Course: Enterprise Resource Planning 345 (5410) 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: http://blackboard.mst.edu/

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

COURSE INFORMATION

Catalog Description: Application of "intelligent" techniques from Computer Science and Operation Research to business decision-making. Overview of the theory, but with a focus on the application to business problem solving. Use of an Enterprise Resource Planning System, SAP, as a tool to access and present data, search for patterns, and identify exceptions, as well as forecast, optimize, and schedule resources.

Prerequisites: Relational Database Experience (such as IST 223(3423)) and ERP 346(5110) (may be taken concurrently) or ERP 246(2110).


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

Course Learning Objectives:
Understand fundamental terminologies related to Business Intelligence.
Understand fundamental terminologies related to Data Warehousing.
Understand fundamental terminologies related to Data Mining, such as Clustering, Association analysis, and Decision Tree.
Understand fundamental terminologies related to Business Analytics, Reporting and Data Visualization.

Planned Learning Outcomes:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Program Learning Objectives</th>
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<tbody>
<tr>
<td>Be able to understand terminologies related to Business Intelligence(BI).</td>
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<td>Be able to perform business analysis using data mining modules in an ERP system.</td>
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<td>Be able to create multi-dimensional data analysis using reporting modules in an ERP system.</td>
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<tr>
<td>Be able to work as a team and conduct a research on current development of advanced BI technologies.</td>
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<tr>
<th>Communicatio n Skills</th>
<th>Critical Thinking</th>
<th>Information Technology</th>
<th>Teamwork &amp; Leadership</th>
<th>Global &amp; Multicultural Issues</th>
<th>Integrate Business Areas</th>
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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 copies of your assignments and exercises to blackboard.

Any assignment is due at the BEGINNING of the class on its due date. Grades on late homework will be reduced by 20%, if turned in late at the same due date. No grade will be assigned for late homework past due date.

Exams

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. One make-up exam will only be provided for a student who has legitimate and official excuses. The make-up exam will be comprehensive and will be provided during the final exam week.

Class Project (Optional for students taking this class as undergraduate 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.

For distance students, live participation is not required but you are required to review class archives when live participation does not fit into your work schedule.

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) very early in the semester.

Classroom Egress Maps:

Students are expected to familiarize themselves with the classroom egress maps posted on-line at: http://registrar.mst.edu/links/egress.html.
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-code](http://stuco.mst.edu/about/honor-code). Please 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 33 of the Student Academic Regulations handbook ([http://registrar.mst.edu/academicregs/index.html](http://registrar.mst.edu/academicregs/index.html)) describes the student standard of conduct relative to the System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage. Additional informational resources for students regarding ethics and integrity can be found online at [http://ugs.mst.edu/academicintegrity/studentresources-ai](http://ugs.mst.edu/academicintegrity/studentresources-ai).

Academic Alert System: [http://academicalert.mst.edu](http://academicalert.mst.edu)
Missouri S&T is committed to the success of its students by providing an environment conductive to teaching and learning. To ensure that every student takes full advantage of the educational opportunities and support programs on campus, the University has implemented an Academic Alert System, a web-based application. The purpose of the System is to improve the overall academic success of students by:

- Improving communication between students, instructors, and advisors;
- Reducing the time required for students to be informed of their academic status;
- Informing students of actions they need to perform in order to meet the academic requirements in the courses they are taking.

To assist you, I will initiate an academic alert for students who are not meeting academic course requirements through poor performance on assignments or poor attendance. When an alert is initiated, an email is immediately sent to the instructor, student, and advisor. You are encouraged to respond quickly to all academic alerts. If you fail to open the alert within one week, email notification is sent to your advisor.

Evaluation Methods:
Discussions and Participations 100 points  Assignments and Labs 500 points
Midterm Exams 300 points  Project and Presentation 100 points (optional for undergrad)

Grading Scale:
Final grades will be assigned according to the following criteria:
For graduate students or undergrad taking this course as graduate credits --
- A = 900 - 1000 points;
- B = 800 - 899 points;
- C = 700 - 799 points;
- F = below 700 points.
Missouri University of Science & Technology  
Department of Business and Information Technology  
Fall 2014  

For undergraduate students --  
\[ A = 810 - 900 \text{ points}; \quad B = 720 - 809 \text{ points}; \quad C = 630 - 721 \text{ points}; \quad D = 540 - 629 \text{ points}; \quad F = \text{below 540 points} \]

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

COURSE OUTLINE  
(Updated: 8/25/2014)

<table>
<thead>
<tr>
<th>Week</th>
<th>Month</th>
<th>T R</th>
<th>Topic</th>
<th>Reading/Assignment</th>
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<tbody>
<tr>
<td>1</td>
<td>Aug.</td>
<td>26, 28</td>
<td>Review of Syllabus. Information System Fundamentals, Decision support systems (A brief review)</td>
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<tr>
<td>2</td>
<td>Sept.</td>
<td>2, 4</td>
<td>Introduction to Business Intelligence, Analytics and Decision Support.</td>
<td>Ch 1</td>
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<td>3</td>
<td></td>
<td>9, 11</td>
<td>Data Warehousing: Definitions, Concepts and Architectures</td>
<td>Ch 2</td>
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<td>4</td>
<td></td>
<td>16, 18</td>
<td>Data Warehouse Development Review</td>
<td></td>
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<td>5</td>
<td></td>
<td>23, 25</td>
<td>(Fall Career Fair) Review Exam 1</td>
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<tr>
<td>6</td>
<td>Sept./Oct.</td>
<td>30, 2</td>
<td>Business Reporting: OLAP</td>
<td>Ch 3</td>
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<tr>
<td>7</td>
<td>Oct</td>
<td>7, 9</td>
<td>Reports and Queries</td>
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<td>8</td>
<td></td>
<td>14, 16</td>
<td>Visual Analytics</td>
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<tr>
<td>9</td>
<td></td>
<td>21, 23</td>
<td>Review Exam 2</td>
<td></td>
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<td>10</td>
<td></td>
<td>28, 30</td>
<td>Data Mining: Concepts and Applications</td>
<td>Ch 4.</td>
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<tr>
<td>11</td>
<td>Nov.</td>
<td>4, 6</td>
<td>Data Mining: Association Analysis</td>
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<td>12</td>
<td></td>
<td>11, 13</td>
<td>Data Mining: Clustering &amp; Decision Tree</td>
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<tr>
<td>13</td>
<td></td>
<td>18, 20</td>
<td>Review Exam 3</td>
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<td>14</td>
<td></td>
<td>25, 27</td>
<td>Thanksgiving Holidays No Class</td>
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<tr>
<td>16</td>
<td></td>
<td>9, 11</td>
<td>BI Emerging Trend and Future Impacts-- Student Project Presentation</td>
<td>Ch 7</td>
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<td>17</td>
<td></td>
<td>15-19</td>
<td>Final Exam Week</td>
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Notes:  
The syllabus is tentative and subject to change. Any change will be announced in class and/or on the Blackboard 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.