MISY 5355/4350 Business Intelligence and Analytics  
OCNR-240; Tue 7:00-9:30 PM; Fall 2019

Instructor: Dr. Mohan Rao, CFPIM  
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Office Hours: TR 4:00-6:00 PM; Other times by appointment  

Required Material:  

Other course material is drawn from various sources, which will be made available free of charge for students in this course.

Website Used: Blackboard https://bb9.tamucc.edu  

Prerequisites:  
ONLY graduate students for MISY 5355 and  
Juniors or Post-Baccalaureate or Seniors for MISY 4350

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 Tableau, SAP Lumira and SAP Predictive Analytics.

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 (BBA Goal 2, Objectives 1 and 2)  
2. Learn to use Tableau, SAP Predictive Analytics, and other software (BBA Goal 3, Objective 2, and 3)
3. Learn to extract data from various organizational sources such as Data Warehouses, Datamarts, Cubes, Databases, Excel workbooks and others (BBA Goal 3, Objective 2, and 3)
4. Learn to manipulate data, and create reports, scorecards and dashboards, including mobile apps (BBA Goal 3, Objective 2, and 3)
5. Develop applications for various functional areas of an organization (BBA Goal 3, Objective 2, and 3)
6. Understand the potential impact of these applications in an organization (BBA Goal 2, Objective 1, Goal 4, Objective 1)
7. Understand the projected growth of the area of Business Intelligence and Analytics (BBA Goal 2, Objective 1, Goal 4, Objective 1).

Relationship to Other Coursework:
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.

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

Course Policies:
Student performance will be evaluated based on in-class exercises, homework assignments, midterm exam, class discussions and discussion board contributions, and a final project. The final project will include a written report, demonstration of the application and oral presentation, including a poster presentation to external audience. The projects are group projects. Each group will have 2-3 students. The project must be approved and/or assigned by the instructor before it is undertaken.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classwork &amp; Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>20%</td>
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<tr>
<td>Exam 2</td>
<td>20%</td>
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<tr>
<td>Final Project</td>
<td>25%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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The Official Course Grade is determined by a letter grade using the following scale:

- A: 90% or above;
- B: 80 - 89.99%;
- C: 70 - 79.99%;
- D: 60 - 69.99%;
- F: below 60%.

The student’s performance, not the instructor, determines the course grade. No additional work will be given after the final exam to supplement a course grade. Grades are given based solely on student performance, not needs or any personal reasons.
Exams:

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.

Discussion Board:

Each week, all students are required to actively participate in the course discussion board. Weekly posts can include, for example: tips or new techniques that you have learned while exploring Tableau, interesting public vizzes that you have discovered, a summary of a valuable training video that you watched, etc. Each student must make one meaningful contribution to the discussion board each week (either a new post or a comment on an existing post). Students will vote on the most valuable contributions to the discussion board at the end of the course, and these votes will be the primary determinant of each student’s discussion board grade.

Steps to Take When You Have Technical Questions:

When learning any new software package, you are bound to have technical questions. Investigating and solving these questions is an important part of learning the software. When you have a question about Tableau that you cannot answer on your own, you should follow the following steps:

1. Check the course discussion board to see if this question has already been resolved by your classmates.
2. If you did not find the solution in Step 1, consult Tableau’s extensive online resources and training videos:
   c. http://www.tableau.com/learn/training
3. If you did not find the solution in Step 2, check Tableau’s community discussion forum to see if the solution has been posted there. If your question has never been posted on the forum, then post it yourself and see if you get a response.
   a. Home page: https://community.tableau.com/welcome
   b. Beginner: https://community.tableau.com/groups/newbie-tableau-desktop
   d. Tips for an effective post: https://community.tableau.com/docs/DOC-5471
4. If you did not find the solution in Step 3, ask a classmate for help.
5. If you did not find the solution in Step 4, ask your instructor or teaching assistant for help.
6. Post the question that you encountered, along with the solution you found, on the course discussion board.

Following the above steps will help you develop the ability to research and answer Tableau questions autonomously, while also fostering collaboration among your peers to find and share solutions. These skills will serve you well as you continue to use Tableau after this class is completed.
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.

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.

Examples of classroom misconduct that may affect student evaluation include: habitually entering or leaving the classroom during class time without the consent of the instructor, using any telecommunication device, talking or chit-chatting with other students, and any other activities that are disruptive to the learning environment. Students caught engaging in such activities should expect class or course dismissal along with a letter of reprimand placed in their academic files. According to the University policy, no cell phone is allowed in the classroom when a test/exam is taken.

Preferred methods of scholarly citations:
APA style is the only accepted method used for citations and referencing during this class. All work should be paraphrased rather than copied directly. Material used from sources other than the text should use APA style citations and references.

Academic Integrity/Plagiarism:
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a zero the first time and failing the course for any additional offence.
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. TBD is the last day to drop a class with an automatic grade of “W” this term.

Grade Appeals:
As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, 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 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 Dean’s office in the college in which the course is taught or the Office of the Provost.

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.

Statement of Academic Continuity:
In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.
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>27-Aug</td>
<td>Introductions; Ch 1. An Overview of Business Intelligence, Analytics and Data Science; Data Visualization &amp; Visual Perception</td>
</tr>
<tr>
<td>3-Sep</td>
<td>Ch 2. Descriptive Analytics I: Nature of Data, Statistical Modeling, and Visualization; Connecting to Data 2.1, 2.2; 3. UI Overview; 4. Discrete + Continuous Data (HW: 5. Basic Charts)</td>
</tr>
<tr>
<td>10-Sep</td>
<td>6. Dashboards and Stories; 7 Formatting Basics (7.1 Worksheets &amp; 7.2 Dashboards); Ex1-Basic charts; 8. Intro to Calculated Fields, Ex2-Basic charts</td>
</tr>
<tr>
<td>17-Sep</td>
<td>Review (1) HW Calculated fields, (2) Ex2-Basic charts and (3) Ex1; Assign Ex3 Dashboards; Assign HwProj2 due; Ch 3. Descriptive Analytics II: Business Intelligence and Data Warehousing;</td>
</tr>
<tr>
<td>24-Sep</td>
<td>Ch 4. Predictive Analytics I; Assign HWProj3; Forecasting; Assign Ex4 Calc fields; Assign HWProj4</td>
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<td>1-Oct</td>
<td><strong>Exam 1</strong>; 9. Intro to Maps; Assign Ex5 Maps; Tableau (Measure Names, Clusters, Word Cloud)</td>
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<td>8-Oct</td>
<td>Ch 5. Predictive Analytics II: Text, Web, and Social Media Analytics; Ch 6. Prescriptive Analytics: Optimization and Simulation; Gapminder</td>
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<td>15-Oct</td>
<td>Linear Programming; SAP Predictive Analytics E9-1, HW E9-2</td>
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<td>22-Oct</td>
<td>SAP PA: Association rules -- Titanic, Sam’s Club; SAP PA: Clustering (Stores), Time Series, Temp Anomaly</td>
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<tr>
<td>29-Oct</td>
<td>Ch 7. Big Data Concepts and Tools; Ch 8: Future Trends; Advanced Topics in Tableau</td>
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<tr>
<td>5-Nov</td>
<td>Project Work -- Designing Presentation Posters; Advanced Topics in Tableau</td>
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<tr>
<td>8-Nov</td>
<td><strong>Last day to drop class</strong></td>
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<tr>
<td>12-Nov</td>
<td><strong>Exam 2</strong></td>
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<tr>
<td>19-Nov</td>
<td>Project work</td>
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<tr>
<td>26-Nov</td>
<td>Project work</td>
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<tr>
<td>3-Dec</td>
<td><strong>Project Presentations</strong></td>
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<tr>
<td>10-Dec</td>
<td><strong>Project Report Due 12PM; No Final Exam</strong></td>
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