SYLLABUS FOR BAN 601: APPLIED BUSINESS ANALYTICS

Offering: Summer 2018 (ONLINE)
Instructor: Dr. Sudesh Mujumdar, Chair of the department of Economics and Marketing and Professor of Economics

Course description: This course will introduce you to the basics of applying some key data analysis tools in managerial contexts, with a focus on distinguishing between uncovering patterns in data and identifying the underlying drivers.

What BAN 601 is Not and What BAN 601 is about!
- Not a course designed to turn you into a data scientist or a data mining expert.
- Is a course that will help you ask important questions of, and guide your, Data Science/Mining team.

COURSE MATERIALS:
2. You will need the XLMINER® Add-In for EXCEL. Here are the steps to obtain XLMINER®:
   ******Student Registration******
   1. Go to www.AnalyticSolver.com/Student

   2. Fill out the form on this page. All of the information is required.

   Use SDMBI3 for the Textbook Code and BAN601SM18SP for the Course Code. We suggest you copy and paste these two values and ensure you do not reverse them.

   3. Check the box to acknowledge that you accept the Frontline Systems license agreement.
   Note: Frontline receives no money from you, or the textbook publisher, or the university; this free 140-day license is a courtesy we offer to students.

   4. Click the button Proceed. If you just plan on accessing our cloud-based software, you're done! Just click the get started button.

   ******Download and Install******

   Mac users:
If you have a Mac -- our installation-based Analytic Solver Platform software is only available for PC (sorry!). However, registration also gives you access to our cloud platform for use if you don’t have a Windows VM or dualboot set-up on your Mac system or don’t want to set one up. Post registration, you can access this here: www.analyticsolver.com/Asp2016/asp.

For Windows based operating systems:
1. Go to www.analyticsolver.com and Log In, if you're not logged in already, with the account you just created. Once logged in, you will see a Download Analytic Solver button available along the top right. Click this button and download the installer.

2. Make sure that Excel is closed (not running), then run the SolverSetup program.

3. The SolverSetup program will prompt you to choose between Analytic Solver Platform, Risk Solver Platform and XLMiner. Choosing Analytic Solver Platform gives you all the features of Risk Solver Platform and XLMiner, so this is usually the best choice. You can change this choice later in Excel, by choosing a menu option Help – Change Product on the Ribbon.

4. When the SolverSetup program finishes, start Excel (the last Setup dialog prompts you to do this). You should see new tabs on the Ribbon for Analytic Solver Platform or Risk Solver Platform, and XLMiner. Click the Solver Platform tab – you should see a “Welcome” dialog with various links. Use the Help dropdown menu to open Help text, the User Guide and Reference Guide, and load example workbooks.

If you have problems, the best avenues to get help are to email support@solver.com (this creates a support ticket in Frontline’s Help Desk) or start a Live Chat from any page on www.solver.com, or from within Excel (Help – Support Live Chat). While our live chat, ticket system, and phone lines are closed on weekends, many common issues can be resolved by searching our Knowledge Base which can be found here: https://solver.zendesk.com/hc/en-us/categories/204379367-Installation-Technical-Support

COURSE LEARNING OBJECTIVES: By the end of the course you

1) Should be familiar with the key vocabulary employed by your data science team
2) Should be able to ask key questions of your data science team that seek to distill their insights through the lens of your business expertise
### COURSE MODULES, TIME-SPAN AND ASSOCIATED CHAPTERS:

**NOTE: FOR SUBMISSION DEADLINES ON ASSIGNMENTS, PLEASE SEE EACH INDIVIDUAL MODULE**

<table>
<thead>
<tr>
<th>MODULE-HEADLINES</th>
<th>BRIEF DESCRIPTION OF MODULES</th>
<th>BY THE END OF THE MODULE YOU SHOULD HAVE THE CONFIDENCE TO ASK THE FOLLOWING QUESTION(S) TO YOUR DATA SCIENCE/MINING TEAM</th>
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<tr>
<td><strong>MODULE 1:</strong> What is Predictive Analytics?</td>
<td>Introduction to Predictive Analytics: Important sampling issues</td>
<td>How does your out-of-sample forecast change, if you use a different sample?</td>
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<td><strong>MODULE 2:</strong> How do I judge the accuracy of my prediction?</td>
<td>Building a Predictive Model: Predicting within a sample and out of sample</td>
<td>Is the prediction based on within sample estimation or out-of-sample estimation?</td>
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<td>Chapter 2: Overview of the Data Mining Process</td>
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<td><strong>MODULE 3:</strong> Why am I not using just one variable to generate my forecast?</td>
<td>Multiple Linear Regression: Balance between predictive and explanatory power. Issues of: 1) Degrees of freedom 2) Dimension reduction</td>
<td>What variables are you including and excluding from the model?</td>
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<td>Chapter 6: Multiple Linear Regression</td>
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<td><strong>MODULE 4:</strong> Predicting what Amanda and Sudesh will buy based on Madison and Kumar’s profiles</td>
<td>Introduction to the K-nearest neighbor algorithm</td>
<td>Why does the value of K that you’ve chosen make intuitive sense?</td>
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<td>Chapter 7: K-Nearest Neighbor</td>
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<td><strong>MODULE 5:</strong>  a) Shannon knows everyone in the Organization! b) My analysis clearly shows what we need to do, but my</td>
<td>1) A most basic introduction to social network analytics 2) Sound/Logical analyses as only a necessary condition for persuasion</td>
<td>Who are the influencers in my organization/unit?</td>
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<td>boss doesn’t see it!</td>
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Chapter 19: Social Network Analytics
The Art of Persuasion
(What does the science say?)

### HOW WILL MY GRADE BE DETERMINED FOR THE COURSE?

1. **Grade Determination**
   - ✓ If you Pass 5 OUT OF 5 Modules, then GRADE FOR THE COURSE = A
   - ✓ If you Pass 4 OUT OF 5 Modules, then GRADE FOR THE COURSE = B+
   - ✓ If you Pass 3 OUT OF 5 Modules, then GRADE FOR THE COURSE = B
   - ✓ If you Pass less than 3 Modules, then GRADE FOR THE COURSE = F

2. **What Does it Mean to Pass a Module?**
You must meet the *Minimum Requirements* of the specific module. These module-specific requirements will be posted *within each module folder* under the heading: **Requirements to Pass Module**.

### COMMUNICATING WITH THE PROFESSOR/COACHES
Students should communicate with the Professor and/or academic coach only with their USI issued email address to comply with FERPA. Emails received between Monday at 8:00 A.M. and Friday at 12:00 P.M (noon) will be responded to within 24-48 hours. Emails received after noon on Friday will be responded to during the following week.

**The coach for the course is:**
**Randa Doleh**: [Randa.doleh@iconnect-na.com](mailto:Randa.doleh@iconnect-na.com)

### GENERAL EXPECTATIONS AND POLICIES

<table>
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<tr>
<th>Professor Responsibilities</th>
<th>Academic Coach Responsibilities (might vary depending on the professor teaching the MODULE)</th>
<th>Student Responsibilities</th>
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<tr>
<td>1. Develop course content that is relevant, useful, and aligned with course/MBA program objectives.</td>
<td>1. Become familiar with course content to provide relevant and useful feedback to students on assignments.</td>
<td>1. Understand and apply course content.</td>
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<tr>
<td>2. Design course content to be delivered effectively online in an accelerated format.</td>
<td>2. Become familiar with course delivery method to assist students with progressing through the course.</td>
<td>2. Allocate appropriate time (approximately 20 hours per week) to complete online accelerated courses.</td>
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<td>3. Teach in a variety of methods.</td>
<td>3. Provide feedback to students in a variety of methods.</td>
<td>3. Learn in a variety of methods.</td>
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</table>
4. Treat everyone with courtesy and respect.

5. Abide by the syllabus and notify academic coaches and students if changes need to be made.

6. Grade samples from each academic coach to ensure quality and consistency in grading.

7. Respond to emails from coaches within 24 to 48 hours during working hours.

8. Maintain the university’s policy concerning academic integrity.

- **Workload**

Given the great value attached to the MBA degree, hard work is to be expected. You can expect to spend 15-20 hours per week on coursework for each 7-week accelerated course in which you are enrolled. Because acquiring an MBA degree requires major devotion of time and effort, USI offers the MBA program in two formats to help students manage this commitment. For more information regarding these two formats, please visit: [https://www.usi.edu/business/mba](https://www.usi.edu/business/mba)

- **Content Availability**

The Professor is not able to make content available to individual students either before or after the scheduled time period for the course - so if you are traveling for work or have other planned events, please remember to set aside time for coursework each week.

- **Where and When to submit Assignments, and Feedback**

BB’s Assignment link is where you will submit all assignments (unless otherwise informed). Locate the link and submit your assignment as an attachment. If technical issues occur with BlackBoard causing course content and/or submission systems to temporarily go down, assignments during that time may be rescheduled. If you have technical problems with Blackboard, please contact USI help desk (812-465-1080 or [http://www.usi.edu/it/help-desk](http://www.usi.edu/it/help-desk)). Due dates for assignments/quizzes are available under the relevant items in each Professor’s section on the BlackBoard site for the course.

The academic coach and the Professor will be happy to answer specific questions to clarify instructions before you submit an assignment for grading. However, your assignment will not be graded with feedback before you officially submit it for grading, as this would be inequitable to the rest of your classmates.
Final Grades

Final grades are posted to My USI within two days of the date that final grades are due which is within one week from the last days of finals. Once grades are official, a student can request an official transcript online (electronic transcripts are usually processed same day, if no holds exist) or print an unofficial transcript from their MyUSI (if an unofficial will be accepted). Faculty are not permitted to email student grades for a course. Employers can verify with the registrar’s office the grading timeframe & availability of grades.

Students are expected to achieve their desired grade through performance on prescribed quizzes and assignments. **Extra credit work is NOT offered in this course.**

Proper Use of Class Material

Materials on the BlackBoard site for the course that have been prepared by a Professor teaching the course may not be redistributed without written permission from the concerned Professor.

Modifications to the Syllabus

The Professor reserve the right to revise this syllabus at any time during the semester as appropriate and necessary. Any changes may be sent via e-mail and/or posted to Blackboard

CLASSROOM MANAGEMENT TOOL

BlackBoard (BB) will serve as the classroom management tool for the course; you can access BB through MyUSI. We will post announcements, assignments, syllabus, schedules, and other communications on BB; you are expected to check the site regularly for such communication. You will also be able to check your grades via BB. Email sent to students via BB will automatically go into a student mailbox @ eagles.usi.edu. If this is not your preferred mailbox or email address you should have your mail.usi.edu mail redirected to your preferred email address. You can make these changes inside MyUSI. You should understand that any email sent to you from campus/USI based technologies will go to your mail.usi.edu address (unless redirected); therefore, IT IS VERY IMPORTANT that you understand how to redirect your email to an address that you check regularly.

CLASSROOM MANAGEMENT POLICIES

Late Work/Assignments

Make-up work on assignments and/or quizzes will only be given in the event of documented emergencies (i.e., hospitalization of the student) and must be completed within one week of the missed deadline. If the deadline for an assignment is missed without a valid excuse, the student will not be allowed to complete it. It is the sole responsibility of the student to submit assignments by the scheduled times. It is also the student’s responsibility to make sure their assignments are submitted correctly in BlackBoard. After submitting the assignment file, students should click on the submission link to verify the document is readable in Blackboard. Submissions that are not readable in BlackBoard will not be accepted after the due date. Please consider completing the assignments early so as to avoid technological or personal complications. Students should use a cloud-based system to save their files so they will have access to them regardless of which computer they are using. If you ask for an extension or an exception, please don’t be offended if you are referred to this section of the syllabus.

Students who miss questions on assignments and/or quizzes may appeal any question they miss. An appeal **must** take the form of a typed explanation as to why the student should receive credit for his or her answer using the grade appeal form on blackboard. Two criteria are used in evaluating appeals: (1)
The explanation/argument must be logical and consistent, and (2) accurate knowledge of course material must be demonstrated. All appeals are due within one week following the scheduled due date. Appeals are evaluated individually, and only those students whose appeals are accepted will receive credit for missed answers. Appeals made without the appeals-form will not be reviewed for credit. (See Blackboard site for the course for the Appeals Form.)

- **Academic Honesty**
  The behavior of all students and the instructor in this class are expected to, at a minimum, adhere to the guidelines stated in the USI publication *Students Rights and Responsibilities: A Code of Student Behavior*. Academic dishonesty in this class includes but is not limited to the following: plagiarism, cheating, submitting someone else’s work as your own, or doing work for someone else who will receive credit for that work. If you are found guilty of academic dishonesty in this class, you will receive an automatic F for the assignment/exam. Further penalties may result. More detailed information about these guidelines can be found at the following link: https://www.usi.edu/media/732965/studentsrightsandresponsibilities2012.pdf

- **Americans with Disabilities Act Compliance:**
  If you have a disability for which you may require academic accommodations for this class, please contact Disability Resources at 812-464-1961 or email Ronda Stone at rfstone@usi.edu as soon as possible. Students who are approved for accommodations by Disability Resources should request their accommodation letter be sent to their online instructors. Due to the nature of online courses, some accommodations approved for on campus courses may not apply. Please discuss this with Disability Resources to clarify as needed. Students who receive an accommodation letter from Disability Resources are encouraged to discuss the provisions of those accommodations with their professors before or during the first week of the semester. If you will be in an internship, field, clinical, student teaching, or other off-campus setting this semester please note that approved academic accommodations may not apply. Please contact Disability Resources as soon as possible to discuss accommodations needed for access while in this setting. For more information, please visit the Disability Resources website at www.usi.edu/disabilities. For more information, please visit the Disability Resources website at http://www.usi.edu/disabilities.

- **Title IX Compliance**
  USI does not tolerate acts of sexual misconduct, including sexual harassment and all forms of sexual violence. If you have experienced sexual misconduct, or know someone who has, the University can help. It is important to know that federal regulations and University policy require faculty to promptly report incidences of potential sexual misconduct known to them to the Title IX Coordinator to ensure that appropriate measures are taken and resources are made available. The University will work with you to protect your privacy by sharing information with only those who need to know to ensure we can respond and assist. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with a counselor in the University Counseling Center. Find more information about sexual violence, including campus and community resources at www.usi.edu/stopsexualassault.