eLearning. Letter grades will be posted after Exam 1 (Mid-Term Letter), Exam 2 (Pre-Final Letter) and Exam 3 (Final Letter). The best 2 out of 3 Exam scores will be used.

Grades cutoffs will be:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
95	90	87	84	80	77	73	70	67	63	60	<60

Course & Instructor Policies

Class attendance is assumed. Students are responsible for all material assigned or discussed in class. Students are expected to access and review the online materials-and to be prepared to discuss the materials in class. All class sessions are recorded and posted to the class folder in UTDbbox. (URL link available through eLearning.)

All persons in the class are expected to behave in a civil and respectful manner.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.