



# ERP and Business Intelligence Systems

OSCM 3332 Fall 2022

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**Class Hours:** TR 1:30-2:50 p.m. BUSN 310

**Face-to-Face Office Hours:** T 10:30 am – 1:30 pm

**Online Office Hours:** T 6:00 – 7:30 pm (Link posted on Blackboard)

## Reference Materials

*Business Intelligence and Analytics*, by Ramesh Sharda, Dursun Delen, Efraim Turban, Pearson, Tenth Edition, (ISBN-13: 978-0-13-305090-5).

*Business Analytics with Management Science Models and Methods*, by Arben Asllan, Pearson, (ISBN-13: 978-0-13-376035-4).

Welcome to ERP and Business Intelligence Systems, the official information for this course, including grades, will be posted on Blackboard. You are responsible for reading the “Announcements”, “Assignments”, and any other information concerning this course; check your Blackboard account daily.

## Course description (*From Goldmine*)

This course expands the knowledge of ERP systems and explores their advanced features. Comprehensive ERP applications are studied and advanced business intelligence tools are utilized to understand how they enhance the decision making process. ERP integrated and external business intelligence tools are considered.

## Objectives:

At the completion of this course students will be able to:

1. Compare different data sets based on descriptive analytics

2. Apply predictive analytics tools
3. Analyze decision making environments based on prescriptive analytics
4. Integrate business analytics methods in an ERP environment
5. Identify and apply tools for big data analysis
6. Formulate AI and machine learning strategies to draw information from ERP systems and enhance the decision-making process.

## **Prerequisite**

ACCT 2301 and ACCT 2302 and ECON 2303 and ECON 2304 and QMB 2301 with a minimum grade of C.

## **Lectures**

This is an in person course. It is expected that you attend the sessions and complete the course activities as indicated in the course calendar. You should be available to complete them on time. Many cases will be analyzed using different types of software. You should be able to reply them and analyze similar cases.

## **Cases**

The cases cover the methods discussed in class. You should be able to apply the methods in a similar cases and report your major findings. There is not make-up of any assigned case.

## **Final Project**

The final project is comprehensive. It encompasses at least two of the methods covered during the semester.

## **Grading Policy:**

30 % Labs completion  
15 % Case # 1  
15 % Case # 2  
20 % Case # 3  
20 % Final Project

## **Course Assignments and Grading Distribution:**

100-90 = A    89-80 = B    79-70 = C    69-60 = D    59 and below = F

## **Technology Requirements**

This course uses Blackboard as learning management system (LMS). Ensure your UTEP e-mail account is working and that you have access to the Web. You may use any of the primary Web browsers. When having technical difficulties, try switching to another browser.

You will need to have access to a computer/laptop and the UTEP virtual private network. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

**If you encounter technical difficulties of any kind, contact the [Help Desk \(UTEP Library Room 300, TS.UTEP.EDU, 915-747-4357\)](#).** Please contact the UTEP Help Desk as they are trained specifically in assisting with technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

## **Late Work Policy**

Case assignments will be due on Thursdays at midnight (11:59 PM). No late work will be accepted.

## **Drop Policy**

To drop this class, please contact the [Registrar's Office](#) to initiate the drop process. If you cannot complete this course for whatever reason, please contact me. If you do not, you are at risk of receiving an "F" for the course.

## **Accommodations Policy**

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at [cass@utep.edu](mailto:cass@utep.edu), or apply for accommodations online via the CASS portal.

## Scholastic Integrity

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more [HOOP: Student Conduct and Discipline](#).

## Student Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.
- [Military Student Success Center](#): UTEP welcomes military-affiliated students to its degree programs, and the Military Student Success Center and its dedicated staff (many of whom are veterans and students themselves) are here to help personnel in any branch of service to reach their educational goals.

## COVID-19 Precautions

If you have tested positive for COVID-19, you are encouraged to report your results to [covidaction@utep.edu](mailto:covidaction@utep.edu) , so that the Dean of Students Office can provide you with support and help with communication with your professors. It is important to follow all instructions that you receive as part of the diagnosis, including isolation and staying at home until a negative test is produced.

If you experience COVID-19 symptoms, please follow the isolation protocol by staying at home and getting tested as soon as possible. If the test is negative but you are still seeking accommodations, please contact the Dean of Students Office for guidance in a timely manner. Your instructor will work with the Dean of Students Office to determine the extent of any such accommodations.

We strongly encourage you to think and act proactively in all matters related to COVID-19 and your academic endeavors. The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](http://epstrong.org).

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## Course Outline:

Lecture	Class Discussion	Case/Project
1 (Jan 17)	Lab # 1 Text mining: Web of Science & Biblioshiny	
2 (Jan 19)	Lab # 2 Text mining: Web of Science & Biblioshiny	
3 (Jan 24)	Lab # 3 Text mining of Twitter comments using R	
4 (Jan 26)	Lab # 4 Text mining and Sentiment Analysis using R: Amazon reviews	
5 (Jan 31)	Lab # 5 Cluster Analysis, k means using R. Container ports	
6 (Feb 2)	Lab # 6 Cluster Analysis, k means using R. Medical schools	
7 (Feb 7)	Lab # 7 Hierarchical clustering analysis. Container ports	
8 (Feb 9)	Lab # 8 Hierarchical clustering analysis. Medical schools	Case # 1 is due
9 (Feb 14)	Lab # 9 Machine learning: Decision Trees. Nursing homes.	
10 (Feb 16)	Lab # 10 Machine Learning: Decision Tree with multiple levels. Nursing homes.	
11 (Feb 21)	Lab # 11 Machine Learning: Random Forest. Nursing homes.	
12 (Feb 23)	Lab # 12 Machine Learning: Improving Random Forest. Nursing homes.	
13 (Feb 28)	Lab # 13 Neural networks. The case of the nursing homes.	
14 (Mar 2)	Lab # 14 Deep neural networks. Nursing homes.	
15 (Mar 7)	Lab # 15 Deep neural networks.	Case # 2 is due
16 (Mar 9)	Lab # 16 Power BI and Machine Learning	
17 (Mar 21)	Lab # 17 Power BI and Machine Learning	
18 (Mar 23)	Lab # 18 Power BI and Sentiment Analysis	
19 (Mar 28)	Lab # 19 Power BI and Sentiment Analysis	
20 (Mar 30)	Lab # 20 Power BI: SAP OData & Retail Int Game	
21 (Apr 4)	Lab # 21 Power BI: SAP OData & Retail Int Game	
22 (Apr 6)	Lab # 22 Power BI: SAP OData & Retail Extended Game	
23 (Apr 11)	Lab # 23 Power BI: SAP OData & Retail Extended Game	Case # 3 is due
24 (Apr 13)	Lab # 24 Machine learning: Power BI, SAP & R	
25 (Apr 18)	Lab # 25 Machine learning: Power BI, SAP & R	
26 (Apr 20)	Lab # 26 Machine learning: Power BI, SAP & R	
27 (Apr 25)	Lab # 27 Machine learning: Power BI, SAP & R	
28 (Apr 27)	Lab # 28 Advanced machine learning & ERP	
29 (May 2)	Lab # 29 Advanced machine learning & ERP	
30 (May 4)	Lab # 30 Advanced machine learning & ERP	Final Project is due