Missouri University of Science & Technology
Department of Business and Information Technology
Fall 2023

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					
Course Objectives	Oral Communication	Written Communication	Critical thinking	IT Impact Knowledge	Teamwork	Leadership
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

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. 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-pacing 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.
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 promotes 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. If you anticipate or experience physical or academic barriers based on 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 and sabotage, any of which will be reported to the Vice Provost for Undergraduate Education.
- Other resources for students regarding academic integrity can be found online.

Student Well-Being
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. - 4:30 p.m. On the website, you can find information related to individual and group counseling, wellness consultations and trainings, resources for many health and wellness topics, and help for mental health crisis situations.

Health and Well-Being Canvas Course
The Health and Well-Being Canvas Course features trainings, presentations, and other health and well-being resources for students. One feature of the course is the Miner Well-Being Certification Program, a semester-long certification where participants can engage with campus-wide services and initiatives and develop skills that contribute to personal well-being and student success. Students can enroll in the free, non-credit course at any time.

Student Support and Community Standards knows student life can be difficult. During your time at Missouri S&T, you may have a friend or peer who needs help navigating their student experience, facing a challenge, or experiencing distress and could benefit from support and connection to resources. You are not alone. We have a dedicated team of Care Managers, numerous resources and services to support you or your student, friend, or peer. This includes emergency funding

support for unexpected emergency expenses. To learn more visit or apply online.

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 does not discriminate 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 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.

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.

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 on-campus section 101)
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/.

Writing Center

The Writing Center's mission is to assist **all students** in their efforts to become better writers, communicators, and critical thinkers. The Writing Center's peer consultants 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 their website and through email: writing@mst.edu.

Student Success Center

The Student Success Center (SSC) provides additional assistance for students academically and helps bolster non-academic life skills. The SCC offers individualized tutoring, peer-to-peer life skill coaching, and campus programming while providing free coffee and hot beverages! All student Miners are encouraged to utilize the SSC's free services to get timely support and to enhance their S&T Miner Experience. Visit the SSC at 198 Toomey Hall, contact us at success@mst.edu, or join us on social media @sandtssc. To see the course offerings and times for SSC Tutoring, visit studentsuccess.mst.edu/tutoring/.

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's veteran resource consuls provide one-on-one consultations to guide students to various resources on campus. Visit the SVRC at Harris Hall Room G10, 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.

COURSE OUTLINE

(Updated:8/21/2023)

Week	Month	T R	Topic	Reading Assignment
1	Aug.	22, 24	Review of Syllabus. Information System Fundamentals, Decision support systems (A brief review)	
2	Aug.	29, 31	An Overview of Business Intelligence, Analytics and Data Science.	Ch 1
3	Sept	5, 7	Descriptive Analytics I;	Ch 2
4		12, 14	Descriptive Analytics II BI and Data warehousing	Ch 3
5		19, 21	Review **Exam 1**	
6	Sept	26, 28	(*Fall Career Fair, Sept 26*) Data warehousing (Continued)	
7	Oct	3, 5	Predictive Analytics *Fall break (no class on Oct 5th)*	Ch 4
8		10, 12	Data Mining Process. Method and Algorithm Association	
9		17, 19	Review **Exam 2**	
10		24, 26	Data Mining Method and Algorithm Continued Clustering	
11	Oct./Nov.	31, 2	Data Mining Method and Algorithm Continued Decision Tree	
12		7, 9	Prescriptive Analytics Simulation	Ch 6
13		14, 16	Review **Exam 3**	
14		20-24	*Thanksgiving Holidays -- No Class*	
15	Nov.	28, 30	Big Data and Analytics	Ch 7
16	Dec	5, 7	BI Emerging Trend and Future Impacts -- Graduate Students Project Presentation	Ch 8
17		11-15	Final Exam Week Final exam: *Tuesday, Dec 12nd 12:30 pm*	

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.