IS-5315-01 BIG DATA ANALYTICS

SYLLABUS AND SCHEDULE | FALL 2020

Course Description

Big data analytics is the application of analytic techniques to very large, diverse data sets that often include varied data types and streaming data. Big data analytics explores business and customer interactions from data that seldom finds its way into a data warehouse or standard report This data is often unstructured data coming from sensors, devices, third parties, Web applications, and social media - much of it sourced in real time on a large scale. Using advanced analytics techniques such as predictive analytics, data mining, statistics, and natural language processing, businesses can study big data to understand the current state of the business and track evolving aspects such as customer behavior. New methods of working with big data, such as Hadoop and Spark, also offer alternatives to traditional data warehousing. This class will define big data and big data analytics techniques and review big data use cases.

Course Information

Course code:	BUAN 5315-01
# credits:	3
Class times:	Online
Location:	Online

Instructor Information

Instructor:	James Lee
Email:	leej@seattleu.edu
Office:	PIGT 430
Office hours:	Online

Learning Outcomes

On successful completion of this course, you will become a
- The prospective manager who can use business analytics in the everyday conduct of running a business.
- The prospective manager who can utilize business analytics to support decision making.
- The prospective manager who can manage the business analytics function in an enterprise.

Core Curriculum Learning Objectives

This course helps students
1. Talk: Terminology. You will be able to explain the meaning of terms used to describe IS concepts and techniques.
2. Think: Advanced Information Systems Concepts. You will be able to evaluate the ways in which IS is used in business.
3. Practice: Skill. You will be able to analyze information systems using the conceptual model and the physical model.
4. Build: Systems Development. You will be able to design and implement information systems.
5. Manage: You will be able to identify and suggest appropriate responses to managerial and organizational issues stemming from development, implementation, and use of IS.

Required readings and materials

- Virtual Machine / Virtual Host (AWS or DigitalOcean)
- *Canvas website*: http://seattleu.instructure.com

Course Policies

This course helps students

- No late submissions, no make-ups, and no late work will be accepted.
- Email policy limits sending problem solving questions via email communications. Specific questions about course materials such as lecture, textbook, homework, and group project must be brought to the instructor's office for face-to-face discussions. Please, consult your visit with your instructor after class meeting or by email prior to 24 hours.
- Students are encouraged to participate actively in discussion in class. Your innovative and creative comments are a critical part of your work. As for class attendance, you are expected to attend all the sessions and come to class before it starts. Please do not come late to class. It hurts your colleagues as well as yourself. Skipping classes is the last thing you may want to do. It will definitely lower your final grade (20 points off).
- The use of computer during the class hours is only limited to course materials. If a student misuses a computer (such as web browsing, chatting, doing homework, etc.), it will lower his/her final grade (20 points off for each incident from your attendance).
- Academic Honesty Policy: While I encourage cooperative learning, I expect all students to submit only work they alone have created. Submitting work authored or created by others anywhere (including the Web), without appropriate reference and credit, will be treated as academic dishonesty resulting in dismissal from the course.
- Cell Phones and PDAs: Cellular phones and PDAs must be turned off before entering the classroom. If your phone emits any sound during a class session or you answer your phone, you will be asked to leave.

Academic Resources

- Library and Learning Commons (http://www.seattleu.edu/learningcommons/)
  (This includes: Learning Assistance Programs, Research [Library] Services, Writing Center, Math Lab)
- Academic Integrity Tutorial (found on Canvas and SU Online)

Academic Policies on Registrar website

(https://www.seattleu.edu/redhawk-axis/academic-policies/)
- Academic Integrity Policy
- Academic Grading Grievance Policy
- Professional Conduct Policy (only for those professional programs to which it applies)

Notice for students concerning Disabilities

If you have, or think you may have, a disability (including an 'invisible disability' such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff located in **Loyola 100, (206) 296-5740**. Disability-based adjustments to course expectations can be arranged only through this process.

Office of Institutional Equity

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University's Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit https://www.seattleu.edu/equity/. If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity (**email**: oie@seattleu.edu; **phone**: 206.296.2824) University Resources and Policies.

Grading

Component	Points Each	Total	Percent
Data Challenge (Final)	200	200	20%
Assignments (10)	45	450	45%
Discussions (10)	35	350	35%

Note.   You are guaranteed to be awarded an A grade if you get over 96.000% overall, at least a B if over 86.000%, and at least a C if over 76.000%.

Course Topics

Week	Topic
1	Big Data
2	Cloud Computing
3	Software Design Architecture
4	SQL
5	NoSQL
6	Data Analytics Platform
7	Data Processing Patterns I
8	Data Processing Patterns II
9	Data Visualization
10	Data Analytics Workflows