



**MYRA  
DECEMBER 2017**

Course:	Data Driven Decision Making -December 2017 Class Room: TBD	Instructor:	H. R. Rao, Ph.D.
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**All Homework and Projects to be mailed to Padmini Prashanth at [padmini.prashanth@myra.ac.in](mailto:padmini.prashanth@myra.ac.in) with a copy to [mgmtraomyra@gmail.com](mailto:mgmtraomyra@gmail.com).**

**Mission Statement for the College of Business**

*The College of Business is dedicated to creating and sharing knowledge that enhances the translation of theory to practice; combines rigor with relevance and provides innovative solutions to global business challenges.*

The MYRA College of Business is committed to life-long learning. We strive to provide an excellent business education at the undergraduate, graduate, and executive levels and promote world-class research, addressing relevant business issues. Using the most current and effective teaching methods and technologies, we serve student-scholars from across the nation and around the world by introducing them to an environment of active learning and a culture of high achievement in a setting that is increasingly entrepreneurial and reliant on technology. MYRA relies on talented, diverse, and dedicated faculty, staff, and administrators working in concert with industry and community leaders, to provide significant contributions to the educational, economic, and cultural development of South Texas and beyond.

**Course Description**

**Data Driven Decision Making**

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

This course familiarizes students with the basic process involved in the data to decision making process. The course also discusses topics that involve data traceability and data ethics. Computer software packages such as Excel may be used for data analysis. This course is designed for students interested in Data Analytics program.

**Learning Goals**

- Students will be able to understand various aspects of data to decision making ranging from business understanding, data handling, modeling, evaluation and deployment.
- Students will be able to understand aspects of data to decision traceability and data ethics
- Students will be able to communicate, both in written reports and oral presentations, information

and ideas pertinent to data driven decision making and design.

- Students will be able to use the data analytic process to support business decision-making.

### **Overview of the Course**

The objective of the Data Driven Decision Making is to familiarize students with basic scientific processes and formalisms, such as question formulation and hypothesis development. Students will gain an understanding of how formulated questions and hypotheses can lead to data collection and analysis, as well as how data itself can be explored and summarized to generate such questions and hypotheses. The course also introduces students to foundational data analytics processes, such as the data-to-decision processes, data handling processes, and data analysis processes. Data provenance for data-to-decision traceability and critical scientific documentation principles important to scientific and analytic functions are also discussed. Topics covered in this course will include:

#### ***Introduction to Data Analytics:***

Need for data analytics today

Examples of companies that have successfully used data analytics

Areas where analytics can and cannot be useful

Need for understanding the process of data analytics

#### ***Process of Data to Decision Making***

Steps in data analytics process: business understanding, data understanding, data preparation and data modeling

Translating modeling results into managerial insights. Use of visualization tools will be discussed.

Deployment of results

#### ***Data Handling Processes and Key Challenges***

Understanding what to predict, level of granularity in data required, handling missing data and how much data to analyze

#### ***Data Analysis Processes***

Data visualization through exploratory data analysis tools

Selecting correct analysis tools based on type of research questions

Discussion of correlation versus causality

#### ***Data to Decision Traceability***

Understanding the what, who, where, how, why and when of data to decision process

#### ***Data Ethics***

Discussion of taxonomy of privacy. Getting informed consent

## Reference Text

Business Analytics: Data Analysis and Decision Making, 5<sup>th</sup> Edition, by S. Christian Albright and Wayne L. Winston

## Reading Assignments

The content of the course is subject to changes during the semester as the instructor deems fit. Harvard cases will be used.

## Teams

There will be six teams in class

## Grading Information

Points may be accumulated based upon your performance on the following tasks:

<i>Task</i>	<i>Point Value</i>
Assignments	100
Term Project Presentations	50x2
Term Project Report	50x2
Cases	100
Exam	100
Peer Evaluation & Class Participation – 10	10x2

Total: 530

Assigning grades that reward excellence and reflect differences in performance is important to ensuring the integrity of our curriculum. Note that the actual distribution for this course and your own grade will depend upon how well each of you actually perform this particular semester.

## Focus and Interaction

The course will explain through lectures, discussions, and real-world examples the fundamental principles, uses, and some technical details of data driven decision making and design. The emphasis primarily is on understanding the fundamental concepts of data driven decision making. I will expect you to be prepared for class discussions by having satisfied yourself that you understand what we have done in the prior classes. The assigned readings will supplement the fundamental material. The class meetings will be a combination of lectures/discussions on the fundamental material, discussions of business applications of the ideas and techniques, case discussions, student exercises, and demos.

## **Participation/Professionalism/Contribution/Attendance**

You are expected to attend every class session, to arrive prior to the starting time, to remain for the entire class, and to follow basic classroom etiquette, including (unless otherwise directed) having all electronic devices turned off and put away for the duration of the class and refraining from chatting or doing other work or reading during class.

If you have questions about class material that you do not want to ask in class, or that would take us well off topic, please detain me after class, or come to office hours to see me. The discussion board is a much better way than sending me email. Also, if you have the question, someone else may too and everyone may benefit from the answers being available. Also, please try to answer your classmates' questions. In grading your class participation. I will include your contributions to the discussion board. You will not be penalized for being wrong in trying to participate on the discussion board (or in class).

Worth repetition: It is your responsibility to check any announcements posted on Blackboard.

I will check my email at least once a day. *Your email will get my priority if you include the special tag Myra: Data Driven Decision Making in the email subject header.* I use this tag to make sure to process class email first. If you forget and send without the tag and then remember, *just send it again* including the tag.

## **Policy on Cheating**

Students are expected to be above reproach in scholastic activities. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. *"Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts"*