CS 418: Introduction to Data Science
Syllabus (Updated)
Fall 2018

Logistics, Staff, and Contacts

Lectures

Days: Mondays, Wednesdays, and Fridays
Time: 01:00PM - 01:50PM (CRN: 42738, 42739)
Location: BH 208

Instructor

Gonzalo A. Bello

Email: gabellol@uic.edu
Office: SEO 939
Office Phone: 312-413-5360
Office Hours: Mondays, Wednesdays, and Fridays, 03:00PM - 03:50PM

Meetings outside office hours may be available by appointment.

Teaching Assistant

Mahshid Hosseini

Email: mhosse4@uic.edu
Office: SELE 2268
Office Hours: Thursdays, 10:00AM - 12:00PM

Course Website

Blackboard: uic.blackboard.com
Gradescope: gradescope.com/courses/22799
Piazza: piazza.com/uic/fall2018/cs418

Grades, lecture slides, lecture videos, homework assignments, and other materials will be posted on *Blackboard*.

Piazza will be used for all course-related discussion. You are strongly encouraged to participate actively in the message boards. The teaching staff will monitor the message boards daily and endorse correct answers from students, which will be counted towards bonus points (see **Extra Credit** section below).

When posting, please follow these guidelines:

- *Look before you post*; someone might already have answered your question.
- *Use an appropriate tag* (e.g., hw1, project1, exam, lecture).
- *Post publicly* so other students can benefit from your question. Use private messages only for grading issues or posts of a personal nature. Anonymous public messages are also possible.

- *Don't post answers to assignment questions*; instead, offer hints or clarifications of the material.

Please don't email the teaching staff directly; all communication will be handled through Piazza.

Course Description

Provides an in-depth overview of data science in engineering. Topics include modeling, storage, manipulation, integration, classification, analysis, visualization, information extraction, and big data in the engineering domain. *Course Information*: 3 undergraduate hours. 4 graduate hours. Extensive computer use required.

"*The ability to manipulate and understand data is increasingly critical to discovery and innovation. As a result, we see the emergence of a new field—**data science**—that focuses on the processes and systems that enable us to extract knowledge or insight from data in various forms and translate it into action.… **[D]ata science** has evolved as an interdisciplinary field that integrates approaches from such data-analysis fields as statistics, data mining, and predictive analytics and incorporates advances in scalable computing and data management.*"

Berman, F., Rutenbar, R., Hailpern, B., et al., Realizing the Potential of Data Science

Prerequisites

- CS 251: Data Structures.
- STAT 381: Applied Statistical Methods I; or IE 342: Probability and Statistics for Engineers; or ECE 341: Probability and Random Processes for Engineers.

Textbook

No textbook is required. Readings will be assigned for every lecture.

Grading

Students are required to complete all assignments in order to receive full credit. The final grade will be determined by the following components:

Component	Quantity	Weight	Details
Quizzes	4*/5**	5%	Individual, online
Lab Assignments	4*/5**	5%	Individual
Homework Assignments	4	25%	Individual
Exam	1	15%	Individual, in class, closed book
Projects	2	30%	In groups (2-3 students)
Final Project	1	20%	In groups (2-3 students)
Extra Credit	-	Up to 2%	See **Extra Credit** section below

* For undergraduate students.

** For graduate students.

The final letter grade will be determined using the following scale:
90 ≤ **A** ≤ 100; 80 ≤ **B** < 90; 70 ≤ **C** < 80; 60 ≤ **D** < 70; 0 ≤ **F** < 60

Extra Credit

Students may earn extra credit by submitting lecture assignments, participating in class, or by answering questions on Piazza. Each lecture assignment, class participation, and answer on Piazza **endorsed by the teaching staff** counts as one extra unit. **Students are encouraged to keep track of their extra units**. At the end of the semester, the top 25% of the students (among those who have earned extra units) will each receive 2% of the course grade as extra credit. The bottom 25% will each receive 0.5% and the rest will each receive 1%. Additional opportunities for extra credit may be offered at the discretion of the instructor.

Course Policies

Attendance

Attendance is strongly recommended. Students are responsible for making up any course material covered during missed classes.

Quizzes, Assignments, and Projects

Quizzes will be posted on *Blackboard*. You will have **2 attempts** to submit each quiz and will receive the grade from your best attempt.

Lab and homework assignments must be submitted on *Gradescope*. Projects must be submitted on *Blackboard*. For projects, students must work in **groups of 2 to 3 students**. Further instructions for the submission will be given in each assignment and project.

The deadline for submission of quizzes, assignments, and projects is 11:59PM (Central Time) on the day due. Any deadline extensions are up to the discretion of the instructor and will be announced to the class.

Undergraduate students are required to submit **4 quizzes**, **4 lab assignments** and the **first 2 projects**. **Graduate students** are required to submit **5 quizzes**, **5 lab assignments** and the **first 2 projects**. **All students are required to submit the final project**. The remaining quizzes and lab assignments will be counted for **extra credit**. Each **extra credit** quiz or lab assignment will be worth 0.5% of the course grade.

Late Submissions

Late submissions of assignments and projects will be accepted within 0-12 hours after the deadline with a 5-point penalty and within 12-24 hours after the deadline with a 20-point penalty. No late submissions (penalty or not) will be accepted more than 24 hours after the deadline.

No late submissions will be accepted for quizzes or for the final project.

Regrade Requests

Requests for regrades of assignments and exams may be submitted on *Gradescope*. **Regrade requests will not be accepted more than one week after grades for that assignment or exam have been posted**.

To request a regrade, you must follow these guidelines:

- *Review the sample solution* to understand how to solve the assignment or exam.
- *Review the grading rubric* to understand how points were assigned.
- Based on the sample solution and the grading rubric, *write a clear and complete description* explaining **why** you should receive more points on the assignment or exam.

If you do not follow these guidelines, the teaching staff will dismiss your regrade request without further review. Please note that when you request a regrade, the teaching staff will review your entire submission and your grade for the assignment or exam can go up, down, or remain unchanged.

Academic Honesty

Quizzes, lab assignments, homework assignments, and exams are individual. Students are required to submit their own solutions and **acknowledge any sources used**. **No discussion between students is allowed**. For projects, students must work in groups of 2 to 3 students.

Offering or receiving any kind of unauthorized or unacknowledged assistance (from students, friends, family, tutors, textbooks, or the Internet) **is a violation of the University's academic integrity policies**, will result in a grade of zero for the assignment and will be subject to disciplinary action (see **Academic Integrity** section below).

Academic Integrity

As an academic community, UIC is committed to providing an environment in which research, learning, and scholarship can flourish and in which all endeavors are guided by academic and professional integrity. All members of the campus community–students, staff, faculty, and administrators–share the responsibility of insuring that these standards are upheld so that such an environment exists. Instances of academic misconduct by students will be handled pursuant to the Student Disciplinary Policy.

Religious Holidays

Students who wish to observe their religious holidays shall notify the faculty member by the tenth day of the semester of the date when they will be absent unless the religious holiday is observed on or before the tenth day of the semester. In such cases, the student shall notify the faculty member at least five days in advance of the date when he/she will be absent. The faculty member shall make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. If the student feels aggrieved, he/she may request remedy through the campus grievance procedure.

Disability Accommodation

UIC is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities. Students with disabilities who require accommodations for access to and/or participation in this course are welcome, but must be registered with the Disability Resource Center (DRC). You may contact DRC at 312-413-2183 (v) or 773-649-4535 (VP/Relay).

For more information on UIC's policies on working with students with disabilities, please see the University's Guide for Accommodating Students.

Grievance Procedures

UIC is committed to the most fundamental principles of academic freedom, equality of opportunity, and human dignity involving students and employees. Freedom from discrimination is a foundation for all decision making at UIC. Students are encouraged to study the University's Nondiscrimination Statement. Students are also urged to read the University's Public Formal Grievance Procedures. Information on these policies and procedures is available on the website of the University's Office of Access and Equity.

Last Modified: December 07, 2018