

**MSIS 5633**  
**Section 001, 002, and 503**  
**Business Intelligence Tools and Technologies**  
**Syllabus – Spring 2016**

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**Class Hours:** Sec 001 Thursday 4:30 p.m. – 7:10 p.m. (COR 127)  
Sec 002 Monday 4:30 p.m. – 7:10 p.m. (GU 101)  
Sec 503 Online, recorded video lectures

**Office Hours:** Wednesday 3:00 pm – 4:30 pm or by appointment

**GA:** Vinay Motamarri, [vinay.motamarri@okstate.edu](mailto:vinay.motamarri@okstate.edu) (Sec 001 & 002)  
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Welcome to BI Tools and Tech. The primary means of communication for this course will include D2L announcements, in-class announcements, and email. To contact me, please use the email address specified above. Please use my office hours to speak with me for any concerns or questions. Also, use online discussion boards to seek answers from fellow classmates.

### **Prerequisites**

This course does not have any official prerequisites. However, it would be beneficial for you to have a basic understanding of database management systems and design as well as programming. This is important in understanding the data warehouse which influences every aspect of BI and BA, which in turn will help you in your project. Also, I assume you have a basic understanding of statistical fundamentals.

### **Course Value**

As an Information Systems major, an understanding of the role of analytics within a business is crucial to staying competitive. Analytics utilizes technology, expertise, knowledge, statistics, and creative thinking to find solutions to problems. This course will provide you with the tools and experience to conduct an analytic project from sourcing the data to interpretation.

### **Textbook**

- **Required Text:** Sharda, R, Delen, D. and Turban, E. 2013. “Business Intelligence: A Managerial Perspective on Analytics,” 3<sup>rd</sup> Edition, *Prentice Hall*, pp. 416.
- **Optional Text:** Crawley, M. J. 2012. “The R Book,” 2<sup>nd</sup> Edition, *Wiley*, pp. 1076.

### **Software Packages**

During the semester you will be using several different types of software packages to enable you to conduct a wide variety of work. While future courses in BI will focus more on SAS products, this class is designed to give you breadth. This semester you will use some or all of the following:

- Microstrategy (provided through TUN)
- Tableau (provided through the [Tableau for Teaching](#) program)
- IBM Modeler (provided through IBM Academic Alliance)
- R (<http://www.r-project.org/>) (provided for free)
- Microsoft Excel

## Course Objectives

The main objective of this course is for the student to develop an understanding of the role of computer based information systems in direct support of managerial decision making (nowadays commonly referred to as business intelligence and analytics). Specifically, at the end of this course you should develop

- knowledge about managerial decision making, business intelligence, analytics, decision support systems and how they relate to other types of information systems,
- knowledge about DSS architectures, development methodologies and enabling technologies (such as Analytical Hierarchy Process, Expert Systems, Neural Networks, Knowledge Management, Data Warehousing and Data Mining, Social Network Analysis),
- and knowledge about Analytics enabling software packages a general understanding and some hands-on capabilities.

## Grading Criteria and Required Work

<u>Grading criteria for the semester</u>		<u>Grading Scale</u>	
Exam	15%	90% - 100%	A
Project	55%	80% - 89%	B
Assignments	25%	70% - 79%	C
Professionalism	5%	60% - 69%	D
		Below 60%	F

### Exam

One exam will be given during the semester. This is aimed at assessing the knowledge and skills learned during the semester. If for any reason you will not be able to sit for the exam, please notify the instructor **prior to the exam day**. Any notice given after or during the exam day, except for an emergency, will not qualify as an excuse. If you are allowed a make-up exam, it will be in a different form/version from that given to the class.

### Project

You will work on a class project involving development of a complete business intelligence solution using one or more of the DSS tools and techniques. Specifics about the acceptable business problems, which you will be identifying, analyzing and solving, will be given later in the semester. You will be responsible for identifying, conceptualizing, designing and developing a valuable solution to a real-world business problem. You can work on it individually or in a team of 2-3 students. Team size will influence my expectation of project outcomes. Each team will submit a proposal, progress report and a final report (documenting each and every step of their development effort), and, if time and venue permits, will present their project (as a team) in class at the end of the semester. Generally, (unless a compelling argument is given to suggest otherwise) the term project will be involved in analyzing and solving a data mining driven business problem of your choice. Peer evaluation forms will be used to measure each member's contribution. Individual grades may be adjusted based upon these evaluations.

## **Homework Assignments**

Individually assigned, these take-home assignments are done outside of class. Unless otherwise specified by the instructor, you will have one week to work on each. You have to turn in your typed, well-organized write-up electronically (using D2L's "Assignments" submission procedure) by 5:30 PM of the stated due date. The homework assignments are to be solved individually. This means that you are not to solve problems together or compare answers prior to turning in the work. Cooperative efforts on individual work will result in an immediate score of zero for all parties involved. I will "spot-grade" the homework. In addition, if I select your answer to be posted on D2L, you will receive extra credit, at my discretion.

## **Professionalism**

As in all business courses, students are expected to act professionally inside and outside of the classroom. To facilitate and develop these attributes you will be assessed by the following:

1. *Appropriate Use of Help.* When requesting help from the professor, you are expected to have read the background material and have made a reasonable effort to solve the problem beforehand. It is important that you exercise your ability to think and problem-solve before asking for help. Asking for help when you have not made a sincere effort to complete the problem or assignment is not acceptable.
2. *Classroom Conduct.* In order to maintain a professional atmosphere in the classroom, students should do the following:
  - Arrive early so that class can start on time. Late attendance is disruptive, unprofessional, and will negatively affect your grade.
  - Be prepared to participate—refusing to participate in the discussion shows you are not prepared.
  - Do not read newspapers, browse the web, play games, text, or engage in private conversations during lectures and presentations.
3. *Courteous Behavior.* Professionalism includes treating the professor and other class members with courtesy and respect. Examples of discourteous behavior include—but are not limited to—dominating class discussion time, groveling for points, and demeaning someone else's comments.

## **Grade Disputes**

If you feel an assessment has been graded unfairly or if you feel you have a better solution, write up your dispute and send it to me via email or bring it during office hours; *do not leave your dispute under the office door, outside the door, or any place in which it can be potentially lost.* You must dispute a grade within one week of grading.

## **Academic Integrity**

You are to do your own work on the Exams. On the exams, do NOT have helpers; do them completely on your own. Doing it with someone else or having a "coach" or having someone else do it for you all constitutes CHEATING and can result in an "F" for a course grade.

You are also to do your own work on the assignments. You can talk with other students on your assignments, but you need to download, save, and work in your own files to complete the requirements; it is fine to discuss approach, formulas, etc., with someone, but any keying into your assignment must be done by YOU. Do NOT copy part or all of anyone else's assignment; and do NOT allow another to copy part or all of yours. This will result in an F for a course grade.

OSU has a policy on academic integrity. You are expected to abide by this policy in this class. Academic dishonesty can result in an F. You can read about OSU's Academic Integrity Policy at <http://academicintegrity.okstate.edu/>.

### **Accommodations for Students with Disabilities**

If you require testing or homework accommodations as certified by the Student Disability Services (SDS), then please inform me in writing now. (This is not required for accommodations, but information for me.) If you need any type of accommodation due to a disability, please ensure the SDS has mailed me the appropriate documentation. Students are responsible for requesting accommodations from the SDS. You must submit a written request for any accommodation to me at least five school days before each of the exam dates. Please schedule a meeting with me in my office to discuss arrangements.