

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

Department Mission Statement:

“Capitalizing on the strong technological emphasis of Missouri S&T, the Department of Business and Information Technology prepares individuals for careers in modern business organizations. The Department emphasizes management through technology, with particular focus on information systems and their application in a fast-changing, global, and competitive environment, to serve the economic interests of industry and the evolving needs of society.”

Course Title: ERP/IST 6444/4444 Essentials of Data Warehouses, Intro to Data Warehouses
Days and Times: 9:30 am – 10:45 am, 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: <http://canvas.mst.edu/>

Office Hours: 8:30-9:30 am and 2 - 3 pm, Tu Th, or by appointment

COURSE INFORMATION

Catalog Description: This course presents the topic of data warehouses and the values to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community's needs.

Prerequisites: IST 3423 or CS 2300 or equivalent relational database experiences. (Or ERP 5410 Business Intelligence).

Instructional Methods: Lectures, discussions, labs, and projects.

Planned Learning Outcomes:

	Learning Goal				
	Oral Communication	Written Communication	IT Impact Knowledge	Teamwork	Leadership
Course Objectives					
Be able to understand the evolution of Decision Support Systems.			X		
Be able to understand current development on Data Warehouses, and their values to the organization.			X		
Be able to design a basic data warehouse using BI tool such as SAP BI.			X		
Be able to initiate a project that addresses current and future development of data warehouses.	X	X	X	X	X

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COURSE ASSIGNMENTS

Reading Assignments/Class Discussion/Exercises

Reading assignments will be assigned throughout the semester. Students should utilize various sources (library, Internet etc) to search relevant information for the topics from the reading assignments. You are expected to present what you have found during class discussion. Participation grade will be assigned accordingly.

Lab Assignments

Several SAP BI labs will be given. The labs are expected to be completed with **individual efforts**. You may discuss the procedures of any lab assignment with others. However, you need to write up the reports all by yourself with your own analysis, answers and results.

Each assignment is due at the BEGINNING of the class on its due date. Late homework will be reduced by 20%, if turned in late at the same due date. No grade would be assigned for late homework past due date. Distance students will have certain flexibility on the due dates. Please check the announcement at the distance section on Canvas.

Submit the digital copy of your lab assignments to Canvas. Your soft copy of each lab assignment will be treated as a regular paper report. All pages should be arranged in proper order and formatted as you were turning in a paper report. Include your name, assignment number, and date submitted.

If you must be absent on a day that an assignment is due, you may only turn in your homework BEFORE the class.

Exams

There will be two midterm exams and a final exam. The final exam will be comprehensive. Make-up exams will only be provided for a student who has legitimate/official excuses. For distance students, exams may be provided at a different date.

Class Project (for graduate students, IST/ERP 6444 students, only)

Class projects will be assigned around the 8th week of the semester (After 1st midterm). The purpose of the projects is to let the students explore additional knowledge and/or gain experiences in the ever-evolving field of data warehouses. Students will work in teams to either implement a real-world project or conduct research on the latest developments on the topics related to the class. Detailed requirements of the projects will be announced when the project is given.

COURSE POLICIES AND GRADING

Attendance:

For on-campus students, you are expected to attend 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 announcements. Due to schedule conflicts of your other classes, special arrangements may be granted to you for a different format of class participation.

For distance students, live participation is **not** required but encouraged.

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No use of GAI is acceptable for use on any graded class activity.
Use of GAI may result in a zero for the assignment.

Evaluation Methods:

Labs: 300 points

Exams: 300 points

Assignments/participation: 100 points

Term Project: 100 points (Graduate Students only)

Grading Scale:

Final grades will be assigned according to the following criteria:

A = 90% and above of total available grades (e.g 720 points out of a total of 800 points for a graduate student; 630 points out of 700 points for undergraduate students);

B = 80%-89%; **C** = 70%-79%;

Undergraduate students: **D** = 60%-69%; **F** = below 60%.

Graduate students: **F** = below 70%.

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 Standard of Conduct and Honor Code.
- The Standard of Conduct defines the behavioral expectations of all students and student organizations with clear descriptions designed to protect a specialized educational environment conducive to learning. This environment promotes learning while fostering integrity, academic success, personal and professional growth, and responsible citizenship.
- Additional resources regarding academic integrity are available online.

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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/>)

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 confidential individual and group counseling, wellness consultations and 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.

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

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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.

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 library provides students and faculty with physical and electronic books, journals, articles and databases as well as recreational reading and video materials. You can also check out laptops, calculators, tool kits and more and reserve study or meeting rooms. 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 about 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.

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/>

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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/>

Military & Veterans Services Center (MVSC)

The Military & Veteran Services Center at Missouri S&T is dedicated to supporting those who have served, are currently serving, and those who aspire to serve in our nation's armed forces, along with their families. We are committed to fostering a welcoming and inclusive environment that empowers military-connected students to achieve their educational and personal goals. Through tailored resources, academic and career support, and community connections, we aim to enhance the success and well-being of service members, veterans, and their loved ones as they transition into and thrive within higher education here on campus.

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COURSE OUTLINE (tentative, subject to change) updated on Jan 20-2025

Week	Dates	Topic
1	1/21, 1/23	Introduction to the class Information Systems Review
2	1/28, 1/30	Decision Support Systems
3	2/4, 2/6	Data Warehouses: An Introduction
4	2/11, 2/13	Data Warehouse Development in ERP Environment I (Lab 1)
5	2/18, 2/20	<i>Spring Career Fair (2/18)</i> Data Warehouse Development in ERP Environment II (Lab 2)
6	2/25, 2/27	Review Exam 1 (2/27)
7	3/4, 3/6	ETL Process
8	3/11, 3/13	ETL for Master Data (Lab 3) <i>Spring Recess (No class on 3/13)</i>
9	3/18, 3/20	ETL for Transaction Data (Lab 4)
10	3/25, 3/27	<i>Spring Break (No Class)</i>
11	4/1, 4/3	Enterprise Reporting (Lab 5)
12	4/8, 4/10	In-Memory Database
13	4/15, 4/17	In-memory Database (Lab 6)
14	4/22, 4/24	Review Exam 2 (4/24)
15	4/29, 5/1	Class Project Working Sessions
16	5/6, 5/8	Class Project Presentation (Final Reports Due)
17	5/12-5/16	FINAL EXAM Week Final Exam: Tuesday, May 13, 8:30 am-9:30 am

Note: * It is possible, due to extenuating circumstances that exact coverage and sequencing of course content, grading criteria and weights may change. Students will be notified as far in advance of such changes.