

The University of Texas at Dallas
Naveen Jindal School of Management
ITSS/BUAN 4351.003.25F
Foundations of Business Intelligence
Fall 2025 Syllabus

Instructor	Cuneyd Kaya, PhD (<i>first name pronounced as “June - aid”</i>)
E-mail	cckaya@utdallas.edu (The best and the only way to contact me) <i>Please do NOT send messages on E-Learning or MS Teams</i>
Class Times	4:00PM-6:45PM on Fridays
Classroom	JSOM 2.803 <i>Please use https://map.utdallas.edu to find the room.</i>
Office Hours	I arrange Teams meetings upon request and mutual availability.
Course Website	http://elearning.utdallas.edu/
Other	<i>It is your responsibility to know important Academic Dates</i> listed here: https://www.utdallas.edu/academics/calendar/ For General class policies (University Rules) please refer to http://coursebook.utdallas.edu/syllabus-policies/
TA Information	Dhwani Singh Kadian Dhwani.Kadian@UTDallas.edu <i>Office Hours: Wednesdays 11AM-12PM at JSOM 11.103</i>

Required Books

1. Shekhar, Gaurav “**Business Intelligence, Simplified: Your Beginner’s Playbook**”, 1st edition, ISBN: 9798385191369, (Kendall Hunt Publishing)

Course Outline and Learning Objectives

Students are introduced to foundational business intelligence (BI) concepts and explore the theory and practice of data warehouses for enterprises. BI concepts including data mart schemas, ETL, OLAP, cubes and reporting will be covered. The course will also examine the components of an enterprise data warehouse, extract, cleanse, consolidate, and transform heterogeneous data into a single enterprise data warehouse, and run queries using a data warehouse. Students will:

1. Be able to describe architecture and methods for storage and provision of enterprise data.
2. Be able to apply the ETL process to transform data into an enterprise data warehouse.
3. Develop a competency for building business intelligence reporting.
4. Demonstrate competency for data mining analysis.

Required Software and Tools

A significant amount of independent study will be required to succeed in this course therefore a personal laptop is required for this class. Software installation instructions will be provided separately.

Assignments

There will be **2 individual** assignments each of which will be submitted electronically via E-Learning. Hand-written submissions will not be accepted. The assignments will be due on the day of class, i.e. Tuesdays by midnight. Late assignments will have 10% penalty for each calendar day they are late, i.e. a 2-day-late assignment will incur 20% penalty. After 5 days, the submission will NOT be accepted.

Quizzes

There will be **3 in-class quizzes** to review the progress of students.

Written Exams

There will be **two closed-book in-class exams**. **However, a cheat sheet WILL BE allowed. The instructions and tips will be given in class.** The delivery format will be provided by the instructor in the coming weeks. These exams are not going to be cumulative. If you have to miss an exam due to work travel or medical conditions (for you or your immediate family members, i.e. parents, spouse, children, siblings, but not cousins) please make prior arrangements with the professor via e-mail **BY NOON ON THE DAY OF THE EXAM**. **Any other Make-up exam requests sent after this time will be rejected.**

Participation

The material in this class is best ingested at a classroom setting, rather than individual studying. Some weeks in this class will include hands-on exercises. Therefore, participation is strongly recommended and will save significant amount of time in preparing for the exams and completing assignments.

Announcements

Each student is responsible for checking the E-learning website at <http://elearning.utdallas.edu> to follow any announcements.

Tentative Schedule

The following schedule **may change due to Weather or progress in class:**

Week	Date	Topics	Reading	Notes
1	8/29	Intro to Business Intelligence & the Modern Data Stack		
2	9/5	Data Modeling and Start Schemas		
3	9/12	Intro to Data Visualization with Tableau		
4	9/19	Data Prep & ETL with Alteryx		Quiz 1
5	9/26	Cloud Data Warehousing with Snowflake		A1 Due about this time
6	10/3	Building the End-to-End Flow (Alteryx to Snowflake)		
7	10/10	Enterprise BI Tools (SSIS & SSAS)		

8	10/17	Big Data Platforms with Databricks		
9	10/24	Applying Machine Learning for BI		
10	10/31	Generative AI in BI Applications		Quiz 2
11	11/7	Operational and Paginated Reporting		
12	11/14	Advanced Visualization		
13	11/21	TBD		A2 Due
	11/28	NO CLASS - THANKSGIVING BREAK		
14	12/5	Exam 2		

Grade Components

Assignments	30%
Assignment 1	15%
Assignment 2	10%
3 Quizzes (5%, 10%, 5%)	25%
Exam #1	25%
Exam #2	25%
TOTAL	100%

Your letter grade will be calculated based on the following calculation.

<u>Rounded Total Score</u>	<u>Letter Grade</u>
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
<=59	F

Laptop Use in Class

You can bring your portable computer in the class **only if** the device is used in conjunction with the material discussed during the class. You will use your laptop to try the SQL Code, or to follow slides.

Please keep in mind that by taking this course, you relinquish the right to be warned publicly in class in case you use your laptop in the class improperly. Improper use of laptop in class includes but is not limited to socializing on the web (Twitter, Instagram or any other social media site), chatting with friends (such as

iMessage, WhatsApp, GroupMe, etc.), checking latest sports games scores, watching videos, listening to music (with or without the headphones). If you are in doubt whether you are using your laptop in class properly or not, do not use it.

Classroom Rules and Etiquette

If you come in late, please enter quietly. If you must leave early, please leave quietly. Mobile communication devices should either be turned off or placed in a quiet state (vibrate) during class. If your mobile phone cannot be placed into a quiet state, please turn it off. Students will not be excused during an exam to answer mobile phone calls.

Teaching Philosophy

My teaching philosophy is to provide education in a friendly and collaborative environment. My sessions aim to provide academic growth and personal development at the same time. I push students to help them reach their potential while maintaining an atmosphere of joy and discovery. Therefore, I expect everyone to show mutual respect to each other in the classroom.