INF 200: Research Methods for Informatics (3 credit hours)

Meeting Information: Mondays & Wednesdays 2:45 – 4:05 PM in room ES242

Instructor: Luis F. Luna-Reyes

Office location: BA 312

Office hours: Mondays 1:30 – 2:30 pm and Wednesdays 1:00 – 2:00 PM

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Teaching Assistant: Xiaoyi (Amy) Zhao

Office location: BA 313A

Office hours: Tuesdays and Wednesdays 1:00 – 2:00 pm

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Course Information:

Course description from *Undergraduate Bulletin*:

In this course students will gain an understanding of key methods, and techniques in research; prepare to critically evaluate, and engage in research. Topics covered will include: identifying and articulating research problems, posing research questions, research design, data collection strategies, quantitative and qualitative analyses, interpreting results of analyses, and concerns in human subject research.

Course Approach:

I believe that learning occurs when we all engage in reading, discussing and doing some tasks. I also believe that learning happens only when the learner commits to his or her own learning. The class design is based on previous experiences of colleagues at the Department of Informatics, and offers spaces for conversation and learning-by-doing.

Prerequisites: INF 100, Information in the 21st Century.

General Education Component:

Gen Ed [http://www.albany.edu/undergraduate_bulletin/general_education.html]

Critical Thinking:

Approved courses provide opportunities for students to the systematic process of analyzing and evaluating data, hypotheses, arguments, or critiques through critical thought. It is an essential component of any academic major. The research, scholarship, and creative activities of university faculty ensure that our academic disciplines are constantly evolving. The facts and theories in academic disciplines are essential knowledge our students must learn, but it is mastery of critical thinking that will allow for lifelong educational and occupational development, and facilitate students' functioning as engaged citizens. Students' coursework in the major will cultivate in them habits of critical thinking, as they learn to approach questions and problems in critical, logical, and reflective ways.

Students completing educational experiences that satisfy the Critical Thinking competency as part of the requirements for graduation in the major will:

- formulate complex questions, problems, and hypotheses clearly and precisely, and apply familiar and new concepts in developing solutions and conclusions;
- gather and assess relevant information/data;
- test hypotheses against relevant criteria and standards, accounting for the facts;
- develop well-reasoned arguments and communicate them effectively to others;
- demonstrate habits of reflection upon their own and others' thinking—identifying, analyzing, and evaluating their own and others' arguments; and challenging conclusions with alternative explanations or points of view.

Course Goals:

By the end of the semester, you should be able to:

- Describe current ethical issues in Informatics research.
- Formulate good research questions and design appropriate research.
- Collect your own data using a variety of methods.
- Critically evaluate your own research and that of other social scientists.

Readings & Additional Required Materials

Required readings:

> Schutt R.K. (2014). *Investigating the social world: The process and practice of research* (8th ed.). Thousand Oaks, Ca.: Sage Publications.

> NOTE: Rent this edition through *Vitalsource (e-book) or Amazon (paperback)* (https://www.vitalsource.com/products/investigating-the-social-world-the-process-and-russell-k-schutt-v9781483350684)

Required Additional Materials:

> Personal, portable laptop or tablet for use during class.

Class Meetings

The class meets twice a week: Mondays and Wednesdays from 2:45 to 4:05 pm. It is *very* important that you attend class - there are frequent quizzes and team activities almost every day, for which everyone is responsible. Your grade will suffer if you are consistently absent.

Course Policies

Attendance:

Attendance is expected in every class and students are expected to arrive on time. If you foresee a time conflict in advance that will prevent attendance at a class or exam or completion of an assignment, you need to report this prior to scheduled class time. An absence will only be considered excused if it was previously discussed and agreed upon by me.

Students absent (for any reason!) for more than 20% of classes (6 classes) will receive a grade of E.

Plan carefully for classes that you know you will need to miss. Work, religious practice, sports team travel, military duty, club activities, fraternity/sorority obligations, family responsibilities, assignments for other courses, and even brief illnesses, etc.—these are your responsibility to manage. If you need to be out of class for any of these, make sure you have conserved your allowable absences (i.e. no more than six!) to cover the class you need to miss.

Grading & Evaluation Methods:

The grade breakdown for the course is:

- Individual Assignments: 40 %
- In-Class Assessments: 35 % (10, 10, and 15 % respectively)
- Reading Quizzes (unannounced):   10 %
- In-Class Participation: 15 %

A-E graded:

93 – 100%	A	77 – 79%	C+	60 – 62%	D-
90 – 92%	A-	73 – 76%	C	0 – 59%	E
87 – 89%	B+	70 – 72%	C-		
83 – 86%	B	67 – 69%	D+		
80 – 82%	B-	63 – 66%	D		

Make-up Policy:

There are generally no make-up opportunities for missed assignments and quizzes.

Late Assignments:

Assignments are due on the due date at the specified time, in class or submitted through Blackboard, depending on the assignment. Late assignments will be accepted, but at the cost of a full letter grade for missing the first deadline and an additional letter grade for each additional 24 hours late. No work will be accepted five days past the original due date or the last day of classes for the semester at noon, which ever date falls first.

Other Course Information:

INF Mini Showcase:

During the last week of April (date to be announced), the Department of Informatics is having a showcase event. The event is mandatory, and you will be presenting there your final projects. It will provide an additional opportunity to learn about other courses and projects.

Withdrawal from the course:

The drop date for the Spring semester is Tuesday, April 5 for undergraduate students. That is the last date you can drop a course and receive a 'W'. It is your responsibility to take action by this date if you wish to drop the course. In particular, grades of "incomplete" will not be awarded to students because they missed the drop deadline.

Cell phones, tablets & laptops:

Please make sure your phones and other electronic devices are turned off before entering the classroom unless we are doing a class exercise where they are required. Use of phones, tablets, computers, etc. for non-class purposes during class will count against you in your class participation grade. While you may be using computers in class, texting, using Facebook, etc., are not appropriate uses of class time and your participation grade will suffer for it.

Incompletes:

As per the Undergraduate Bulletin, the grade of Incomplete (I) will be given "only when the student has nearly completed the course requirements but because of circumstances beyond the student's control the work is not completed." A student granted an incomplete will make an agreement specifying what material must be made up, and a date for its completion. The incomplete will be converted to a normal grade on the agreed upon completion date based upon whatever material is submitted by that time.

Important: Incompletes will not be given to students who have not fulfilled their classwork obligations, and who, at the end of the semester, are looking to avoid failing the course. This is asking for special treatment.

Academic Integrity

It is every student's responsibility to become familiar with the standards of academic integrity at the University. Claims of ignorance, of unintentional error, or of academic or personal pressures are not sufficient reasons for violations of academic integrity. See http://www.albany.edu/undergraduate_bulletin/regulations.html

Course work and examinations are considered individual exercises. Copying the work of others is a violation of university rules on academic integrity. Individual course work is also key to your being prepared and performing well on tests and exams. Forming study groups and discussing assignments and techniques in general terms is encouraged, but the final work must be your own work. For example, two or more people may not create an assignment together and submit it for credit. If you have specific questions about this or any other policy, please ask.

The following is a list of the types of behaviors that are defined as examples of academic dishonesty and are therefore unacceptable. Attempts to commit such acts also fall under the term academic dishonesty and are subject to penalty. No set of guidelines can, of course, define all possible types or degrees of academic dishonesty; thus, the following descriptions should be understood as examples of infractions rather than an exhaustive list.

- ➢ Plagiarism
- ➢ Allowing other students to see or copy your assignments or exams
- ➢ Examining or copying another student's assignments or exams
- ➢ Lying to the professor about issues of academic integrity
- ➢ Submitting the same work for multiple assignments/classes without prior consent from the instructor(s)
- ➢ Getting answers or help from people, or other sources (*e.g.* research papers, web sites) without acknowledging them.
- ➢ Forgery
- ➢ Sabotage
- ➢ Unauthorized Collaboration (just check first!)
- ➢ Falsification
- ➢ Bribery
- ➢ Theft, Damage, or Misuse of Library or Computer Resources

Any incident of academic dishonesty in this course, no matter how "minor" will result in

1. No credit for the affected assignment.
2. A written report will be sent to the appropriate University authorities (*e.g.* the Dean of Undergraduate Studies)
3. One of -
   - o A final mark reduction by *at least* one-half letter grade (*e.g.* B → B-, C- → D+),
   - o A Failing mark (E) in the course, and referral of the matter to the University Judicial System for disposition.

Policies from Undergraduate Bulletin: http://www.albany.edu/undergraduate_bulletin/regulations.html

Responsible Use of Information Technology

Students are required to read the University at Albany Policy for the Responsible Use of Information Technology available at the ITS Web Site:
https://wiki.albany.edu/display/public/askit/Responsible+Use+of+Information+Technology+Policy

Time Management

For every credit hour that a course meets, students should expect to work 3 additional hours outside of class every week (3 x 3= 9). For a three-credit course you should expect to work 9 hours outside of class every week. Manage your time effectively to complete readings, assignments, and projects.

Available Support Services

Reasonable accommodation

Reasonable accommodation will be provided for students with documented physical, sensory, cognitive, learning and psychiatric disorders. If you believe you have a disability requiring accommodation in this class, please notify the Director of Disability Resource Center (Campus Center 137, 442-5490). That office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations. In general, it is the student's responsibility to contact the instructor at least one week before the relevant assignment to make arrangements.

Course Outline and Schedule

The following schedule of lecture topics and reading assignments is preliminary and may be changed as the semester progresses. The final schedule and specific homework and lab assignments and materials will be provided in Blackboard. Students are expected to have read the listed material before it is covered in class. Unannounced "reading quizzes" will be given throughout the semester.

Module	Topic	Readings	Individual Assignments
1: Getting Started	Introduction and Overview	*How to Read Academic Texts Critically*	
	What is social research?	Chapter 1	Homework #1
		Chapter 2	Homework #1 Revised
	Research Questions	*Close Readings Guidelines*	Homework #2
		Lowhorn, Qualitative and Quantitative Research How to Choose the Best Design- 2007	
	Module 1 Assessment *Tentative date 2/10*		
2: Quantitative Research	Measuring Concepts	Chapter 4	
	Finding a Sample	Chapter 5	Homework #4
	Designing a Project	Chapter 6	Homework #5
	Experiments	Chapter 7	Homework #6
	Survey Research	Chapter 8	Homework #7
	Module 2 Assessment *Tentative date 3/29*		
3: Qualitative Research	Basic Quantitative Data Analysis	Chapter 14	Homework #8
	Secondary Data Analysis	Chapter 13	
	Historical Research	Chapter 12	Draft Poster
	Field Research Interviews Content Analysis	Chapter 9	Final Poster (Homework #9)
	Basic Qualitative Data Analysis	Chapter 10	
	Research Ethics	Chapter 3	Final Research Proposal Paper (Homework #10)
	Module 3 Assessment *Tentative date 5/4*		