1. COURSE TITLE/NUMBER, NUMBER OF CREDIT HOURS:

ISM 4433
Section 001
Social Media and Web Analytics
3 credit hours

2. COURSE PREREQUISITES: Working knowledge of Microsoft Windows, Microsoft Office and Excel. This course is part of the College of Business Major in Management Information Systems. If used towards a major or minor, a grade of "C" or better is required to pass the course.

3. COURSE LOGISTICS:

Term:	Fall 2012
Class Location:	FL 411
Time:	Monday 7:10 – 10:00

4. INSTRUCTOR CONTACT INFORMATION:

Instructor:	Tamara Dinev, Ph. D.
Office Address:	FLH 219
Office Hours:	Monday 2:30 – 3:30 pm Wednesday 2:30 – 3:30 pm and by appointment
Phone:	(561) 297-3181
FAX:	(561) 297- =3043
E-mail:	tdinev@fau.edu

5. TA CONTACT INFORMATION: There is no TA in this class at this time.

6. COURSE DESCRIPTION: The course covers concepts and techniques for retrieving, exploring, visualizing, and analyzing social network and social media data, website usage, and clickstream data. Students learn to use key metrics to assess goals and return on investment, perform social network analysis to identify important social actors, subgroups, and network properties in social media.

7. COURSE OBJECTIVES/STUDENT LEARNING OUTCOMES. This course explores the use of social network analysis to understand the growing connectivity and complexity in the world around us on different scales – ranging from small groups to the World Wide Web. It examines how we create social, economic and technological networks and how these networks enable and constrain our attitudes and behavior. The course will discuss how social networks concepts, theories, and visual-analytic methods are being used to map, measure, understand and design a wide range of phenomena such as social networking sites (e.g., Facebook, MySpace), recommender systems (e.g., Amazon, NetFlix, Pandora), trust and reputation systems (e.g., eBay, Epinions, Slashdot), search engines (e.g., Google, Technorati), P2P file-sharing (e.g., BitTorrent; Joost), user-generated content (e.g., Flickr, Wikipedia, Yelp), social bookmarking (e.g., del.icio.us, digg, reddit) and virtual worlds (e.g., Second Life, EverQuest 2, World of Warcraft).

- Study several models to interpret emergent features such as the structure and evolution of the Web graph, its traffic patterns, and the spread of information; and

- Apply technical and analytic skills to develop a significant group research project, with the opportunity to submit the results for publication
- Apply multiple quantitative and qualitative methods (e.g., clickstream analysis, A/B testing, surveys, social network analysis) to analyze website traffic and social media initiatives
- Understand sources and limitations of web-based data
- Use key web metrics (e.g., visits, bounce rate, conversion rate) to assess goals and return on investment (ROI)
- Perform social network analysis to identify important social actors, subgroups (i.e., clusters), and network properties in social media sites such as Twitter, Facebook, and YouTube
- Use appropriate information visualization technique to gain insights into large datasets
- Apply best practices in Search Engine Optimization
- Apply ethical principles to the use of web and social media data
- Become familiar with core research communities, publications, and conferences focused on web and social media analytics and the research questions they are engaged in
- Understand how web and social media analysis can be used to address original research questions in information technology and social science domains

8. COURSE EVALUATION METHOD:

Component:	Weight
Homework assignments	30%
Class Participation	20%
Presentation	20%
Mid-Term Exam	15%
Final Exam	15%

9. COURSE GRADING SCALE:

A	=	(93-100) %	C	=	(73-76.99) %
A-	=	(90-92.99) %	C-	=	(70-72.99) %
B+	=	(87-89.99) %	D+	=	(67-69.99) %
B	=	(83-86.99) %	D	=	(63-66.99) %
B-	=	(80-82.99) %	D-	=	(60-62.99) %
C+	=	(77-79.99) %	F	=	< 60 %

Student mastery of the concepts of the course will be demonstrated through the use of homework problems solved by the student, in class discussions of topics between the student and the instructor, in-class team presentations and a combination of in-class and take-home exams and a term paper.

10. POLICY ON MAKEUP TESTS, LATE WORK, AND INCOMPLETES.

COURSE COMPONENTS.

Homework: Homework is to be turned in by 4:00 pm on Monday of the week assigned (see course content and tentative schedule attached). Late homework (homework turned in before the assignment has been discussed in class) will lose 10% of its value. Homework turned in after an assignment has been discussed in class returned and/or a solution posted will lose 75% of its original value.

Teams: Students will be divided into teams for portions of the course.

Class Participation: There will be a discussion of the materials contained in the text. Two teams will be responsible for leading the discussion each week. One team will lead the discussion and the other will comment on their presentation. However, this is meant to be a class activity so all members of the class are expected to have read the material and be prepared to comment on it.

Each team is to use library resources and/or the internet to find at least two unique references concerning social media and web analytics from **different** sources, analyze the articles and prepare a **wiki** page for each article. A second team will be assigned to edit the **wiki** for each article to insure completeness and readability. All students will be responsible for reading the wikis and participating in the class discussion over the articles, led by the team which created the Wiki. Articles must be substantive, i.e. an announcement of a new product or a new release about a product does not count. The team will turn in a copy of the article when each **wiki** is posted.

Presentation: Your no more than 20 min presentation to class will be analyzing a dataset or a course topic. Students will be expected to a) articulate the basic issues surrounding this topic, b) fairly and accurately characterize the different positions around this issue, and c) advocate and argue for a particular position. You will be graded on your presentation skills, your notes, and how you lead the class discussion. A more detailed description, with examples, will be provided in class.

Exams and Exam Make-Up Policy: There will be two exams during the semester. The last one (the final) is cumulative in this course. These exams will be taken on-line during the time periods noted in the course content outline.

A student who is unable to take an exam due to an emergency must inform me of that fact on or earlier than the day of the exam (except for extreme cases, i.e., you are in a coma in the hospital due to a car accident suffered on the way to the exam) and arrange for a make-up exam before the graded exam is returned to the class. Any student requiring a make-up will have to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead stating the nature of illness *and its severity*). Exams missed without prior approval (or documented proof that the unapproved absence was unavoidable) cannot be made up.   In no event will a make-up be given after the graded exam is returned to the class, which is usually the week after the exam is scheduled.

Incompletes: University policy states that an incomplete may be given only if a student has a passing grade in the course. An incomplete is only meant for students who are unable to complete the course due to severe hardships beyond their control. It is not meant to accommodate students who decide that the workload is too heavy. If an "I" is given, work must be completed within the time period specified by the instructor which is not to exceed 12 months from the time the incomplete is given.

Religious Accommodation: In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments. For further information, please see
http://www.fau.edu/academic/registrar/catalog/academics.php

Students Representing The University At Official Functions: Students representing the University at official functions will not be penalized for missing exams or quizzes while performing these functions. Reasonable accommodations will be made to allow the student to make up the work, usually after the majority of the class has taken the exam or quiz. It is up to the student to bring to the instructor's attention the need for the accommodation, both by presenting the instructor a University form attesting to the need for the accommodation and by reminding the instructor of the event close to its occurrence.
11. SPECIAL COURSE REQUIREMENTS:

Blackboard: You must use Blackboard to retrieve class notes, take tests, and to receive class e-mail from me. Go to http://blackboard.fau.edu to log in.

Web Assist Course: This course will make use of the Blackboard Internet feature. Lecture material and homework assignments will be posted on Blackboard, with due dates. Grade information will also be found there. We will experiment with an occasional on-line session using Blackboard Collaborate. Additionally there will be occasional on-line discussion periods. The times of these discussion periods will be determined as the semester progresses.

12. CLASSROOM ETIQUETTE POLICY: Inappropriate behavior distracts other students and interferes with their learning experience. Inappropriate behavior would include rude and inappropriate comments in either live or on-line discussions. Additionally, in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions. Behavioral deviation from these policies will not be tolerated. Since it is my responsibility to provide an environment that is conducive to learning for everyone is the class, I will deduct points from the final grade of a student who chooses to repeatedly distract others. In particularly egregious cases, I will have the student permanently removed from the class.

13. DISABILITY POLICY STATEMENT: In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute course work must register with the Office for Students with Disabilities (OSD) – in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures**.**

If you are recognized as a student with learning disability by the university, please provide the necessary documentation as soon as possible (no later than the first two weeks of the semester) so that I can make arrangements for you to take tests, etc., according to the prescribed procedures. If you have any other special needs please let me know. If you don't inform me of your special status and arrange for the paperwork with the Office Students with Disabilities, you will be given the same status as the rest of the students in class until you have provided the required information and the Office Students with Disabilities. Grades will not be changed retroactively based on any information provided late.

For further information, please see http://www.fau.edu/eop/ada/ada_policy.php

14. CODE OF ACADEMIC INTEGRITY POLICY STATEMENT:

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards because it interferes with the university mission to provide a high quality education I which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see the College of Business Academic Honesty Policy at http://business.fau.edu/undergraduate/current-students/academic-policies/academic-honesty-policy/index.aspx.

While the FAU Honor Code governs all student activities throughout the course, there are some specific comments which are applicable.

Homework is to be an individual effort. It is certainly permissible to work with other students on assignments, but the final result turned in must be your own work. It is almost impossible for a program of any size above trivial to use identical variables, algorithms and computer memory. Having said that, you may incorporate code you find from other sources as long as you properly reference the sources.

(Reuse of code is one of the objectives of object oriented programming after all). However, cheating, plagiarism, and unauthorized collaboration are unacceptable and subject to disciplinary actions. Plagiarism is turning in someone else's ideas as your own work. Cheating is copying from someone or giving your work to someone else. Such actions may include an "F" in the course and the placement of a letter of fact in your student record in accordance with the rules of the University and the College of Business.

15. REQUIRED TEXTS AND READINGS:

Duncan J. Watts. 2003. Six Degrees: The Science of a Connected Age. New York: W.W. Norton and Company. Available at campus and other bookstores in paperback, and through web bookstores.

Hanneman, Robert and Mark Riddle. 2005. Introduction to Social Network Methods. Free to read on-line or to download. Go to: http://faculty.ucr.edu/~hanneman look for links at the bottom of my home page.

16. SUPPLEMENTARY/RECOMMENDED READINGS

Additional readings may be assigned during the semester as part of the homework or project components.

Software: Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. Ucinet for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies. Download free software from: http://www.analytictech.com/ucinet.htm
The free download is good for 30 days. You may then purchase the software ($40), or download another free copy.

17. COURSE TOPICAL OUTLINE, INCLUDING DATES FOR EXAMS/QUIZZES, PAPERS, COMPLETION OF READINGS: The table below contains a schedule of topics by week. Homework assignments over the material will be found in the assignments section of Blackboard. Assignment due dates are given with the assignments in Blackboard.

TENTATIVE SCHEDULE

Week	Activity	Readings, and asssignments.
1	Introduction: Networks everywhere The social networks perspective	Watts 2. First data collection
2	Social network and web data and methods. Graphs and Matrices. Basic measures for individuals and networks. Information visualization	Hanneman and Riddle 1, 6.
3	Web analytics tools. Clickstream analysis, A/B testing, online surveys	Online material
4	Web search and retrieval. Search engine optimization. Web crawling and Indexing. Ranking algorithms, Web traffic models	Online Material
5	Making connections: Link analysis. Random graphs and network evolution. Social contexts: Affiliation and identity	Watts 3,4. Second data collection
6	Connection: Search, collapse, robustness Social movements and diffusion of innovation	Watts 5, 6.
7	Midterm Exam	Third data collection

8	Centrality, centralization, and power	Hanneman and Riddle 10.
9	Hierarchy, efficiency, and robustness	Hanneman and Riddle 8, section on Krackhardt; Watts 9.
10	Ego neighborhoods. Cliques and groups	Hanneman and Riddle 11.
11	Homophily and social segregation	Hanneman and Riddle 12.
12	Equivalence: Positions and Social Roles	Hanneman and Riddle 12, 13.
13	Sources and limitations of web-based data. Ethics of studying online interaction	Online material
14	Student Presentations	
15	Final exam	

REFERENCES

Hansen, Derek, Ben Sheiderman, Marc Smith. 2011. Analyzing Social Media Networks with NodeXL: Insights from a Connected World. Morgan Kaufmann, 304.

Avinash Kaushik. 2009. Web Analytics 2.0: The Art of Online Accountability.

Easley, D. & Kleinberg, J. (2010). Networks, Crowds, and Markets: Reasoning About a Highly Connected World. New York: Cambridge University Press.
http://www.cs.cornell.edu/home/kleinber/networks-book/

Wasserman, S. & Faust, K. (1994). Social network analysis: Methods and applications. New York: Cambridge University Press.
Monge, P. R. & Contractor, N. S. (2003). Theories of communication networks. New York: Oxford University Press. http://nosh.northwestern.edu/vita.html

Borgatti, S., Mehra, A., Brass, D., & Labianca, G. (2009). "Network Analysis in the Social Sciences." Science, Vol. 323: 892-895.

Wellman, Barry and S.D. Berkowitz (Eds.). 1988. "Structural Analysis: From Method and Metaphor to Theory and Substance." Chapter 2 (pp. 19-61) in Social Structures: A Network Approach. Cambridge: Cambridge University Press.

Emirbayer, M. & Goodwin, J. (1994). "Network analysis, culture, and the problem of agency." American Journal of Sociology, 99(6): 1411-1454. – Critique.

Emirbayer, M. (1997). "Manifesto for a Relational Sociology." American Journal of Sociology, 103(2): 281-317. – Critique.

Powell, W. (1990). "Neither Market Nor Hierarchy: Network Forms of Organization." Research in Organizational Behavior, 12: 295-336. – Influential in organizational/management literature.

Vespignani, A. (2009). "Predicting the Behavior of Techno-Social Systems." Science, 325: 425-428.