

9-2014

BMIS 391.01: Special Topics - Introduction to Data Analytics

Belva L. Jones

University of Montana - Missoula, belva.jones@umontana.edu

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Recommended Citation

Jones, Belva L., "BMIS 391.01: Special Topics - Introduction to Data Analytics" (2014). *Syllabi*. 2116.
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SYLLABUS

BMIS 391: Introduction to Data Analytics (3 cr.)
Fall 2014
MW 9:40-11:00, GBB 206



Belva L. Jones, Ph.D.	Office Hours:
GBB 390, 243-5155	MW 1:30-3:00
belva.jones@umontana.edu	or by appointment

Program Mission Statement and Assurance of Learning The University of Montana's School of Business Administration enhances lives and benefits society by providing a world-class business education in a supportive, collegial environment.

We accomplish this mission by acting on our shared core values of creating significant experiences, building relationships, teaching and researching relevant topics, behaving ethically, and inspiring individuals to thrive.

As part of our assessment process and assurance-of-learning standards, the School of Business Administration has adopted the following learning goals for our undergraduate students:

- Learning Goal 1: SoBA graduates will possess fundamental business knowledge.
- Learning Goal 2: SoBA graduates will be able to integrate business knowledge.
- Learning Goal 3: SoBA graduates will be effective communicators.
- Learning Goal 4: SoBA graduates will possess problem solving skills.
- Learning Goal 5: SoBA graduates will have an ethical awareness.
- Learning Goal 6: SoBA graduates will be proficient users of technology.
- Learning Goal 7: SoBA graduates will understand the global business environment in which they operate.

Course Learning Goals – After completing this course, a student will be able to:

- Understand the terminology used in the Big Data field of study.
- Explore the applications of Big Data in a variety of disciplines.
- Use, at an introductory level, data analytics tools.
- Explain the story told by the output of the data analyses.
- Discuss the issues of privacy and ethics raised by the use of Big Data tools.

Course Grading Policies -- Students' mastery of the course material is assessed through homework, participation, and exams. This course must be taken for a letter grade.

Homework	200 pts.
Participation	20 pts. Maximum (bonus)
Exams	300 pts.

Homework – Students will have an opportunity to practice the tools and techniques presented in class.

Deliverables will be described as the class plays out during the semester.

Participation – Students will be given 10 pts. for giving a short presentation to the class illustrating an application of data analytics or big data. An opportunity to present will be given at the beginning of each class period. Only one person can present each class period, so do your preparation early in the semester. Each student can present up to two applications

Exams – Individual exams must be taken during the designated class period. If you must miss an exam because of illness, be prepared to document your absence with a doctor's note in order to take a makeup exam. Any other reason for missing the exam must be cleared with the professor well in advance of the test. Any cheating on a test (e.g., opening any file or application other than your own test file, looking at someone else's monitor, etc.) may result in a failing grade for the course and further disciplinary action by the university. The last exam will be taken during the final time allocated to this class (Wednesday, December 10 from 8:00 to 10:00 am).

Drops and Incomplete Grades – This course follows published UM policies on drop dates and incomplete grades. These are excerpted below.

Drop dates – Dates and policies per the UM catalog:

September 15 – last day to drop course in Cyberbear with no approvals required

October 27 – last day to drop course with instructor and advisor signatures

After October 27 – drops are not allowed unless there are very explicit circumstances such as family emergency, accident/illness, or other severe circumstances *beyond the student's control* that are fully documented and acceptable to the instructor. Low grades or their consequences are not acceptable reasons for a petition approval.

Incompletes – Policy per the UM catalog: "Incomplete grades are not an option to be exercised at the discretion of a student. In all cases it is given at the discretion of the instructor within the following guidelines. A mark of incomplete may be assigned students when (1) the student has been in attendance and doing passing work up to three weeks before the end of the semester, and (2) for reasons beyond the student's control and which are acceptable to the instructor, the student has been unable to complete the requirements of the course on time. *Negligence and indifference are not acceptable reasons.*"

Professional Behavior Expectations – Students are preparing to become business professionals, and professional behavior is expected at all times. Students are expected to abide by the [SoBA Code of Professional Conduct](#).

Treat class sessions like business meetings. Failure to adhere to these expectations may result in being asked to leave the classroom. In addition, students will

- Remain in the class for the duration of class time (no in and out or leaving early)
- Refrain from using any technology, including cell phones, not required for the class conduct at that time
- Being an active listener – not talking while others, including the instructor, are talking.

Email Expectations -- According to University policy, faculty may only communicate with students regarding academic issues via official UM email accounts. Accordingly, students must use their UM accounts. Email from non-UM accounts will likely be flagged as spam and deleted without further response. To avoid violating the Family Educational Rights and Privacy Act, confidential information (including grades and course performance) will not be discussed via phone or email. All email communications should be professional in tone and content. A professional email includes a proper salutation, grammar, spelling, punctuation, capitalization, and signature.

Academic Misconduct -- All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. The University of Montana Student Conduct Code specifies definitions and adjudication processes for academic misconduct and states, "Students at the University of Montana are expected to practice academic honesty at all times." (Section V.A., available at http://www.umt.edu/vpsa/policies/student_conduct.php). All students need to be familiar with the Student Conduct Code. It is the student's responsibility to be familiar the Student Conduct Code.

The School of Business Administration endorses academic honesty as a pillar of integrity crucial to the academic institution. Academic honesty is an important step towards developing an ethical backbone needed in a professional career. Failure to practice academic honesty is considered academic misconduct. Academic misconduct will be penalized to the fullest extent. Students are expected to:

- Be knowledgeable of activities that are considered academic misconduct, as defined in section V.A. of the UM Student Conduct Code,
- Practice academic honesty on all exams, quizzes, homework, in-class assignments, and all other activities that are part of the academic component of a course,
- Encourage other students to do the same.

Confusion may arise in what is and is not academic misconduct. Students should ask if they are unsure if a behavior will be viewed as academic misconduct. A good rule of thumb is that any credit-earning activity in a course should represent the true skills and ability of the person receiving the credit. A partial list of situations that are considered academic misconduct is in the SoBA Professional Code of Conduct at <http://www.business.umt.edu/Soba/SoBAEthics/CodeofProfessionalConduct.aspx>. If at any point a student is unsure if working with another student is permissible, that student should contact the instructor before doing so.

Disability Services for Students -- Students with disabilities will receive reasonable modifications in this course. The student's responsibilities are to request them from me with sufficient advance notice and to be prepared to provide official verification of disability and its impact from Disability Services for Students. Please speak with me after class or during my office hours to discuss the details. For more information, visit the Disability Services for Students website at <http://www.umt.edu/disability>.

Grievance Procedures – The formal means by which course and instructor quality are evaluated is through the written evaluation procedure at the end of the semester. The instructor and department chair receive copies of the summary evaluation metrics and all written comments sometime *after* course grading is concluded. Students with concerns or complaints during the semester should first communicate these to the instructor. This step almost always resolves the issue. If the student feels that the conflict cannot be resolved after meeting with the instructor, the student should contact the department head. If, after speaking with the department head and the instructor, the student still feels that the conflict has not been resolved, contact the Associate Dean of the School of Business Administration.

Tentative Schedule – changes may be announced in class

Week	Chapter/Topic
1	Introduction to Big Data / Python
2	Data Quality
3	Exploratory Data Analysis

4	Binary Logistic Regression with SPSS
5	EXAM / Cluster Analysis with SPSS
6	Continue Cluster Analysis with SPSS
7	Visualization with Tableau or Cognos
8	Continue with Visualization
9	Predictive Modeling with SPSS Modeler
10	Continue SPSS Modeler
11	EXAM / Introduction to Hadoop or Big Insights
12	Continue Hadoop
13	Work on projects
14	Present projects
	EXAM

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