

Missouri University of Science & Technology
Department of Business and Information Technology
Fall 2024

DEPARTMENT MISSION

To serve the economic interests of industry and the evolving needs of society in a challenging, rapidly-changing, global environment, the Department of Business & Information Technology capitalizes on the strong technological emphasis of Missouri S&T to enable individuals to excel in a technology-centric business world. Recognizing this rapid evolution of the marketplace, we create and disseminate knowledge impacting the theory and practice of business.

COURSE INFORMATION

Course: ERP 5410 Use of Business Intelligence

Days and Times: 11 am 12:15 pm, Tu Th

Room: 107A Fulton Hall

Instructor’s Name: Dr. Wen-Bin “Vincent” Yu

Office Location: 106C Fulton Hall

Office Phone: (573) 341-7502

Email: yuwen@mst.edu

Web Locations: canvas.mst.edu

Office Hours: 9:30-10:30 am & 1- 2 pm, Tu, Th ; or by appointment

Catalog Description: This course introduces data-oriented techniques for business intelligence. Topics include Business Intelligence architecture, Big Data, Business Analytics, and Enterprise Reporting. SAP Business Information Warehouse, Business Objects, or similar tools will be used to access and present data, generate reports, and perform analysis.

Prerequisites: Relational Database Experience (such as IST 1750)

Required Materials: Sharda et al, “Business Intelligence, Analytics and Data Science” 4th ed., Pearson 2018

Instructional Methods: A mix of lectures, Excel, SAP labs, discussions and projects.

Course Learning Objectives:

Understand fundamental terminologies in Business Intelligence, Analytics and Data Science.

Understand Descriptive Analytics: Data, Business Intelligence and Data Warehousing; Predictive Analytics: Data Mining; and Prescriptive Analytics: Optimization and Simulation

Understand fundamental terminologies of Big Data and Data Science technologies

Planned Learning Outcomes:

	Program Learning Objectives					
	Oral Communication	Written Communication	Critical thinking	IT Impact Knowledge	Teamwork	Leadership
Course Objectives						
Be able to understand terminologies related to Business Intelligence (BI) and Data Analytics.			X	X		
Be able to perform business analysis using data mining tools.		X	X	X		
Be able to create multi-dimensional data analysis using data warehousing and reporting modules in an ERP system.		X	X	X		
Be able to work as a team and conduct a research on current development of advanced BI and Data Science.	X	X	X	X	X	X

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COURSE ASSIGNMENTS

Lab Assignments/Class exercises

The assignments are expected to be completed with **individual efforts**. You may only discuss the procedures of any SAP lab assignment with others. You need to write up the reports all by yourself with your own screenshots and results. You will be required to turn in digital copy of your assignments to Canvas.

Follow the due dates specified on Canvas to submit the assignments. Grades on late homework assignment will be reduced by 20%, if turned in late at the same week. No grade will be assigned for late homework past the weekend following the due date. Distance students may receive some flexibility on the due date.

Quizzes/Exams

All the quizzes/exams will be Canvas on-line tests. However, students in the on-campus (101) section will take the quizzes/exam in class, unless otherwise specified. There may be announced or pop quizzes. There will be three midterm exams but NO official final exam. The second and third midterm exams will emphasize the material covered after the previous exam. Make-up exam, should you need one, may be provided during the final exam week. The make-up (final) exam is comprehensive.

Class Project: Only required for students taking this class as graduate credits

Class projects will be assigned at around the 6th week of the semester. The purpose of the projects is to let the students explore additional knowledge and/or gaining experiences in the fast-paced field of Business Intelligence. Students will work in teams to either implement a real world project or conduct a research on the latest development on the topics related to the class. Requirements of the project will be announced when the project is given.

COURSE POLICIES AND GRADING

Attendance:

For on-campus students, you are expected to attend all classes, be on time, and participate in classroom discussions and exercises. If you are absent, it is your responsibility to obtain any class material and announcement. You should attend the class by following the guidelines specified in the University Coronavirus Information website at <https://coronavirus.mst.edu/>

For distance students, live on-line participation is not mandatory. However, you need to watch class archives when live participation does not fit into your work schedule.

Evaluation Methods:

Discussions and Participations 100 points Assignments and Labs 500 points

Quizzes 100 points Midterm Exams 300 points Project 100 points (graduate students only)

Grading Scale:

Final grades will be assigned according to the following criteria:

For graduate students or undergrad taking this course as graduate credits --

A = 990 - 1100 points; **B** = 880 - 989 points; **C** = 770 - 879 points; **F** = below 770 points.

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For undergraduate students –

A = 900 - 1000 points;

B = 800 -899 points;

C = 700 - 799 points;

D = 600 -699 points

F = below 600 points

IMPORTANT INFORMATION

Statement about Copyright, FERPA, and Use of Video

It is vitally important that our classroom environment promote the respectful exchange of ideas. This entails being sensitive to the views and beliefs expressed during discussions, whether in class or online. Please obtain instructor permission before recording any class activity. It is a violation of University of Missouri policy to distribute such recordings without authorization and the permission of all who are recorded. More information is provided [online](#).

Accessibility and Accommodations

It is the university's goal that learning experiences be as accessible as possible. Student Accessibility and Testing provides services and accommodations that facilitate full participation in Missouri S&T's learning experience for students with disabilities. If you anticipate or experience physical, academic, and/or digital barriers due to a disability, please contact Student Accessibility and Testing at (573) 341-6655, email dss@mst.edu, or visit <https://saat.mst.edu/> for information.

Student Honor Code and Academic Integrity

- All students are expected to follow the [Honor Code](#).
- [Student Academic Regulations](#) describes the student standard of conduct relative to the University of Missouri System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism, sabotage, and **unauthorized use of artificially generated content**, any of which will be reported to the Dean of Students.
- Other resources for students regarding academic integrity can be found [online](#).

Student Mental Health and Well-Being

Your well-being is important, and it contributes to your success in this course. At S&T, we provide resources to support your mental, physical, and social well-being. Any of us can experience challenges that make learning difficult. If you are struggling, take advantage of the following resources offered by the university:

[Student Well-Being](https://wellbeing.mst.edu/) (<https://wellbeing.mst.edu/>)

Student Well-Being provides counseling services, health promotion initiatives, and prevention programs to empower the S&T community to thrive and enhance personal, academic, and professional success. Department office hours are Monday-Friday, 8 a.m. – 5:00 p.m. On the website, you can find information related to confidential individual and group counseling, wellness consultations and

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trainings, case management services, resources for many health and wellness topics, and help for mental health crisis situations. For the 988 Suicide and Crisis Lifeline, call or text 988, or visit missouri988.org For the National Suicide Prevention Lifeline, call or text 988, or visit missouri988.org.

Health and Well-Being Canvas

Course (<https://umsystem.instructure.com/enroll/G3LY3G>)

The Health and Well-Being Canvas Course features trainings, presentations, and other health and well-being resources for students. The course is free for all students, is non-credit, and students can enroll at any point in the semester.

Student Emergency Fund (SEF)

The SEF is administered by the Division of Student Success to help ensure Missouri S&T students have access to the support and resources they need to successfully recover from an unforeseeable financial emergency. The goal of this fund is to prevent one small emergency or unexpected expense from derailing a student's progress toward degree completion.

Nondiscrimination, Equity, and Title IX

Missouri S&T is committed to the safety and well-being of our campus community, and to creating an environment free from discrimination and harassment.

The University prohibits discrimination and harassment on the basis of race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, and any other status protected by applicable state or federal law. As used in this policy, the word "sex" is also inclusive of the term "gender."

Additionally, US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Sexual harassment violations of this law include quid pro quo, hostile environment, sexual assault, dating/domestic violence, and stalking. The U.S. Department of Education has stated the prohibition on discrimination on the basis of sex includes sexual orientation and gender identity.

Students who are experiencing pregnancy or pregnancy-related conditions, including the birthing parent and non-birthing parent, have rights protected under Title IX. Students should contact Student Accessibility and Testing or the Office of Equity and Title IX to learn more about their rights and pregnancy-related assistance/accommodations provided by the University to ensure equitable access to University educational programs and activities.

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In accordance with the University of Missouri's Collected Rules and Regulations, all faculty and staff are required to report any information concerning discrimination disclosed through communication including, but not limited to, direct conversation, email, social media, classroom papers and homework exercises to the Equity Officer/Title IX Coordinator.

For more information regarding support for those that have been impacted or to report an incident of discrimination or harassment as defined by [Chapter 600](#) of the University's Collected Rules and Regulations, visit the Office of Equity and Title IX or visit their website at equity.mst.edu.

Office of Equity and Title IX

Equity Officer and Title IX Coordinator: Dr. Paul Hirtz

Phone: (573) 341-7734

Location: 900 Innovation Drive, Suite 500

E-mail: equity@mst.edu

Classroom Egress Maps

For all in-person instruction, faculty should explain where the classroom emergency exits are located. Classroom egress maps are posted at <http://designconstruction.mst.edu/floorplan/>.

University Libraries

The Curtis Laws Wilson Library is the place to gather on campus, offering group meeting spaces, quiet study carrels and reservable conference rooms. The library provides students and faculty with physical and electronic books, journals, articles and databases as well as recreational reading, games and DVDs. We also have technology to check out, from laptops to chargers to calculators and everything in-between. Librarians create library and course guides to help navigate searching for resources. Talk to us one-on-one via chat, email, phone or in person for any assistance regarding library services or finding peer-reviewed, credible research materials for study and research needs. Find out more information and connect with the library here: library.mst.edu.

Writing and Communication Center

The Writing and Communication Center's mission is to assist all students in their efforts to become better writers, communicators, and critical thinkers. The Center's peer consultants and coaches provide free individualized one-on-one and small-group conversations to offer meaningful feedback and guidance to students across all disciplines. More information can be found on our website, through email: writing@mst.edu or stop by Curtis Laws Wilson Library 314-315.

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Student Success Center

The Student Success Center (SSC) offers peer tutoring and success coaching to help students succeed in their academic goals. Additionally, we work as a resource hub and can connect you to the campus resources necessary to help you dig deeper and finish the semester strong. Visit the SSC in Room 117 Innovation Lab and contact us at ssc@mst.edu or 573-341-7590. To learn more about the SSC, visit <https://ssc.mst.edu/>

S&T Tutoring Opportunities

The Student Success Center (SSC) helps you with your studies in three ways:

- **LEAD Drop-in:** Our LEAD Drop-in service provides convenient access to experienced peer learning assistants for a multitude of courses across campus. No appointments necessary. Simply check our tutoring schedule to discover when support for your specific course is available: <https://ssc.mst.edu/leaddrop-in/>
- **LEAD Group Sessions:** Our LEAD Group sessions offer after-hours group tutoring, facilitated by our dedicated peer learning assistants in partnership with faculty members. Explore the LEAD Group schedule to see if your course is featured and join us at the next session: <https://ssc.mst.edu/leadgroup/>
- **Knack Tutoring:** If your schedule clashes with our LEAD offerings, or if your course isn't covered, Knack is your solution. Request a tutor for either a virtual meeting or an in-person session on campus, ensuring you get the help you need, when you need it. To sign up for your FREE Knack account, visit: <https://ssc.mst.edu/knacktutoring/>

Student Veterans Resource Center

The Student Veterans Resource Center (SVRC) is the nexus of resources and support for student veterans at S&T. The SVRC provides student veterans with a "safe space" and a familiar atmosphere. The center's Veteran Consuls provide one-on-one consultations to guide students to various resources on campus, while its advisor provides students with VA health and benefits resources. Visit the SVRC at Harris Hall, Suite G10, and contact us at svrc@mst.edu.

Artificial Intelligence

Unauthorized use of artificially generated content violates University Student Academic Standards. You may not use ChatGPT and other AI systems to answer your homework assignments without consent of the instructor.

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COURSE OUTLINE

(Updated:8/14/2024)

Week	Month	T R	Topic	Reading Assignment
1	Aug.	20, 22	Review of Syllabus. Information System Fundamentals, Decision support systems (A brief review)	
2	Aug.	27, 29	An Overview of Business Intelligence, Analytics and Data Science.	Ch 1
3	Sept	3, 5	Descriptive Analytics I;	Ch 2
4		10, 12	Descriptive Analytics II BI and Data warehousing	Ch 3
5		17, 19	Review Exam 1	
6	Sept	24, 26	(<i>Fall Career Fair, Sept 24, 25</i>) Data warehousing (Continued)	
7	Oct	1, 3	Predictive Analytics Data Mining Process. Method and Algorithm	Ch 4
8		8, 10	Association <i>Fall break (no class on Oct 10th)</i>	
9		15, 17	Review Exam 2	
10		22, 24	Data Mining Method and Algorithm Continued Clustering	
11	Oct.	29, 31	Data Mining Method and Algorithm Continued Decision Tree	
12	Nov.	5, 7	Prescriptive Analytics Simulation	Ch 6
13		12, 14	Review Exam 3	
14		19, 21	Big Data and Analytics BI Emerging Trend and Future Impacts	Ch 7 Ch 8
15	Nov.	25-29	<i>Thanksgiving Holidays -- No Class</i>	
16	Dec	3, 5	Graduate Students Project Presentation	
17		9-13	Final Exam Week Final exam: <i>Wednesday, Dec 11th, 3pm</i>	

Notes:

*The syllabus is **tentative and subject to change**. Any change will be announced in class and/or on the Canvas class website.*

Students need to bring to my attention conflicts of scheduled exams and any religious and other holidays they wish to observe prior to the 3rd week of the class.