# 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 4444 Essentials of 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:**

| Course Objectives | Oral Communication | Written Communication | IT Impact Knowledge | Teamwork | Leadership |
|---|---|---|---|---|---|
| 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 |

## 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.

## 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.

**Evaluation Methods:**

Labs: 300 points
Assignments/participation: 100 points

Exams: 300 points

**Grading Scale:**
Final grades will be assigned according to the following criteria:

**A** = 90% and above of total available grades (e.g 630 points out of 700 points);

**B** = 80%-89%;        **C** = 70%-79%;    **D** = 60%-69%;              **F** = below 60%.

**IMPORTANT INFORMATION**

**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).

**Classroom Egress Maps:**

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

**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 .

### 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.

### 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; facebook: 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 (manuels@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 (tentative, subject to change) updated on Jan 15-2024**

| Week | Dates | Topic |
|------|-------|-------|
| 1 | 1/16, 1/18 | Introduction to the class<br>Information Systems Review |
| 2 | 1/23, 1/25 | Decision Support Systems<br>6 |
| 3 | 1/30, 2/1 | Data Warehouses: An Introduction |
| 4 | 2/6, 2/8 | Data Warehouse Development in ERP Environment I (Lab 1) |
| 5 | 2/13, 2/15 | Data Warehouse Development in ERP Environment II (Lab 2)<br>Review |
| 6 | 2/20, 2/22 | *Spring Career Fair*<br>**Exam 1 (2/22)** |
| 7 | 2/27, 2/29 | ETL Process |
| 8 | 3/5, 3/7 | ETL for Master Data (Lab 3) |
| 9 | 3/12, 3/14 | *Spring Recess (No class on 3/14)* |
| 10 | 3/19, 3/21 | ETL for Transaction Data (Lab 4) |
| 11 | 3/26, 3/28 | *Spring Break (No Class)* |
| 12 | 4/2, 4/4 | Enterprise Reporting (Lab 5) |
| 13 | 4/9, 4/11 | In-Memory Database |
| 14 | 4/16, 4/18 | **Review**<br>**Exam 2 (4/18)** |
| 15 | 4/23, 4/25 | In-memory Database (Lab 6) |
| 16 | 4/30, 5/2 | In-memory Database (Lab 6) |
| 17 | 5/6-5/10 | *FINAL EXAM Week*<br>**Final Exam: Friday, May 10, 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.