Instructor:
Dr. Le Gruenwald
Office, Phone and Email: 233 DEH, 405-325-3498, ggruenwald@ou.edu
Office Hours: 3:00 PM-4:30 PM Monday, Wednesday

Textbook:
Pang-Ning Tang, Michael Steinbach and Vipin Kumar, Introduction to Data Mining, Addison-Wesley, 2006

Reference Materials:
5. Additional materials provided by the instructor

Prerequisite:
Permission of instructor

Software:
WEKA and R

Course Website:
http://canvas.ou.edu

Course Coverage:
This course covers the process, concepts and techniques in data mining, including advanced techniques that deal with big data. It provides students with the necessary background for the application of data mining to real world problems. The topics to be covered include:

**Topic** | **Reading**
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1. Introduction to Data Mining | Ch. 1 (Text)
2. Data | Ch. 2 (Text)
3. Data Mining Tools: WEKA and R | References 1, 2
4. Exploring Data | Ch. 3 (Text)
5. Classification: Concepts, Decision Trees and Model Evaluation | Ch. 4 (Text)
6. Association Analysis | Ch. 6 (Text)
7. Cluster Analysis | Ch. 8 (Text)
8. Anomaly Detection | Ch. 10 (Text)
9. Classification: Alternative Techniques | Ch. 5 (Text)
10. Association Analysis: Advanced Concepts | Ch. 7 (Text)
11. Big Data Mining | Ch. 9 (Text)

Grading:
Group Project (Proposal, Progress Report, Final Report, and Presentation) 45%
Exam 25%
Homework 30%
ACADEMIC INTEGRITY: Homework and Exam are individual work; they must be done by you only – no collaboration with anyone else is allowed. Group Project and Presentation are group work; they must be done by you and your assigned group members only – no collaboration with other groups or anyone else is allowed. Plagiarism will result in action as specified in the Academic Integrity Code at OU: http://integrity.ou.edu/files/Academic_Misconduct_Code.pdf. Consult also the following web page for a Student's Guide to Academic Integrity at OU: http://integrity.ou.edu/students_guide.html.

REASONABLE ACCOMMODATION POLICY: Students requiring academic accommodation should contact the Disability Resource Center for assistance at (405) 325-3852 or TDD: (405) 325-4173. For more information please see the Disability Resource Center website http://www.ou.edu/drc/home.html. Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

RELIGIOUS OBSERVANCE: It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays without penalty.