

Course Information and Materials

Course Information

- BAN 5743
 - Online CRN 23804
 - On Campus Mondays CRN 25514
 - On Campus Wednesdays CRN 31713
- Spring 2022



Course Site: (Canvas): <http://canvas.okstate.edu>

Canvas Tutorials for Students: <https://osuonline.okstate.edu/Canvas.vbhtml>
(<https://osuonline.okstate.edu/Canvas.vbhtml>)

Greenwood Center for Online Excellence Support: spearsonline@okstate.edu
(<mailto:spearsonline@okstate.edu>)

Phone: 405-744-4048

Facebook: Follow Greenwood Center for Online Excellence on Facebook!

<https://www.facebook.com/SpearsOnline/> (<https://www.facebook.com/SpearsOnline/>)

Course Description

This course assumes you must have successfully completed descriptive analytics techniques (BAN5733) and preferably completed STAT5013. The primary objective of this course is to prepare second-semester MSBAN students to learn how to convert business data (both numeric and text) into actionable information. This course will focus on learning how to use various analytics tools such as neural networks, decision trees, classification and prediction algorithms, text and sentiment mining algorithms, etc. in the context of most common applications in business – sales, marketing, and customer relationship management (CRM). Students will be expected to use state-of-the-art industrial-strength data mining software (SAS Enterprise Miner) as well as open-source tools such as R, Python to analyze real-world data and make strategic recommendations for managerial actions. My philosophy in teaching the course is “you learn by doing,” that is, you should be prepared to work extensively with various software in analyzing data sets using various techniques such as neural networks, decision trees, multiple/logistic regression, association rules, sequence detection, ensemble models, text mining, sentiment mining, content categorization, etc. The course will use lectures, data analysis using state-of-the-art data mining software, case discussions, and exercises. All class lectures will be handled via video (video links will be posted on the course site) that you can watch at our own convenience (you will need a high-speed Internet connection to watch the lectures). However, you must work on

exercises/assignments/projects as assigned by the instructor and turn these in via the drop box by the specified deadline.

Required Materials

Required Textbook: None, all materials will be given as part of class

Reference Texts: You will find them very useful for writing papers and doing assignments, exams, projects and going on interviews. So, I strongly recommend that you read them. I will put them on reserve at OSU library for Stillwater-based students for a 2-hour checkout basis. Off-campus students will be able to access #1 for free via OSU’s library link. You should consider buying say #2 or #3.)

- 1. Text Mining and Analysis: Practical methods, Examples and case Studies using SAS® by Goutam Chakraborty, Murali Pagolu and Satish Garla, SAS Publishing, 2013, Cary, NC, SAS Institute Inc. (OSU Library Call number: 005.55 C435t)
- 2. Handbook of statistical analysis and data mining applications, by Nisbet, Elder and Miner, Academic Press/Elsevier, 2009, (OSU library call number: 006.312 N724h)
- 3. Data Mining Techniques for Marketing, Sales and Customer Relationship Management, by Michael J. Berry and Gordon S. Linoff, Wiley Publishing Inc., 2011. (OSU library call number: 658.802 B534d for 2004 version of this book)
- 4. Data Preparation for Data Mining by Dorian Pyle, Morgan Kauffman publications, 1999. (OSU library call number: 005.74 P996d)

Student Learning Outcomes

Upon completion of this course, you will be able to:

Course Objective	Program Learning Goal
Students will be able to engage in analytical reasoning to break problems into their component parts; identify important patterns by analyzing data; and test for assumptions behind models.	· Critical Thinking
Student can apply science and business principles to analyze and interpret data, using analytic and computer-based techniques.	· Critical and Creative Thinking

Students will be able to present written results from their analyses by relating those back to the business issues that demonstrate a mastery of language and mechanics.

· Written
Communication

Students will be able to present their results orally using a message that is well organized, concise and quickly understandable by business professionals.

· Oral
Communication

Students will be able to use appropriate tools and technologies for data visualization and statistical model building

· Technology
Skills

Course Outline

Lectures: The class will be conducted using pre-class readings and videos and hands-on practice exercises. Lecture videos will be available via Canvas in streaming video a week prior to the lab class. Other formats may be available based on need (downloadable zip file). Lecture videos are broken into 10-15 minute segments for easier streaming. The link for each video lecture will be posted on Canvas. It is your responsibility to watch the lecture videos and do appropriate readings/exercises **for each week**.

Manuals and video lecture links are available on the Canvas Module tab for the class. Each week will have sections for video links, manuals, other readings and quiz/exercise links that will open as you move through the class. Solution documents will open after the assignment due date has passed and you have turned in the related assignment. Week 1 material must be viewed prior to lab class in week 1. For example: week 1 material is available on the Contents tab a week prior to the start of the semester. The quiz for week 1 will be made available after the videos for week 1 have been viewed. All quizzes will be due on Sunday after being assigned by 11:59 pm central time.

Labs for On-Campus learning students (CRN 25514 and 31713): It is not required for BAN 5743 CRN 23804 (OL) students to attend labs physically but may join the link below if your schedule allows. Students who do not join during the live lab session will be expected to view the weekly lab video posted by Tuesday afternoons in an asynchronous manner.

Lab Connection Information by Zoom:

Join Zoom Meeting

[https://busokstate.zoom.us/j/91706750656?](https://busokstate.zoom.us/j/91706750656?pwd=dzV1TkJrMXFQc0NPTU1QTHdQRC92dz09)

[pwd=dzV1TkJrMXFQc0NPTU1QTHdQRC92dz09](https://busokstate.zoom.us/j/91706750656?pwd=dzV1TkJrMXFQc0NPTU1QTHdQRC92dz09)

[\(https://busokstate.zoom.us/j/91706750656?pwd=dzV1TkJrMXFQc0NPTU1QTHdQRC92dz09\)](https://busokstate.zoom.us/j/91706750656?pwd=dzV1TkJrMXFQc0NPTU1QTHdQRC92dz09)

Meeting ID: 917 0675 0656

Passcode: 149357

Dial in number: +1 669 900 6833 US (San Jose)

Special Training: From time-to-time, we will bring in guest lecturers (who are experts in certain areas) to teach a few specialized modules. These will typically be held on Saturday (all day)/Sunday (5-6 hours) intensive format. The exact dates and times will be announced in the schedule (or, via website/email) and will be communicated to you in advance. There may be work assigned based on the special training. Also, the topics covered in special trainings may be included in the exams. We expect you to *watch these special trainings either real-time (via BAN 5743 Regular Meeting using the Zoom meeting) or, the recordings* as soon as they become available. If you are within a short driving distance to Stillwater and if you want, you may also join the trainings in person only if you are enrolled in the online MS BAnDS program. If you want to attend any of the special trainings physically, please check with the instructor(s) at least 2 weeks in advance of the training.

Course Expectations:

- You are expected to complete a weekly quiz and weekly assignments
- There will be one comprehensive final exam for this class
- Readings: All students are expected to read the assigned materials each week. Please review each week's objectives before you read the assignments.
- You will be working in teams for lab assignments and some homework assignments. Individual assignments will be indicated at the beginning of the assignment.
- Discussions via Canvas: We will use this format extensively for communication among students as well as between students and the instructor. This will be a bulletin-board type system with specific folders for different aspects of this course. There will be multiple forums (folders) in this bulletin board. Please check these folders regularly. Please post your questions only in the **appropriate forums**. Please use the appropriate subject line in your posting and use threaded discussion whenever possible.