

University of North Carolina at Charlotte BDBA

Advanced Research Methods II – Fall 2018

Professors: Lead Instructor: Franz Kellermanns

Meeting Time: 8:00 AM to 5:00 PM

Room: Center City

Office Hours: By appointment

Contact Information:

Franz Kellermanns kellermanns@uncc.edu

Monica Johar msjohar@uncc.edu

Chandra Subramaniam csubrama@uncc.edu

Dongong Zhang dzhang15@uncc.edu

George Banks gbanks3@uncc.edu

Course Description

This course covers the development and application of advanced research skills. Both advanced quantitative and qualitative research methods will be discussed. Toward this aim, students extend knowledge gained from previous courses and explore how advanced analytical software enables them to assess the measurement characteristics of variables / constructs and test the theoretical relationships among them. This course also helps students develop broader skills of scientific inquiry through qualitative methods by providing a review of major qualitative research designs, qualitative data collection and analysis methods, including state-of-the-art software packages, as well as effective strategies for presenting qualitative research findings.

Course Objectives

Upon completion of the course, students will be able to:

- Understand differences between quantitative and qualitative research designs and analytical methods, evaluate strengths and weaknesses, and choose an appropriate design for a particular research question or type of study.
- Conduct and evaluate advanced statistical and qualitative analyses in business research.
- Demonstrate proficiency in conducting advanced statistical and qualitative data analyses.
- Apply and interpret computer software for advanced statistical analyses as well as for qualitative data analysis.
- Communicate results of statistical and qualitative analyses clearly and concisely.

Course Design

Session Format

Classes will meet once a month for 5 months. Classes run from 8:00 AM until 5:00 PM with breaks in-between. A different faculty member will lead each class day. Students are expected to participate actively during the sessions. To facilitate this, required readings will be assigned and must be read prior to each class meeting. Additional assignments may occur after a class meeting. Carefully read and be prepared to discuss all required readings prior to each class meeting.

Instructional Method

The course will be delivered in a seminar style setting that includes open discussion, lectures, in-class projects and presentations.

Individual Assignments

Please refer to the specific assignments outlined by the respective instructors.

Course Materials

Course materials will consist of a combination of journal articles, textbooks, and software packages for quantitative and qualitative data analysis. Required course materials will be provided by the respective instructor prior to class.

Software

The course will make use of various software packages for quantitative and qualitative data analysis. Quantitative software packages will involve SPSS and AMOS. Students will be provided with access to these software packages and are expected to ensure the software is properly installed and ready to be used prior to the respective class. Students are required to bring their own laptops to lectures for in-class application and exercises.

Grading

Course Component	Weight
Class Participation and Assignments	20% Each
Total	100%

Class Participation and Discussions

Students are expected to actively participate in class discussions. Class discussions are comprised of in-class discussions during lectures and may also include online discussion threads in Canvas. The class participation and discussion will include the assignment and open discussion of course readings as well as other assignments or current issues arising in the business sector.

Assignments

Each class segment has its own assignments and due dates. Please refer to the postings on CANVAS for specific due dates.

Final Course Grades:

Grades will be assigned for each of the sections. Final grades will be based upon the weighted average of all five sections. Note that grades below C are not acceptable for graduate work

90% and above = A

80 – 89.5% = B

70 – 79.5% = C

Below 70% = U

Course Information & Guidelines

Classroom Policies:

1. **Attendance.** Attendance is mandatory. Missing a class is equivalent to missing 20% of the semester. Late arrival or early departure will count as an absence. An absence, unless due to medical conditions and approved by student services, will result in a **FAIL** of the class.
2. **Orderly and Productive Classroom Conduct.** We will conduct this class in an atmosphere of mutual respect. We encourage your active participation in class discussions as well as online. Each faculty may have strongly differing opinions on the various topics of class discussions. The orderly questioning of the ideas of others, including the faculty, is welcome. However, we will exercise our responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion.
3. **Classroom Expectations.** This syllabus contains the policies and expectations the faculty have established for this course. Please read the entire syllabus carefully before continuing in this course. These policies and expectations are intended to create a productive learning atmosphere for all students. Students who fail to abide by these policies and expectations, risk losing the opportunity to participate further in the course. The standards and requirements set forth in this syllabus may be modified at any time by the instructors. Notice of such changes will be by announcement in class and/or by changes to this syllabus posted on the course Canvas website.
4. **Materials.** All materials submitted as part of course requirements become the property of the instructor. Students desiring to retain copies of their work should make such copies before turning in their materials.
5. **Electronic Devices in Classroom.** Use of computing, communication, or other devices during the class time **for purposes other than those required for the class** is prohibited and may result in being asked to leave the classroom for the remainder of the class period. This includes the use of laptops, lab computers, phones or other devices for Internet browsing, game playing, reading news, emailing, texting, chatting, IM, Facebook, or other activities not required for the class. **Cellular phones and other communication devices must be silenced AND stored away during class.**
6. **Under no circumstances** will students be permitted to spend their class time working on assignments for other classes, checking e-mail, surfing the Web, texting, or engaging in activities not related to the class. Attempts to engage in such behavior will be reflected in lower grades and may lead to removal from the course.
7. **Grade Appeals.** If a student believes that the grade that they received on an assignment or an exam was in error or unfair, the student can appeal to the professor in writing within seven (7) calendar days after the grades are posted. The appeal should clearly state the reasons why the grade is believed to be unfair or the nature of the error. Overdue appeals will not be considered.
8. **Use of Tobacco and e-Vapor Products in Class.** The use of tobacco and e-Vapor products in class is prohibited. If a student uses any form of tobacco or e-Vapor product during class, the student may be asked to leave the class.

University Policies:

9. **Academic Integrity**
 - As a program that helps to create business and government leaders, the College of Business has an obligation to ensure academic integrity is of the highest standards. Standards of academic integrity will be enforced in this course.
 - University regulations will be strictly enforced in all cases of **academic irregularities, cheating or plagiarism** or any variations thereof. Students assume full responsibility for the

content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be that of the student's own work.

- All UNCC students have the responsibility to be familiar with and to observe the requirements of **The UNCC Code of Student Academic Integrity** (see the Catalog and also <http://integrity.uncc.edu>). This code forbids cheating, fabrication or falsification of information, multiple submission of academic work, plagiarism of written materials and software projects, abuse of academic materials (such as Library books on reserve), and **complicity in academic dishonesty** (helping others to violate the code).
 - Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online at: <http://www.legal.uncc.edu/policies/ps-105.html> (also see <http://integrity.uncc.edu/>). All UNC Charlotte students are expected to be familiar with the Code and to conduct themselves in accord with these requirements. To clarify, any academic dishonesty can result in a grade of "Fail" (F) for the course. Academic dishonesty also pertains to violating the "rules" of this syllabus. Anyone violating this policy will receive an "F" for the course.
 - For this course, it is permissible to assist classmates in general discussions of computing techniques. General advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned homework and laboratory exercises. So while students are encouraged to work together on class exercises, each student must produce and submit an own individual graded assignment in the end (unless it is a group assignment). A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own. If you need help on an assignment, contact your instructor.
 - Any further specific requirements or permission regarding academic integrity in this course will be stated by the instructor, and are also binding on the students in this course.
 - Students are expected to **report cases of academic dishonesty** they become aware of to the course instructor who is responsible for dealing with them.
10. **Use of Computing Resources Policy.** For the purposes of the course you will be given access to a variety of computing resources. These resources are to be used only for the purposes of this course. Intentional or grossly negligent disruptive and/or illegal use of the resources will result at a minimum in a loss of access privileges and a failing grade for the course. Further action will be taken as necessary. All University Policies on the use of Computing Resources apply.
 11. **Disability Accommodations.** Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations. If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from the Office of Disability Services. For more information regarding accommodations, please contact the Office of Disability Services at 704.687.4355 or stop by their office in 230 Fretwell.
 12. **Diversity.** The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
 13. **Incomplete Grades.** Students will not be given an incomplete grade in the course without sound reason and documented evidence as described in the Student Handbook. In any case, for a student to receive an incomplete, he or she must be passing the course and must have completed a significant portion of the course.

14. **Course Changes.** The instructor reserves the right to make any necessary changes to the course content, schedule, and policies. Changes will be announced in class and will also be posted online and communicated via email.
15. **Religious Accommodations.** The instructor will observe University Policy 409 (<https://legal.uncc.edu/policies/up-409>) on matters of religious accommodation. Please note that the procedure prescribed by this policy requires a notice to the instructor prior to the census date of the semester (typically the tenth day of instruction).
16. **Severe Weather.** In case classes are cancelled due to severe weather, the DBA program has designated make-up days for each semester.

Detailed Course Flow

Saturday, January 12th, 2019

Topic: AMOS

Instructor: Dr. Franz Kellermanns

PowerPoints and data files are posted in Canvas. Please have SPSS and AMOS installed on your computer prior to class.

Saturday, February 9th, 2019

Topic:

Instructor: Dr. Monica Johar

8.00 – 8.30am

Brief introductions of instructor and participants, including the participant's self-report of research methods learned so far

8.30am-12.00pm (with breaks as appropriate)

Introduction to Queuing Theory and its applications in Research

- Fundamental Concepts of Queueing Theory
- Introduction to Infinite Source Queueing Systems
- Discuss journal articles that apply Queueing Theory in conjunction with Game Theory

12.00noon – 1.00pm

Lunch break

1.00-4.00pm (with breaks as appropriate)

Web Personalization with Strategic Learning and Targeting

- Understanding Association Rule Mining
- Problem Solving
- Discuss Journal Papers that research Web-Mining and Hiding using of Ruling Mining.
- Discuss Journal Papers that study strategic Targeting and learning of user profiles

4.15 – 5.00pm

Open discussions and wrap up

Saturday, March 9th, 2019

Topic:

Instructor: Dr. Chandrasekar Subramaniam

Please refer to the materials and assignments provided in Canvas.

Topic: Text Analysis

Instructor: Dr. Dongsong Zhang

Two paradigms characterize much of the research in the Information Systems discipline: behavioral science and design science. The behavioral science paradigm seeks to develop and verify theories that explain or predict human or organizational behavior, while the design-science paradigm seeks to extend the boundaries of human and organizational capabilities by creating new and innovative artifacts. Both paradigms are foundational to the IS discipline, positioned as it is at the confluence of people, organizations, and technology. The first half of this lecture will introduce the design science research methodology through a conceptual framework and guidelines for understanding, executing, and evaluating such research. We will discuss

- What is design science research?
- Why do we conduct design science research?
- How to conduct it? What are essential elements and steps of a design science research project?

Then, we will discuss a number of research papers (see the tentative list below) that follows the design science research paradigm and that were recently published in top journals (e.g., MIS Quarterly, Information Systems Research, and Journal of Management Information Systems) in the management information systems field.

Readings:

1. Hevner, A. R., March, S. Park, J., and Ram. S. (2004). Design Science in Information Systems Research. *MIS Quarterly*. 28(1), 75-105
2. Abbasi, A. and Chen, H. (2008). Cybergate: a design framework and system for text analysis of computer-mediated Communication. *MIS Quarterly*, 32(4), 811-837
3. Adipat, B., Zhang, D., and Zhou, L. (2011). The effects of tree-view based presentation Adaptation on mobile web browsing. *MIS Quarterly*. 35(1), 99-121
4. Venkatesh, V., Aloysius, J., Hoehle, H., and Burton, S. (2017). Design and evaluation of auto-ID enabled shopping assistance artifacts in consumers' mobile phones: two retail store laboratory experiments. *MIS Quarterly*. 41(1), 83-113.
5. Samtani, S., Chinn, R., Chen, H., and Nunamaker, J. (2017). Exploring Emerging Hacker Assets and Key Hackers for Proactive Cyber Threat Intelligence. *Journal of Management Information Systems*. 34(4), 1023-1053
6. Dong, W., Liao, S., and Zhang, Z. (2018). Leveraging financial social media data for corporate fraud detection. *Journal of Management Information Systems*. 35(2), 461-487
7. Abbasi, A., Albrecht, C., Vance, A., and Hansen, J. (2012). Metafraud: a meta-learning framework for Detecting financial fraud. *MIS Quarterly*. 36(4), 1293-1327
8. Bauman, K. and Tuzhilin, A. (2018). Recommending remedial learning materials to students by filling their knowledge gaps. *MIS Quarterly*. 42(1), 313-332.

Student tasks/assignment (required):

1. Students should read the above listed papers before the class. I would like students to divide into 7 groups, with each group selecting a paper of their interest from the papers #2~8 in the above list (non-overlapping with other student groups). Each group is expected to prepare 10 PPT slides or so to introduce and lead the discussion on the selected paper in the class. The discussion should include, but not limited to, the following **(15 points)**:
 - 1) The research problem and research questions of the selected study
 - 2) Why is it important? Practical benefits?
 - 3) Limitations/gaps of existing research
 - 4) Description of the proposed design science approach (what is the **new IT artifact**?)
 - 5) Description of data used
 - 6) How was the proposed approach evaluated?
 - 7) Summary of major findings
 - 8) Major limitations of the study**
 - 9) How to address the identified limitations? In other words, if you were to carry out this research, how could you do it in a better way and potentially achieve better outcomes?**
 - 10) What could be the follow-up research questions and future research?**

Additional instructions:

- (1) Please print out a hard copy of your PPT slides (double sides, two slides per page) and submit it to Dr. Zhang before your present.
- (2) The presentation will be assessed based on the clarity of the review of the selected paper, as well as the thought-provoking level and interestingness of your discussion on the items 8~10 in the above list.

2. (Optional with 5 bonus points) Student groups are also strongly encouraged to propose and present a design science approach to an actual real-world problem that they may experience (e.g., in their work) to get feedback from the instructor and other students in the class. If any group is interested in doing that, please inform Prof. Zhang (dzhang15@uncc.edu) **no later than April 1, 2019 to get further guidance.**

Saturday, May 11th, 2019
--

Topic: Meta-Analysis

Instructor: Dr. George Banks

Banks, G.C. & McDaniel, M.A. (2012). Meta-analyses and selection procedures. In N. Schmitt (Eds.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 156-175). Oxford: Oxford University Press.

Kepes, S., McDaniel, M.A., Brannick, M.T., & Banks, G.C. (2013). Meta-analytic reviews in the organizational sciences: Two meta-analytic schools on the way to MARS. *Journal of Business and Psychology*, 28, 123-142.

Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, 63(3), 665-69

Landis, R. S. (2013). Successfully combining meta-analysis and structural equation modeling: Recommendations and strategies. *Journal of Business and Psychology*, 28(3), 251-261.

Gonzalez-Mulé, E., & Aguinis, H. 2018. Advancing theory by assessing boundary conditions with meta-regression: A critical review and best-practice recommendations. *Journal of Management*, 44: 2246–2273

Banks, G. C., Kepes, S., & McDaniel, M. A. (2015). Publication bias: Understand the myths concerning threats to the advancement of science. In C. E. Lance & R. J. Vandenberg (Eds.), *More Statistical and methodological myths and urban legends* (pp. 36-64). New York, NY: Routledge.