INFO 3000 – Social Media Analytics and Application – Spring 2020

Course Number: INFO 3000  
Instructor: Lina Zhou

Classroom: Friday Building — 155  
Office: Friday Building — 363C

Time: MW 4:00PM – 5:15PM  
Email: lzhou8@uncc.edu

Content Access: Canvas  
Phone: (704) 6871976
(https://uncc.instructure.com)

Office Hours: MW 1:30PM – 2:30PM, or by appointment

Course Description
This course takes an integrative approach to social media opportunities for achieving business, marketing, organizational, and personal goals. The emphasis is on social media environment, social network data, social network analysis, and social media analytics and application.

Course Objectives
The rise of social media has brought about unprecedented opportunities for businesses and individuals. The primary objective of this course is to understand social media environment, concepts, social consumers, methods of social network analysis and social media analytics, and social media application. By the end of this course, students will be able to:

- Understand social media environment
- Explain social network properties and perspectives
- Learn to collect and represent social media data
- Analyze social network data
- Perform social media analytics
- Recognize the dark side of social media
- Apply social media analytics to address real-world problems

Prerequisites: INFO 3130
Course Material
There is no required textbook for the class.

Reference books

Supplemental Material
Lecture slides, assignments, and additional course materials will be posted and managed on Canvas.

Course Grading
Each student can earn a maximum of 100% by completing the required tasks successfully. A letter grade will be awarded at the end of the semester as your final grade based on your total points.

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage in Final Grade</th>
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<tbody>
<tr>
<td>Exams (3 @ 230)</td>
<td>690</td>
</tr>
<tr>
<td>Assignments (3 @ 30)</td>
<td>90</td>
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<tr>
<td>Group project (1)</td>
<td>120</td>
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<tr>
<td>Class Participation (25 attendance, 20 in-class participation, 10 article presentation, 45 in-class homework)</td>
<td>100</td>
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<tr>
<td>Total</td>
<td>100%</td>
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Final letter grade will be calculated based on the following scale:
- A: 90% and above;
- B: 80-89.9%;
- C: 70-79.9%;
- D: 60-69.9%;
- F: below 60%.

The course grades are posted on Canvas for informational purposes only. The official overall grade is computed and kept in the instructor’s grade book.

Exams
There will be three exams. All exams are closed book and closed notes, unless otherwise indicated. All exam grades will be posted on Canvas. The instructor will keep all exams after grading. However, exam reviews are available during office hours or by appointment. Students who like to review their exams should submit a request within 7 days of the posting of the exam grades and set up a time for the review. No grade reviews or adjustments will be done beyond this 7-day period.

Exams are a form of intellectual property belonging to those who create them. Consequently, exams must remain in my possession or under my control at all times. This means that exams may not be...
taken out of the room or copied. Students are encouraged to review their exams during office hours or by appointment. However, failure to return an exam after taking or reviewing it or removing an exam from my presence at any time or copying an exam will be considered theft of intellectual property. Such action will result in an exam grade of zero and may warrant further disciplinary action. Missed exams: In the event that the excuse is approved before the exam date (a rare case and requires supporting documents), the student will be given a make-up exam. A student who misses an exam without prior approval, possibly due to an unexpected situation on the exam day, should contact the instructor within 6 hours of the exam start date/time and provide appropriate supporting documentation to be eligible for the makeup exam. It is the student’s responsibility to be aware of and follow the makeup exam policies and no special accommodations will be made for any exceptions. No makeup exam will be given after April 27, 2020.

Assignments
Students need to complete three individual assignments during the course of the semester. These assignments will be submitted on Canvas by 4:00pm on the due date. Assignments submitted after the due date will be considered late. A penalty of 25% of the assignment value per day (including weekends) is assessed on late assignments beginning on the due date.

You must complete each assignment on your own. Any sharing between students will be considered a violation of the Academic Integrity Code and will result at a minimum in a grade of zero for the assignment with a possibility for further disciplinary action.

All changes in assignments or schedules will be posted on Canvas. It is your responsibility to keep up with the changes that are posted on Canvas.

Group Project
Students will form a group of 3 members to complete the project. The group project consists of 3 deliverables: group formation, proposal, presentation and report. All project deliverables should be submitted to course canvas at the beginning of the class (4:00pm) on the scheduled due dates.

Group formation and topic selection (10 points)
- You are expected to take the initiative to form groups on your own.
- A group cannot have less than 3 or more than 4 students. The maximum project grade for students not belonging to a group will be a B.
- If you cannot find a group on your own by the deadline, I will randomly assign you to a group.
- The instructor reserves the right to assign an additional student randomly to a 3-member group depending on the class size.
- Each group collectively makes a decision on the group project topic.
- A list of group members and the topic of group selection is due on January 29.

Project proposal (30 points)
- The proposal must contain 3 pages: one-page description of the motivations of studying the topic, another page of outline of the final report, and a third page of a minimum of 12 key references on the selected topic (a minimum of 6 academic articles).
- The proposal is due on March 11.

Group presentation (60 points)
- Each group must submit their presentation file by the scheduled date of presentation.
• All group members are expected to participate in the presentation.
• The last slide(s) must contain a complete list of sources as references.
• The presentation is tentatively scheduled for the last week of the classes.

Project report (20 points)
• The due date for the project report is May 4.
• Detailed project requirements, report formatting guideline, and grading rubrics will be provided in separate files on Canvas.
• If necessary, peer reviews will be factored into the grade.

Class Participation
Class attendance will be taken at random in class during the semester. Students are expected to attend every class and remain in class for the duration of the session. Your attendance grade is the percentage of attendance multiplied by 25. Failure to attend class, arriving late, or early departure may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student’s obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. You are responsible for all lecture material regardless of whether you attend each class. Please note that office hours are not to be used as a substitute for class attendance.

You are encouraged to have active participation in-class discussions. The in-class participation is rated at the following scale: 5 (does not participate), 10 (occasional participation), 15 (regular participation), 20 (exceptional participation). Each of us may have strongly differing opinions on the various topics of class discussions. The conflict of ideas is encouraged and welcome. The orderly questioning of the ideas of others, including the instructor, is similarly welcome. However, the instructor will exercise responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion. The class will be conducted in an atmosphere of mutual respect. You should expect that if your conduct during class discussions seriously disrupts the atmosphere of mutual respect, you will not be permitted to participate further.

Each student will have an opportunity to give a short presentation (5~7 minutes) on one article in social media analytics and application in support of business decision making.
• The presentation will be rated at the following scale: 4 (does not present), 6 (unsatisfactory), 8 (satisfactory), and 10 (exceptional presentation).
• The presentations will be scheduled throughout the semester by the instructor.
• The presentation will be based on your selected articles from academic or trade journals and/or conferences. The article should contain significant content.
• Your presentation is expected to cover problem context, methods, and findings of the selected article, among others.
• You are encouraged to prepare a presentation file in support of your presentation. The presentation file should be submitted on the day of your scheduled presentation.

During the semester, the instructor will give in-class homework to be completed in class. The total points of the homework will be 45. The homework usually cover topics which have been completed or topics to be discussed that day. The schedule and points for each assignment will be announced by the instructor.
There is NO MAKE UP for in-class homework, irrespective of the reason for a student missing the homework. Instead, you will be allowed to drop ONE in-class assignment (missed or lowest grade).

Class Policies

Attendance and Participation Policy

Attendance and participation are required and tardiness or early departure is disruptive and is, of course, discouraged. Students will be held responsible for any material covered, announcements made, assignments passed out, and any other type of work that they may miss during any absence from class. Recurrence of such disruptive behavior will be noted and will lead to deduction of significant grade points and the student being asked to leave the class.

Class Behavior Policy

Inappropriate behavior distracts from the ability of others to profit from their in-class experience. Such behavior includes arriving late, leaving early, talking, surfing the net, and so on.

Rude and inappropriate behavior will not be tolerated. Since it is my responsibility to provide an environment that is conducive to learning for everyone in the class, I will deduct points from the grade of any student who chooses to repeatedly distract others. In particularly egregious cases, I will have the student permanently removed from the class.

Under no circumstances will students be permitted to spend their lab time working on assignments for other classes, checking e-mail, surfing the Web, or printing out homework. Attempts to engage in such behavior will be reflected in lower grades and may lead to removal from the course.

Electronic Devices in Class

The use of cell phones, smart phones, or other mobile communication devices is disruptive, and is therefore prohibited during class unless being used as a part of Poll Everywhere or at the instructor’s discretion. Cellular phones MUST BE TURNED OFF DURING CLASS, except in cases of medical emergencies. Except in emergencies, those using such devices must leave the classroom for the remainder of the class period. Calculators, computers, smart phones, or smart watches are prohibited during examinations and quizzes, unless specified. Use of computing devices for purposes other than those required for the purposes of the class topic is prohibited. This includes use of laptops, lab computers, phones or other devices for Internet browsing, game playing, reading news, texting, chatting, IM and other activities not required for the class.

Electronic video and/or audio recording is not permitted during class unless the student obtains permission from the instructor. If permission is granted, any distribution of the recording is prohibited. Students with specific electronic recording accommodations authorized by the Office of Disability Services do not require instructor permission; however, the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.
Extra Credit for this Class
Any extra-credit opportunities will be the instructor's decision and such opportunities will be presented to the whole class and not to individual students. It is possible that there will be no extra-credit at all for this class. In any case, no extra-credit opportunities will be given after 4/27/2020. The total points from all the extra-credit combined will not exceed 20 points (i.e., 2%) towards the final grade. I strongly recommend that you do not depend on any extra credit opportunities to improve your grade later in the semester.

Grade Appeals Policy
If you believe that the grade you received on an assignment or an exam was in error or unfair, you can appeal to the professor in writing within 7 calendar days of posting the grades. The appeal should clearly state the reasons why you believe the grade to be unfair or the nature of the error. Overdue appeals will not be considered.

Academic Integrity
As a program that helps to create business and government leaders, the College of Business has an obligation to ensure academic integrity is of the highest standards. Standards of academic integrity will be enforced in this course.

University regulations will be strictly enforced in all cases of academic irregularities, cheating or plagiarism or any variations thereof. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be his/her own work.

Students have the responsibility to know and observe the requirements of The UNC Charlotte Code of Student Academic Integrity available online at http://legal.uncc.edu/policies/up-407. This code forbids cheating, fabrication or falsification of information, multiple submission of academic work, plagiarism of written materials and software projects, abuse of academic materials (such as library books on reserve), and complicity in academic dishonesty (helping others to violate the code). Additional examples of violation of the Code include:

- Representing the work of others as your own.
- Using or obtaining unauthorized assistance in any academic work.
- Giving unauthorized assistance to other students.
- Modifying, without instructor approval, an examination, paper, record, or report for the purpose of obtaining additional credit.
- Misrepresenting the content of submitted work.

Students are expected to report cases of academic dishonesty they become aware of to the course instructor who is responsible for dealing with them.

For this course, it is permissible to assist classmates in general discussions about the homework. General advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned homework and laboratory exercises. Students may not "work together" on graded assignments. Such collaboration constitutes cheating, unless it is a group assignment. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own. If you need help on an assignment, contact your instructor or the TA, not other classmates.
Any further specific requirements or permission regarding academic integrity in this course will be stated by the instructor, and are also binding on the students in this course.

Students who violate the code can be punished to the extent of being permanently expelled from UNCC and having this fact recorded on their official transcripts. The normal penalty is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases, the course grade is reduced to "F."

If you are unclear about whether a particular situation may constitute an honor code violation, you should meet me to discuss the situation. Feel free to discuss the definition of cheating and/or plagiarism with me if you are unclear on these terms or have questions about the acceptability of a particular type of action.

The instructor may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

Disability Accommodations
UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please send me your accommodation letter as early as possible. You are encouraged to meet with me to discuss the accommodations outlined in your letter. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 (Fretwell 230).

Diversity and Inclusion
The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

Incomplete Grade Policy
Receiving a grade of incomplete ("I") is not based solely on a student’s failure to complete work or as a means of raising his/her grade by doing additional work after the grade report time. An incomplete grade can be given only when a student has a serious medical problem or other extenuating circumstance that legitimately prevents completion of required work by the due date. In any case, for a student to receive an 'I' grade, the student's work to date should be passing, he/she must have completed a significant portion of the course, and the student must provide proper written proof (e.g., a doctor’s note) of the extenuating circumstances.

Course Changes Disclaimer
The instructor reserves the right to make any necessary changes to the course content, schedule, and policies set forth in this syllabus. Changes will be announced in class and will also be posted online.

Religious Accommodation for Students Policy
The instructor will observe University Policy 409 (https://legal.uncc.edu/policies/up-409) on matters of religious accommodation. Please note that the procedure prescribed by this policy requires a notice to the instructor prior to the census date of the semester.
Copyright Ownership in Course Materials

The lectures and course materials, including presentations, tests, exams, outlines, and similar materials, are protected by copyright. The instructor is the exclusive owner of copyright in those materials created by the instructor. You are encouraged to take notes and make copies of course materials for your own educational use. However, you may not, nor may you knowingly allow others to reproduce or distribute lecture notes and course materials publicly without express written consent of the instructor. This includes providing materials to commercial course material suppliers such as CourseHero and other similar services. Students who publicly distribute or display or help others publicly distribute or display copies or modified copies of an instructor's course materials may be in violation of University Policy 406, The Code of Student Responsibility. Similarly, you own copyright in your original papers and exam essays. If the instructor is interested in posting your answers or papers on the course web site, the instructor will obtain your written permission.
# Tentative Class Schedule

*** This tentative schedule is subject to change ***

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Jan 8</td>
<td>• Course Introduction</td>
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<tr>
<td>Week 2</td>
<td>Jan 13</td>
<td>• The social media environment</td>
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<tr>
<td></td>
<td>Jan 15</td>
<td>• The social media environment</td>
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<tr>
<td>Week 3</td>
<td>Jan 20</td>
<td>M.L. King Day, no Class 😊</td>
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<td></td>
<td>Jan 22</td>
<td>• Social network terminology and representation</td>
<td>Topic Approval</td>
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<tr>
<td>Week 4</td>
<td>Jan 27</td>
<td>• Social network data collection and application</td>
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<tr>
<td></td>
<td>Jan 29</td>
<td>• Web crawling</td>
<td>Project Group Due</td>
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<tr>
<td>Week 5</td>
<td>Feb 3</td>
<td>• Graphs and matrices basics</td>
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<tr>
<td></td>
<td>Feb 5</td>
<td>• PageRank and HITS</td>
<td>HW 1 Due</td>
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<tr>
<td>Week 6</td>
<td>Feb 10</td>
<td>• Centrality measures</td>
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<td></td>
<td>Feb 12</td>
<td><strong>Exam 1</strong></td>
<td></td>
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<tr>
<td>Week 7</td>
<td>Feb 17</td>
<td>• Centrality measures</td>
<td></td>
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<td></td>
<td>Feb 19</td>
<td>• Optional Computer Lab 1</td>
<td></td>
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<tr>
<td>Week 8</td>
<td>Feb 24</td>
<td>• Subgroup and community analysis</td>
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<tr>
<td></td>
<td>Feb 26</td>
<td>• Subgroup and community analysis</td>
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<tr>
<td>Week 9</td>
<td>Mar 2</td>
<td>Spring Break, no class. 😊</td>
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<td></td>
<td>Mar 4</td>
<td>Spring Break, no class. 😊</td>
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<tr>
<td>Week 10</td>
<td>Mar 9</td>
<td>• Affiliations and social network models</td>
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<td>Mar 11</td>
<td>• Optional Computer Lab 2</td>
<td>Proposal Due</td>
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<tr>
<td>Week 11</td>
<td>Mar 16</td>
<td>• Social commerce</td>
<td>HW 2 Due</td>
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<tr>
<td></td>
<td>Mar 18</td>
<td>• Social commerce</td>
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<tr>
<td>Week 12</td>
<td>Mar 23</td>
<td><strong>Exam 2</strong></td>
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<td></td>
<td>Mar 25</td>
<td>• Social consumers</td>
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<tr>
<td>Week 13</td>
<td>Mar 30</td>
<td>• Social consumers</td>
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<td></td>
<td>Apr 1</td>
<td>• Text analytics</td>
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<tr>
<td>Week 14</td>
<td>Apr 6</td>
<td>• Text analytics</td>
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<td></td>
<td>Apr 8</td>
<td>• Optional Computer Lab 3</td>
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<tr>
<td>Week 15</td>
<td>Apr 13</td>
<td>• Sentiment analysis</td>
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<td></td>
<td>Apr 15</td>
<td>• User behavior analytics</td>
<td>HW 3 Due</td>
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<tr>
<td>Week 16</td>
<td>Apr 20</td>
<td>• Social media recommender system</td>
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<td></td>
<td>Apr 22</td>
<td>• Project Day</td>
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<tr>
<td>Week 17</td>
<td>Apr 27</td>
<td>• Group project presentation</td>
<td></td>
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<tr>
<td>Week 18</td>
<td>May 4</td>
<td><strong>Exam 3 (5:00- 6:15pm)</strong></td>
<td>Group Report Due</td>
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</tbody>
</table>

| Week 18 | May 4  | **Exam 3 (5:00- 6:15pm)**                                              | Group Report Due           |