DEPARTMENT MISSION

To serve the economic interests of industry and the evolving needs of society in a challenging, rapidly-changing, global environment, the Department of Business & Information Technology capitalizes on the strong technological emphasis of Missouri S & T to enable individuals to excel in a technology-centric business world. Recognizing this rapid evolution of the marketplace, we create and disseminate knowledge impacting the theory and practice of business.

COURSE INFORMATION

Course: Information Science and Technology 6443 Information Retrieval and Analysis
Days and Times: 2– 3:15 pm T Th   **Room:** 107A Fulton
Instructor's Name: Dr. Wen-Bin "Vincent" Yu   **Office Location:** 106C Fulton Hall
Office Phone: (573) 341-7502   **Email**: yuwen@mst.edu
Web Locations: canvas.mst.edu
Office Hours: 9:30-10:30 am & 1- 2 pm Tu, Th, or by appointment (Zoom meeting preferred)

Catalog Description: Covers the applications and theoretical foundations of organizing and analyzing information of textual resources. Topics include information storage and retrieval systems, web search engines, text mining, collaborative filtering, recommender systems. Students will also learn the techniques with the use of interactive tools such as SAS. Prerequisite: ERP 5410 or statistics knowledge.

Prerequisites: ERP 5410 Business Intelligence or statistics knowledge.

Instructional Methods: Projects oriented; consist of lectures, SAS labs, discussions and critique.

Course Learning Objectives:

Understand fundamental terminologies related to textural data analysis in Text Mining.
Understand current development of Information Retrieval mechanism such as search engines.
Understand recommender system for Information Retrieval.

Planned Learning Outcomes:

Course Objectives	Program Learning Objectives					
	Oral Communication	Written Communication	Critical thinking	IT Impact Knowledge	Teamwork	Leadership
Be able to understand current development on Information Retrieval.				X		
Be able to understand current development on Textural Information Analysis.				X		
Be able to perform textural data analysis using text mining tool such as SAS Enterprise Miner.				X		
Be able to initiate a project that addresses some research gap in current literature on Information Retrieval and Analysis	X	X	X	X	X	X

COURSE ASSIGNMENTS

This is a project oriented class. All assignments will lead to a semester project. Students will be assigned and/or choose their own reading assignments; turn in critiques for the reading assignments; and prepare to discuss your own assessments/analysis in class.

At around the 8th week, students will be asked to choose a project related to the topics covered in this class. By the end of the 10th week, students would need to submit a summary of literature survey of his/her semester project. Starting from 12th week, you will have couple of WIP(work-in progress) reports to turn in. By Week 16, students will be scheduled to present their project up-to-date and receive comments. During the finals week, students will turn in a complete paper ready to be submitted to a conference or journal.

COURSE POLICIES AND GRADING

Attendance:

For on-campus students, you are expected to attend all classes, be on time, and participate in classroom discussions and exercises. If you are absent, it is your responsibility to obtain any class material and announcement. However, due to the coronavirus (COVID-19) situation, Access to Zoom meetings and the recordings will be available to all students. You should attend the class by following the guidelines specified in the University Coronavirus Information website at https://coronavirus.mst.edu/

For distance students, live participation is not required but you are required to review class archives when live participation does not fit into your work schedule.

Evaluation Methods:

Discussions, Homework Assignments and Participations: 100 points
Projects milestone reports, Presentations and Final papers: 400 points

Grading Scale:

Final grades will be assigned according to the following criteria:
      A = 450 - 500 points;   **B** = 400 - 449 points;   **C** = 350 - 399 points;
      F = below 350 points.

IMPORTANT INFORMATION

Disability Support Services: http://dss.mst.edu

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation. If you have a disability that might require academic accommodations, please visit Disability Support Services in 204 Norwood Hall (341-4211; dss@mst.edu).

Classroom Egress Maps:

Students are expected to familiarize themselves with the classroom egress maps posted on-line at: http://designconstruction.mst.edu/floorplan/.

Student Honor Code and Academic Integrity:
The Honor Code developed and endorsed by the Missouri S&T Student Council can be found at this link: http://stuco.mst.edu/about/honor.shtml. Please read and reflect upon the Honor code and its emphasis on HONESTY and RESPECT.

Violations of the University's academic code include, but are not limited to, possession of or use of unauthorized materials during quizzes or tests; providing unauthorized information to another student; or copying the work of another person. Violations may result in academic penalties in addition to receiving an "F" on the assignment in question.

Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the University of Missouri System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage (http://registrar.mst.edu/academicregs/index.html). Other informational resources for students regarding ethics and integrity can be found online at http://ugs.mst.edu/academicintegrity/studentresources-ai .

S&Tconnect:

S&Tconnect provides an enhanced system that allows students to request appointments with their instructors and advisors via the S&Tconnect calendar, which syncs with the faculty or staff member's Outlook Exchange calendar. S&Tconnect will also facilitate better communication overall to help build student academic success and increase student retention. S&Tconnect Early Alert has replaced the Academic Alert system used by Missouri S&T.

The Burns & McDonnell Student Success Center

The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center was developed as a campus wide initiative to foster a sense of responsibility and self-directedness to all S&T students by providing peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the B&MSSC at 198 Toomey Hall; 573-341-7596; success@mst.edu; facebook: www.facebook.com/SandTssc ; web: http://studentsuccess.mst.edu/

Title IX

Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises.

Missouri S&T's Title IX Coordinator is Vice Chancellor Shenethia Manuel. Contact her directly (manuels@mst.edu; (573) 341-4920; 113 Centennial Hall) to report Title IX violations. To learn more about Title IX resources and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit http://titleix.mst.edu.

Missouri University of Science & Technology
Department of Business and Information Technology
Fall 2020

COURSE OUTLINE (*Tentative*)

(Updated: 8/24/2020)

Week	Month	T R	Topic
1	Aug.	25, 27	Review of Syllabus. Introduction to Information Retrieval and Analysis
2	Sept.	1, 3	Unstructured Textural Data in the Organization Introduction to Data Mining: Clustering and Classification
3		8, 10	Textual Analytics Text mining in SAS, I
4		15, 17	Integration of Unstructured, semi-structured and structured data. Text mining in SAS, II
5		22, 24	(Fall Career Fair: Sept. 22, 2020) Text mining in SAS, III
6	Sept/Oct	29, 1	Methodologies for Textual Analytics
7	Oct	6, 8	Text mining in SAS, IV Analyzing Textural data
8		13, 15	Text mining in SAS, V *Semester project: Topic selection (Milestone 1)*
9		20, 22	Other topics in Unstructured Data
10		27, 29	*Semester project: Literature survey due (Milestone 2)*
11	Nov.	3, 5	Additional topics in Information retrieval and Analysis
12		10, 12	*Semester project: Working Sections -- WIP report (Milestone 3)*
13		17, 19	*Semester project: Working Sections – Potential Publication venue(s) selection (with rationale) due (Milestone 4)*
14		22-27	**Thanksgiving Holidays** **No Class**
15	Dec	1, 3	*Semester project: Working Sections*
16		8, 10	*Semester project: Presentations (Milestone 5)*
17		14-18	Final Exam Week *Semester project: Final Report (Milestone 6)*

Notes:

> *The syllabus is **tentative and subject to change**. Any change will be announced in class and/or on the Canvas class website.*
> *Students need to bring to my attention conflicts of scheduled exams/report due dates and any religious and other holidays they wish to observe prior to the 3rd week of the class*