INF 397C - Understanding Research - MSIS Core course

I USED TO THINK CORRELATION IMPLIED CAUSATION.  
THEN I TOOK A STATISTICS CLASS. NOW I DON'T.  
SOUNDS LIKE THE CLASS HELPED. WELL, MAYBE.

(source: https://www.xkcd.com/552/)

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Instructor

Unmil Karadkar (@unmil, please do call me by first name)
Office: UTA 5.408

How to contact me:

email: via canvas or to unmil-At-ischool.utexas.edu (please include the text "INF397C" in your subject line)

with prior appointment in-person meeting or, videoconference

skype: unmil.karadkar, Google hangouts: unmilk-aT-gmail.com (please don't send email to this address)

drop by my office without an appointment–I will try to make time for you

Class Meetings

<table>
<thead>
<tr>
<th>Classroom: UTA 1.208</th>
<th>Time: Tuesdays, 9am to 12pm</th>
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<tbody>
<tr>
<td>Course unique id: 28445</td>
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<tr>
<td>Canvas page: <a href="https://utexas.instructure.com/courses/1204405">https://utexas.instructure.com/courses/1204405</a></td>
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iSchool description: Survey of the goals, methods, processes, and products of systematic inquiry. Designed to prepare students to critically evaluate information studies research. Three lecture hours a week for one semester.

Prerequisites
Readings

Textbook:

|-------|--------------------------------------------------|
| Image | David E. Gray,  
| Image | The book is available from a variety of sources:  
|       | Publisher's book page ($60)  
|       | Amazon (Kindle: $37, paperback $54+)  
|       | AbeBooks ($47+) |

Other assigned readings will be available online or made available via Canvas. Some online readings are only available to UT Austin students and you may access these off-campus via UT-VPN or via the libraries' web site.

Introduction

"This toothpaste will whiten your teeth three shades".
"Our study has shown that people are not using libraries due to the availability of online information".
"54% of Americans are unhappy with the president's performance".
"This weight loss pill has helped people reduce over a 100 lbs. * Follow this link to read our testimonials and success stories".
"A recent survey by the Cool Heritage Foundation concluded that unemployment on the west coast is down 1.3% in the third quarter of the year because of the policies enacted by John Doe. Reelect him to keep our wealth intact and our economy growing".
"Our results indicate that 37% of library users want access to free wi-fi".
"Scientists are now 95% certain that global warming is caused by human activity. The previous studies led to only 90% certainty regarding this causal effect".
"Taking this course will make you a better information scientist".

*Results not typical. The pill may not be taken by those with headaches, severe breathing congestion, two limbs, sugar intake, blood pressure, and vascular capacity. Several other disclaimers go here

Unprepared information professionals – indeed, unprepared citizens! – are forced to consider the huge inflow of claims they hear every day, and either accept or reject them based on faith. Prepared professionals and citizens can, instead, consider the methods used and analyze the information on which the claims are made, and evaluate for themselves the likely goodness of the claims. This course aims to help you evaluate and understand such claims by helping you to understand quantitative and qualitative research methods, as well as a number of other approaches. Being able to critically examine research for quality and applicability and to discuss it intelligibly is an important competency of an information professional. Understanding the underpinnings of research is part of being a critical consumer of information. You may also find the need to conduct studies in your practice as a professional, whether you are an information architect, an archivist, a librarian, a UX specialist, or any other information professional. In this course, we will integrate the exploration of criteria-based research evaluation with hands-on experience.

The course is designed to help you develop skills and awareness for understanding research. The course will arm you with a chance to demonstrate that you understand the basics of these various approaches to research. We will engage in some lecture, some discussion, and some hands-on in-class exercises. I expect you to come out from this course being able to evaluate whether a piece of research you read about was appropriately designed and well conducted. Note that the fundamental goal of this course is not to empower you to conduct your own research, but rather to well prepare you to be critical consumers of research in your academic and professional careers. But we will practice some research methods too.
Pedagogy and Organization

Class time will be split between short content-based lectures, reading discussions & debates, group activities, and project work. Lectures will highlight content from assigned readings. The goal is to create a learning environment in the classroom where we raise significant questions, discuss concepts, and develop skills collaboratively. This format requires participation of all class members. Students are expected to:

- Participate actively in all activities
- Attend all class sessions; if a student misses a class, it is her/his responsibility to arrange with another student to obtain all notes, handouts and assignment sheets
- Read all material prior to class; students are expected to use the course readings to inform their classroom participation and enable them to perform the class activities and assignments
- Hand in all deliverables fully and on time. Late submissions will only be accepted as specified in the assignment. For information about addressing emergency situations and university excused absences, please contact , the student must contact the instructor as soon as possible. (see also Grading and Policies)
- Educate themselves and their peers. The successful completion of this course and their participation in the information professions depend upon the students' willingness to demonstrate initiative and creativity. Your participation in the professional and personal growth of your colleagues is essential to your success as well as theirs. Such collegiality is at the heart of professional practice. The in-class group activities and discussion of the assignments is designed to encourage this kind of collaboration.
- When needed, ask for additional help from the instructor.

Learning outcomes

At the end of this course, you will be able to:

1. appreciate the significance of ethical and responsible conduct of research
2. evaluate and critique research results (serve the role as a peer or as a referee)
3. articulate the implications of information obtained from research projects
4. compare and contrast the strengths and weaknesses of research methods employed
5. differentiate between data, analysis, and interpretation
6. design data collection instruments
7. design data collection strategies
8. assess the reliability of presented data
9. frame research questions and hypotheses (required for a masters thesis)
10. design research proposals that include qualitative and quantitative methods (required for a masters thesis)

My Personal Goals

In addition to the content-specific objectives, I will do my best to:

- provide opportunities to think deeply and carefully about the topics being discussed in the class
- foster an environment where students all feel welcome and free to share not only their knowledge but concerns and desires about course-related topics
- help develop skills that will be useful to you in your career
- engender a deeper interest in learning that can be pursued beyond this course
- to make you proud of your achievements in this course, and,
- help you enjoy the process!