

**Missouri University of Science & Technology**  
**Department of Business and Information Technology**  
**Fall 2020**

**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](mailto:yuwen@mst.edu)

**Web Locations:** canvas.mst.edu

**Office Hours:** 9:30-10:30 am & 1- 2 pm, Tu, Th ; or by appointment (zoom meeting preferred)

**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" 4<sup>th</sup> 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
<b>Course Objectives</b>						
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. 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 6<sup>th</sup> 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. However, due to the coronavirus (COVID-19) situation, Access to Zoom meetings and the recordings will be available to all students. 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 participation is not required. 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:

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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

Note: for IST majors, the passing grade for this class is C and above.

## **IMPORTANT INFORMATION**

### **Student Honor Code and Academic Integrity:**

The Honor Code developed and endorsed by the Missouri S&T Student Council can be found at this link: <http://stuco.mst.edu/about/honor.shtml>. Please read and reflect upon the Honor code and its emphasis on HONESTY and RESPECT.

Violations of the University's academic code include, but are not limited to, possession of or use of unauthorized materials during quizzes or tests; providing unauthorized information to another student; or copying the work of another person. Violations may result in academic penalties in addition to receiving an "F" on the assignment in question.

Page 30 of the Student Academic Regulations handbook 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 or sabotage (<http://registrar.mst.edu/academicregs/index.html> ). Other informational resources for students regarding ethics and integrity can be found online at <http://ugs.mst.edu/academicintegrity/studentresources-ai> .

### **Classroom Egress Maps:**

Students are expected to familiarize themselves with the classroom egress maps posted on-line at: <http://designconstruction.mst.edu/floorplan/>.

### **Disability Support Services: <http://dss.mst.edu>**

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation. If you have a disability that might require academic accommodations, please visit Disability Support Services in 204 Norwood Hall (341-4211; [dss@mst.edu](mailto:dss@mst.edu)).

### **S&Tconnect:**

S&Tconnect provides an enhanced system that allows students to request appointments with their instructors and advisors via the S&Tconnect calendar, which syncs with the faculty or staff member's Outlook Exchange calendar. S&Tconnect will also facilitate better communication overall to help build student academic success and increase student retention. S&Tconnect Early Alert has replaced the Academic Alert system used by Missouri S&T.

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**The Burns & McDonnell Student Success Center**

The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center was developed as a campus wide initiative to foster a sense of responsibility and self-directedness to all S&T students by providing peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the B&MSSC at 198 Toomey Hall; 573-341-7596; [success@mst.edu](mailto:success@mst.edu); facebook: [www.facebook.com/SandTssc](http://www.facebook.com/SandTssc) ; web: <http://studentsuccess.mst.edu/>

**Title IX**

Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. 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. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises. Missouri S&T's Title IX Coordinator is Vice Chancellor Shenethia Manuel. Contact her directly ([manuel@mst.edu](mailto:manuel@mst.edu); (573) 341-4920; 113 Centennial Hall) to report Title IX violations. To learn more about Title IX resources and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit <http://titleix.mst.edu>.

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**COURSE OUTLINE**

(Updated: 8/24/2020)

Week	Month	T R	Topic	Reading Assignment
1	Aug.	25, 27	Review of Syllabus. Information System Fundamentals, Decision support systems (A brief review)	
2	Sept.	1, 3	An Overview of Business Intelligence, Analytics and Data Science.	Ch 1
3		8, 10	Descriptive Analytics I;	Ch 2,
4		15, 17	Descriptive Analytics II BI and Data warehousing	Ch 3
5		22, 24	(Virtual?? <i>Fall Career Fair, Sept 22</i> ) Review	
6	Sept/Oct	29, 1	<b>Exam 1</b> Data warehousing (Continued)	
7	Oct	6, 8	Predictive Analytics	Ch 4
8		13, 15	Data Mining Process. Method and Algorithm	
9		20, 22	Review <b>Exam 2</b>	
10		27, 29	Data Mining Process, Method and Algorithm Continued	
11	Nov.	3, 5	Prescriptive Analytics	Ch 6
12		10, 12	Simulation	
13		17, 19	Review <b>Exam 3</b>	
14		22-27	Thanksgiving Holidays -- No Class	
15	Dec	1, 3	Big Data and Analytics	Ch 7
16		8, 10	BI Emerging Trend and Future Impacts -- Graduate Students Project Presentation	Ch 8
17		14-18	Final Exam Week Optional Final exam: <i>Friday, Dec 18<sup>th</sup> 12:30 pm</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 3<sup>rd</sup> week of the class.*