Course Description and Objectives

This course will provide students with an overview of qualitative and quantitative research approaches and the application to work in different types of organizational and institutional settings, such as large international organizations and governments. It will then emphasize particular applications in the area of technology and development, with special reference to those data collected by the World Bank, the United Nations, and other organizations. This course allows the student to examine the research perspective in technology and development studies, emphasizing techniques in the collection of primary data and the effective use of secondary data sources. While students will have exposure to and be able to conduct primary research, the course is also designed to encourage a deep appreciation for the instruments used in standardized (secondary) data sets. While the course is structured to establish the basis for GTD 506: Quantitative Analysis in Technology and Development, it is also suitable for any student seeking to better understand and use research methods, particularly the survey research method.

Learning Outcomes

- Apply qualitative and quantitative research principles and their philosophical underpinnings to different research problems.
- Establish the relationship between research questions and data analytic approaches to those questions.
- Articulate the various stages of the research process
- Distinguish between research designs and their appropriateness to different research problems.
- Develop strategies to learn how to formulate research questions that will address solutions to practical problems, policies and/or issues in development.
- Determine the appropriate research method and research design for a research problem.
- Determine appropriate sampling, data collection, and associated analytical approaches for qualitative and quantitative research designs.
• Evaluate published quantitative and qualitative research studies.
• Understand the linkages between research process and theory-building

Course Requirements

This is a fully online class. Participation is required and will be reflected in the awarding of participation points above and beyond class assignments, which will amount to a significant percentage of your final grade. Students are expected to contribute 4 substantive posts (one per discussion board) and 8 replies (at least two per discussion board) in the main forum to advance discussion which will be facilitated by a discussion question posted by the instructor. In addition, there will be a final exam and a final concluding paper, which will consist of two earlier steps (a research problem statement and basic proposal outline), followed by a highly detailed outline of a research proposal, including an extensive bibliography. The outline research proposal must include research problem, purpose, significance, research questions, an outline of a theoretical framework, and a brief appropriate methodology. APA citation rules must be observed for all written assignments. The written assignments should be submitted using the class website.

Required Texts


Optional Texts (These texts may be useful for some students, depending on their interests. The Instructor can provide guidance upon request)


Discussion Boards: Each student is required to answer the question listed (typically 500-700 words) and make it available to all members of the class on the Discussion Board Forum (worth a total of 10 points. All class members may choose to comment on any of the posts listed, but must respond to at least two of them within 48 hours of the due date and time. Replies to posts are worth 5 points each, up to two replies per Discussion Board, for a maximum of 10 points.

Grades

In this class, it is assumed that the student is committed to excellence and will endeavor to perform to the best of her/his abilities. Therefore, grades are not used to provide “incentives” toward improving performance. Rather, grades are meant to acknowledge the achievement of the courses aims and the degree to which the student can master its techniques and concepts. In addition to letter grades, the instructor will provide each student an evaluation concerning class performance, research strengths, weaknesses, and suggestions for future endeavors if
this is desired by the student. In addition, one part of the purpose of this course is to acquaint students with how research is done in the “real world”. Accordingly, completing work in the given time frame is one of the ground rules. No late assignment will be accepted.

The final grade will compose of accumulation of assignment grades, participation points and final project. There will be no extra-credit other than that which is announced and available to all class members. Any grade falling into the “gaps” between grades will be assigned at the discretion of the instructor and be based on the quality of participation in class activities.

The Grading Rubric for written (papers and posts) work is based on the following criteria:

**Analysis** – You show understanding and can specify main points and concepts.

**Critique** – You can identify gaps literature defining a research problem.

**Synthesis** – You integrate and clarify the various views presented by the class readings, other resources, and peers, clearly articulating your own view.

**Communication** – You are able to clearly present ideas, showing proper use of language and grammar, with papers and posts written neatly and organized logically.

The point value of each assignment is as follows:

4 Discussion Board Posts@10 points each=40 points

8 Discussion Board Replies@5 points each=40 points

Research Problem Statement=10 points

Basic Research Outline=10 points

Peer Review Analysis=10 points

Final Research Proposal=100 points

Final Exam=100 points

Student Participation=40 points

**Total Points Possible=350 points:** The grading will be distributed as follows: (NOTE: To determine your final grade, divide your final point total by the total points available in the class (340). The chart below is the ultimate arbiter of final grades and will be strictly interpreted. The Instructor will exercise discretion only where point values fall between grade categories)

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<thead>
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<tr>
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COURSE OUTLINE

WEEK 1-2 (3/14-3/27)

Topics:

- Introduction to research methods
- Purpose of conducting research
- Main approaches to research, quantitative or qualitative, inductive/deductive reasoning
- Types of research: Basic vs. applied.
- Research and theory
- Problem definition
- Review of Literature

Required Readings:

Neuman, Chapters 1-5, pp. 1-146

Creswell, Chapters 1-3 pp. 3-70

Assignments:

- Discussion Board 1: “What is research? How do we differentiate between ‘good’ and ‘bad’ research? Which is better: quantitative or qualitative research?”
  

WEEK 3 (3/28-4/3)

Topics:

- Ethical considerations
- Issues with research design
- Incorporating problem and research design
- Research Designs, Part 1: qualitative and quantitative

Required Readings:

Neuman, Chapters 6, pp. 149-175

Creswell, Chapter 4, pp. 73-85

Assignments: Written assignment: 1-2 page Research Problem Statement Due: 4/3 at 11:59 PM Arizona Time. Deposit per Instructions on Class Website
WEEK 4 (4/4-4/10)

Topics:

- Research designs, Part 2
- How to develop a purpose statement
- Significance of research to practice and theory

Required Readings:
Creswell, Chapter 5, pp. 87-104 and 149-150

Assignments:
- Discussion Board 2: “What is ‘truth’? How does the researcher balance the need for ethical research protocols with the mission of determining ‘truth’?” Main Post Due: 4/10 at 11:59 PM. Replies Due 4/12 at 11:59 PM Arizona Time.

WEEK 5 (4/11-4/17)

Topics:

- Develop research questions and hypotheses
- Measurement and data scales
- Measurement issues
- Validity, Reliability, and Sensitivity

Required Readings:
Creswell, Chapter 6, pp. 105-118
Neuman, Chapters 7, pp. 179-198

Assignments: Basic Proposal Outline: Using your Problem Statement as a foundation, develop a 1-2 page basic outline of your research proposal including at least the main methodological approach you intend to utilize. Due 4/17 at 11:59 PM Arizona Time

WEEK 6 (4/18-4/24)

Topics:

- Sample and population
- Sampling methods
- Determining sample size for quantitative studies
- Sampling error

**Required Readings:**

Neuman, Chapters 8, pp. 220-244

**Assignments:**

- Discussion Board 3: “What are the definitions of validity, reliability, and sensitivity? Can a measure be ‘valid’ without being ‘reliable’? If so, give an example. Can a measure be ‘reliable’ without being ‘valid’? If so, give an example. Can a measure be ‘valid’ and ‘reliable’ without being ‘sensitive”? If so, give an example.” **Main Post Due: 4/24 at 11:59 PM. Replies Due 4/26 at 11:59 PM Arizona Time.**

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**WEEK 7 (4/25-5/1)**

**Topics:**

- Data collection methods
- Quantitative data collection methods
  - Surveys and questionnaires
  - Types of survey questions
- Qualitative data collection methods
  - Interviews and focus groups
  - Document analysis etc.

**Required Readings:**

Neuman, Chapter 10, pp.272-299, Chapter 12, pp. 344-274, and Chapter 16, pp.491-516

- **Assignments:** Written Assignment/Peer Review: Post draft of detailed research proposal in Doc Sharing. In addition to revised purpose and problem statements, add your research questions and hypotheses. Every quantitative research study should have at least one research question and a sufficient number of testable hypotheses that fulfill the requirements of the research problem. **Due: 4/27 at 11:59 PM. Peer Critiques Due 4/29 at 11:59 PM Arizona Time.**

- **Final Exam:** **Released: 4/28. Due: 5/1 at 11:59 Arizona Time.**
WEEK 8 (5/2-5/3)

Assignments:

- Discussion Board 4: “What is the most important thing you learned in GTD 505? How and where will you use it in the rest of the program and in your life?” **Main Post Due: 5/2 at 11:59 PM. Replies Due 5/4 at 11:59 PM**

- Written assignment: Revised detailed research outline (Final), **Due: 5/3 at 11:59 PM Arizona Time**.

RELEVANT UNIVERSITY POLICIES

**ADA Statement:** The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. One element of this legislation requires that all qualified students with documented disabilities be guaranteed a learning environment that provides reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation please contact the Disability Resource Center at ASU Polytechnic located in Student Affairs Quad #4 or call 480-727-1039/TTY 480-727-1009. Eligibility and documentation policies online at [http://www.asu.edu/studentaffairs/ed/drc](http://www.asu.edu/studentaffairs/ed/drc)

**Student Academic Integrity:** Students are required to adhere to the policy on student conduct identified in the ASU Student Academic Integrity Policy ([http://www.asu.edu/studentaffairs/studentlife/judicial/academic_integrity.htm](http://www.asu.edu/studentaffairs/studentlife/judicial/academic_integrity.htm)) and the Arizona Board of Regents Policy Manual ([http://www.abor.asu.edu/1_the_regents/policymanual/chap5/chapter_v.htm#C.%20CODE%2020](http://www.abor.asu.edu/1_the_regents/policymanual/chap5/chapter_v.htm#C.%20CODE%2020))

**Sexual Violence and Harassment:** Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at [http://sexualviolenceprevention.asu.edu/faqs/students](http://sexualviolenceprevention.asu.edu/faqs/students).