

Syllabus
Ethics of Data Analytics (ITAO 70330)
Fall 2018/Q1 (August-October 2018)

Location: Room 158, Mendoza College of Business
Time: Monday & Wednesday, 10:00AM – 11:50AM

Professor: Scott Nestler, PhD, CAP, PStat	Office: 383 Mendoza
Email: snestler@nd.edu	Office Hours: Mon, 2:30PM – 4:30PM
Telephone: (574) 631-8117	Thur, 8:30AM – 10:30AM (or by appointment)

Course Description: Data-informed decision making has created new opportunities, but also expands the set of possible risks to organizations. One of these risks comes from grappling with the "should we?" question with regard to data and analytics, and associated privacy concerns. In this course, we will explore a few frameworks to address the issues related to the proper roles of public law, government regulation, and ethics in performing and managing analytics activities. The course will cover applicable theory, guidelines, recent examples, and also make use of case studies.

Course Objectives: Upon completion of this course, you should be able to:

1. Apply ethical frameworks, guidelines, and codes to all phases of the analytics process.
2. Describe the historical efforts in developing ethical practices in research and identify how current standards provide a necessary but insufficient foundation for applying ethics in data science and analytics.
3. Reflect on and acknowledge the centrality of the human in the analytics process and the complexities of working with human data through analysis in case studies.
4. Distinguish between what an organization would like to do, what can be done technically, what can be done legally, and what should be done from an ethical perspective when performing and managing analytics projects.

Required Textbook: Davis, Kord, Ethics of Big Data, O'Reilly, ISBN: 978-1-449-31179-7

Software: Access to Microsoft Word, Microsoft PowerPoint, and .pdf files. Other software as students are familiar with and desire to use (e.g. R, Python, SPSS, Tableau, ...)

Grading: Your final course grade depends on your performance on the items shown below.

Attendance	10%
Class Participation	10%
Quizzes (Checks on Reading)	10%
Homework Assignments	25%
Capstone Situational Exercise	15%
Exam	30%

Per the Mendoza College of Business grading policies, the mean (average) final grade for this course must average between 3.3 and 3.6.

Attendance: Attendance is absolutely expected. Regular attendance of lecture periods will not only facilitate your understanding of the material presented in the text, but **and** **Participation:** also will better prepare you for the examination and course project. Classroom discussion is a critical component in the assimilation of concepts. All students are encouraged to ask questions and provide comments. Note that attendance is necessary for participation, but it is not sufficient for *active* participation. Our time in class will be more enjoyable and productive if you participate fully in activities and ask as well as answer questions. Section 3.1 of the Faculty Handbook (<http://facultyhandbook.nd.edu/governance/>) outlines the University's policy on excused absences. If you can provide a University approved reason for missing class, then you may make up any work from a missed class period free from penalty. However, you need to do so in a timely manner. You have 48 hours from the time of your return to class to make up any assignments you missed during class time.

Homework: There will be weekly homework assignments and/or short case studies. You may work in teams of three or four, but clearly identify who you worked with. No late submissions will be allowed, unless prior arrangements have been made with the instructor.

Homework will be graded on a list of criteria specified on the assignment, such as: quality of writing, completeness, insight into technical or ethical issues, etc. For each criterion, you will receive either a check-plus, check, or check-minus. Most criterion will receive a check. A plus means "you impressed me." A minus means the assignment is incomplete, incorrect, or sloppy in some fashion with respect to that criterion. Pluses and minuses are combined to give your grade for the assignment. For most assignments, you start off halfway between a B+ and an A-. One plus makes it an A-, one minus makes it a B+. More pluses or minuses adjust the grade further. These are general guidelines to let you know what to expect. Grading on specific assignments may differ.

- Quizzes:** There will be regular low point value quizzes as “Checks on Reading.” These will be short (10 min) Sakai quizzes due before class, consisting of fill-in-the blank, true/false, and multiple-choice questions.
- Exam:** There will be one exam in this course, on Thursday, October 5. It will cover topics from assigned readings, homework assignments, and class sessions. Please make special note of the examination date; it is fixed and generally not negotiable. If (and only if) you have a University approved excuse for the day of an examination, you will be allowed to take a make-up exam similar to the one you missed without penalty, if completed within 48 hours of your return to class.
- Capstone Exercise:** The capstone exercise will be a role-playing exercise in which students will be assigned to teams representing different stakeholders in a hypothetical situation combining many of the ethical elements covered in this course. Deliverables will include a short presentation / debate, along with a written summary.
- Special Needs:** It is University policy to make reasonable academic accommodations for qualified individuals with disabilities. Registration with the Office of Disability Services is required to receive accommodations in this course (no exceptions!).
- Wireless Policy:** No wireless communication devices will be permitted during class time except when expressly permitted, including (but not limited to) items such as cell phones, personal digital assistants, instant messaging devices, and software programs that are capable of wireless communication.
- Academic Honor Code:** Upon entering the University, you were required to study the on-line edition of the Academic Code of Honor, to pass a quiz on it, and to sign a pledge to abide by it. The full Code and a Student Guide to the Academic code of Honor are available at <http://honorcode.nd.edu>. Perhaps the most fundamental sentence is the beginning of section IV-B: “The pledge to uphold the Academic Code of Honor includes an understanding that a student’s submitted work, graded or ungraded – examinations, draft copies, papers, homework assignments, extra credit work, etc. - must be his or her own.” Please recall that you are all bound to abide by the University of Notre Dame Honor Code, and the Honor Code states that, “as a member of the Notre Dame community, I will not participate in or tolerate academic dishonesty.”

Updated Course Schedule
ITAO 70330 - Ethics in Data Analytics
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Class	Date	Day	Topic(s)	Vignette(s)	Homework Due
1	AUG 20	Mon	Introductions; Course Overview	---	---
2	AUG 22	Wed	Ethics Review; Business Ethics; Elements of Big Data Ethics	Cambridge Analytica (example)	---
3	AUG 27	Mon	Research Ethics: Necessary but Not Sufficient	--	HW#1 Catholic Social Teaching
4	AUG 29	Wed	Ethical Guidelines and Codes	Facebook Mood Manipulation Facebook Faces New World Opioid Crisis	---
5	SEP 3	Mon	Legal Frameworks; Regional (US, Europe, Asia) Differences	--	HW#2 Using Ethical Guidelines
6	SEP 5	Wed	Artificial Intelligence (AI); Algorithmic Bias	AI's White Guy Problem Data Mining to Recruit Sick People License Plate Readers	---
7	SEP 10	Mon	Analyzing Behavioral Big Data: Methodological, Practical, Ethical, & Moral Issues	--	HW#3 Privacy Policy Review
8	SEP 12	Wed	The 4R's: Reuse, Repurposing, (Re)Combining, Reanalysis	Disney / Staples Center Monitoring Is Alexa So Dangerous? Smart Toys	---
9	SEP 17	Mon	Ethical Issues in Sports and Healthcare; Wearable Device Data	--	HW #4 TBA
10	SEP 19	Wed	Ethical Issues in HR & Talent Analytics	Reducing Costs of Employee Churn Boss Using Slack to Spy on You	---
11	SEP 24	Mon	Analytics for Social Good	--	---
12	SEP 26	Wed	Capstone Exercise	Combatting Fake News Can AI Wipe Unconscious Bias? Child Abuse Prevention	HW #5 Capstone Prewrite
13	OCT 1	Mon	Course Review and Wrap-up	--	---
	OCT 3	Wed	No Class (Study Day)	--	---
14	OCT 4	Thur	FINAL EXAM	--	---

NOTE: The information provided on this syllabus is tentative and may be modified, using an in-class and/or Sakai announcement.