MISY 4350 Business Intelligence and Analytics
OCNR-240; Tue 7:00-9:30 PM; Fall 2016

Instructor: Dr. Mohan Rao, CFPIM
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E-mail: mohan.rao@tamucc.edu
Office Hours: TR 2:45-3:30PM and 4:45-7:00PM; Other times by appointment

Required Material:

Prerequisites:
- ONLY Juniors or Post-Baccalaureate or Seniors

Course Description:
Overview of important concepts of business intelligence, and the use of analytics, technologies, applications and processes used by organizations to gain data-driven insights. These insights and predictions can be used to aid decision-making and performance management across functional areas, including marketing, operations, and finance. Students will learn to extract and manipulate data, and create reports, scorecards and dashboards, including mobile apps. Technologies utilized in the course include SAP Crystal Reports and Dashboards, SAP BusinessObjects, SAP Lumira Cloud and SAP Predictive Analytics.

Relationship to Other Course work:
Business intelligence and analytics can play an important role in all areas and levels of an organization. To that end this course draws on the students’ knowledge from courses in marketing, operations, finance, accounting, and human resources etc., to build applications that make organizations more efficient and effective.
**Learning Objectives:**

By the end of this course, the students will be able to:

1. Define and understand business intelligence and analytics, scorecards and dashboards.
2. Learn to use SAP Lumira, Predictive Analytics, BusinessObjects, Crystal Reports and Dashboards, and HANA in-memory appliance.
3. Learn to extract data from various organizational sources such as Data Warehouses, Datamarts, Cubes, Databases, Excel workbooks and others.
4. Learn to manipulate data, and create reports, scorecards and dashboards, including mobile apps.
5. Develop applications for various functional areas of an organization.
6. Understand the potential impact of these applications in an organization.
7. Understand the projected growth of the area of Business Intelligence and Analytics.

**Instructional Methodology:**

Lecture and hands-on use of computers in the classroom.

**Performance Evaluation and Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments/Quizzes</td>
<td>35%</td>
</tr>
<tr>
<td>Midterm Project</td>
<td>10%</td>
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<tr>
<td>Midterm Exam</td>
<td>25%</td>
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<tr>
<td>Term Project</td>
<td>30%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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All course material is considered for exam questions— all assigned readings whether discussed in class or not and all material presented in lectures whether covered in assigned readings or not. No make-up exam will be given. A letter grade will be determined based on the total points earned, as follows:


**Late Policy:**

Keep track of the due dates for assignments and quizzes. You may do the quizzes and assignments before the due date. No excuse for late work will be considered. If not done by the due date, they will automatically receive a grade of zero.

**Attendance Policy:**

In order to achieve the objectives of this course, students are expected to attend all classes and be on time. There will be no make-up exams. Students are encouraged to participate in the class as much as possible. Each 10% of unexcused absences will result in loss of a letter grade. For example, if your grade is a B and you have missed 10% of classes without legitimate excuses, you will end up with a C. The instructor reserves the right to drop a student if a student has missed more than 20% of class time.
Dropping a Class:
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Observe the last day to drop a class with an automatic grade of “W” this term.

Oral and Written Communication Content:
Class discussions, presentations, discussion forums, quizzes, written reports on special topics, as well as major examinations will provide an opportunity for evaluating each student’s performance in oral and written communication.

Technology Applications:
The student is expected to have a good working knowledge of Excel and Access. This is a technology-intensive course, and as such it is not for students that are technologically challenged.

Ethical Perspectives:
Ethical issues and practices of firms, their social responsibility and environmental stewardship will be discussed.

Global Perspectives:
Today, the customers, retailers, suppliers and manufacturers are linked globally via computers and communication networks. Vital operational information and international currency exchange rates come from all linked areas leading to useful actionable insights on a daily basis. Accordingly, the applications developed in this course take advantage of these data flows.

Demographic Diversity Perspectives:
Presentations and discussions will show how practices in the area of business intelligence and analytics are widespread across race and gender.

Political, Social, Legal, Regulatory, and Environmental Perspectives:
Examples from other countries will be discussed to compare BI/BA applications, philosophies and approaches. Behavioral and ethical aspects, reliability, and their impact on users will be discussed.

Classroom/Professional Behavior:
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.
Academic Honesty:
This course, and all other courses offered by the College of Business (COB), requires all of its students to abide by the COB Student Code of Ethics (available online at www.cob.tamucc.edu). Provisions and stipulations in the code are applicable to all students taking College of Business courses regardless of whether or not they are pursuing a degree awarded by the COB.

Grade Appeals:
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

Disabilities Accommodations:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.
The following schedule is *tentative*. It is subject to change depending on the software availability, technical and security issues.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>30-Aug</td>
<td>Introductions; Intro to ERP, BI/BA, Software Tools</td>
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<tr>
<td>6-Sep</td>
<td>Ch 1. An Overview of Business Intelligence, Analytics and Decision Support; Self-serve analytics: SAP Explorer</td>
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<tr>
<td>13-Sep</td>
<td>Ch 3. Business Reporting, Visual Analytics &amp; Business Performance Management; Crystal Reports</td>
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<td>20-Sep</td>
<td>Dashboards with SAP; Sales Dashboard; Sales Simulation; Muesli dashboard</td>
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<td>27-Sep</td>
<td>Ch 2. Data Warehousing; Multidimensional analysis: SAP BusinessObjects Analysis, Edition for MS Office; Reporting on SAP BW, BEx Query Designer; Introduction to data sets from University of Arkansas/BW/Teradata; HW: Exercise 4 -- Discoveries from Tyson InfoCube, Prepare Presentation and report</td>
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<tr>
<td>4-Oct</td>
<td>Midterm Project (Make a presentation and submit report on Tyson Foods; Review other applications)</td>
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<tr>
<td>11-Oct</td>
<td>Ch 4. Data Mining; Data Visualization with SAP Lumira Cloud; ERPSim data; GBI data</td>
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<td>18-Oct</td>
<td>Midterm Exam</td>
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<tr>
<td>25-Oct</td>
<td>Automated Analytics (data mining) with SAP Infinite Insight (part of SAP Predictive Analytics)</td>
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<td>1-Nov</td>
<td>Expert Analytics (data mining) with SAP Predictive Analytics</td>
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<td>8-Nov</td>
<td>Ch 5. Text, Web, and Social Analytics; Ch 6. Big Data and Analytics; Analytics Mobile App design with SAP BusinessObjects Design Studio</td>
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<td>15-Nov</td>
<td>Ch 7. Business Analytics: Emerging Trends and Future Directions; In-memory databases; Data mining with SAP HANA</td>
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<td>22-Nov</td>
<td>Project Work; No Class</td>
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<tr>
<td>29-Nov</td>
<td>Project Presentations</td>
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<tr>
<td>6-Dec</td>
<td>Project Report Due 12PM; No Final Exam</td>
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