# ITSS 4351 Foundations of Business Intelligence

## Class Information

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| **Course Name** | Foundations of Business Intelligence |
| **Term** | Fall 2022 |
| **Course Number** | ITSS 4351 |
| **Class Meetings** | Tuesday 4.00 – 6.45 PM |
| **Classroom** | JSOM 11.206 |

## Instructor Information

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| **Instructor** | **Thiru Pandian** |
| **Phone** | 972.883.4399 |
| **Email** | thiru.pandian@utdallas.edu |
| **Office Hour** | By Appointment using Teams |
| **TA** | **Amish Vyas, amish.vyas@utdallas.edu** |

## Course Modality and Expectations

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| **Instructional Mode** | **Face-to-face** |
| **Course Platform** | The course will be delivered using a combination of Face-to-Face, MS Teams, Blackboard Collaborate, and eLearning. |
| **COVID-19 Guidelines and Resources** | The information contained in the link lists the University's COVID-19 resources for students and instructors of record. Please see http://go.utdallas.edu/syllabus-policies |

## Course Information

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| **Prerequisites** | ITSS 3300 and ITSS 4300 and (MATH 1326 or MATH 2414 or MATH 2419 or OPRE 3340) |
| **Course Description** | 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. |
| **Learning Outcomes** | **1: Students will be able to describe architecture and methods for storage and provision of enterprise data.**<br><br>**2: Students will be able to apply the ETL process to transform data into an enterprise data warehouse.**<br><br>**3: Students will develop a competency for building business intelligence reporting.**<br><br>**4: Students will demonstrate competency in data mining analysis.** |
| **Recommended Book** | Foundations of Business Intelligence – Grossmann, Wilfried, Rinderle-Ma, Stefanie |
| **Required Materials** | *A laptop/computer access to eLearning* |
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**Course Calendar ***

| Weeks | Topic | Activity Due |
|---|---|---|
| **WK1- Aug 23** | Course Introduction<br>Introduction to Business Intelligence | |
| Aug 30 | Data Visualization, Introduction to Tableau, SSIS | |
| Sep 6 | Data warehouse, ETL/Data Cleansing | |
| Sep 13 | OLAP/OLTP Cubes, SSIS Reporting | Assignment 1 |
| Sep 20 | ETL to Tableau – End-to-End Data Flow | |
| Sep 27 | SAP Crystal reports, Advanced Tableau | Assignment 2 |
| Oct 4 | Advanced BI Cases, Introduction to Alteryx | |
| **WK 8- Oct 3-5** | **EXAM 1- Testing Center** | |
| Oct 18 | Machine Learning | Case study Selection |
| Oct 25 | Clustering/Neural Networks | |
| Nov 1 | Introduction R, Sentiment/ Time Series | Assignment 3 |
| Nov 8 | Big data and NoSQL | |
| Nov 15 | Cloud Business Analytics | Assignment 4 |
| **Nov 22** | **Thanksgiving Holiday** | |
| Nov 29 | Individual Case Study Presentation | Case Study Report |
| **Dec 6** | **EXAM 2** | |

***Lessons and timelines are subject to change at the discretion of the professor**

## Grading Policy

This course will feature a mix of activities and writing exercises that may be in class or on campus. Homework will include readings from the text, assignments, and activities that usually require the student to complete a task in class. The instructor will provide detailed instructions and the grading criteria for each assignment and Lab exercise. All activities carry the same weight.
The final grade will be based on the total score of the following:

| Activity | Available Points |
|---|---|
| Homework, Labs | **30 %** |
| In-Class Exercise/Quiz/Attendance | **10 %** |
| Exam 1 | **25 %** |
| Exam 2 | **25 %** |
| Case study | **10 %** |

## Final Grading Scale

| Final Points Total | Letter Grade |
|---|---|
| 94-above | A |
| 90-93 | A- |
| 87-89 | B+ |
| 83-86 | B |
| 80-82 | B- |
| 77-79 | C+ |
| 73-76 | C |
| 70-72 | C- |
| 59 or Below | F |

## Course Policies *

| Course Policies | |
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| **Attendance & Class participation** | Attendance is very important. Students are expected to attend all classes to achieve maximum success. Attendance will be taken at the beginning of each class and may be used for class participation grading. There is no makeup for missed in-class assignments. |
| **Make-up Exams** | Restricted to documented emergencies with sufficient written proof provided. Make-up exams will be in essay format and the content will differ from the regular exams. Since make-up exams will differ in content, no curve fitting may be applied at either the exam level or the semester level. |
| **Instructor Response** | The instructor will respond to all student inquiries (emails and voice mails) within 48 business hours (excluding holidays and weekends). |
| **Late Work** | 24-hour grace period to allow for technical problems with assignment submission. After the grace period, reduced by 25 % per 24-hour period. Please do not ask for any extensions or lifting of late penalties, unless it is a documented emergency with sufficient written proof provided. |
| **Classroom Citizenship** | Professional Conduct: expected at all times from all students. Examples of unprofessional conduct include, but are not limited to: • Trying the "game the system" • Coming late to class (without good reason) • Leaving early from class (without good reason) • Talking in class • Working on other subjects while in class Using electronic devices for other than the course materials |
| **Comet Creed** | ***"As a Comet, I pledge honesty, integrity, and service in all that I do."*** |
| **Academic Support Resources** | 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 |

*Course Timelines and policies are subject to change at the discretion of the professor or university policy update