HLP 6535 Research Methods, Section 051A  
Fall semester 2018

Instructor
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Hours
Tuesday, period 6-8 (12:50 PM - 3:50 PM)

Office hours
Monday, 2 p.m. – 4 p.m.

Location
Florida Gym 225
Summary
The main objective of this course is to introduce the graduate students to conducting independent research in social sciences. That includes reviewing the scientific literature for current state of knowledge, developing sound research proposals, study planning, applying for the institutional review process, data collection, data analysis, and writing a research paper based on study results. The course will mostly concentrate on the quantitative study designs, although qualitative approaches will also be covered. Finally, we will touch on two new important research methods, namely, putting data on the map (GIS and spatial analysis) and examining big sets of data for patterns (big data analytics).

The overall course structure:

- Part 1: Introduction to research;
- Part 2: Data collection;
- Part 3: Data analysis;
- Part 4: Introduction to GIS and big data analytics.

For topics covered in class see the attached Excel table. Notice that the schedule is a subject to change! One of the reasons for that is that we are going to have guest presentations and need to accommodate the speakers.

Objectives and skill outcomes
1. To get a basic understanding of research process;
2. To get skills in using scientific literature;
3. To improve skills in statistics, numerical problem solving and computer software;
4. To improve research and oral presentation skills;
5. To get skills in written and oral reporting of research results.

Reading
The reading will be based on Exploring Research by Neil J. Salkind 8th edition, other recent editions will be acceptable as well. We will also include chapters from Research Design: Qualitative, Quantitative, and Mixed Methods by John W. Creswell, Statistics: a Tool for Social Scientists by J. Healey, and from research papers.

Assignments and evaluation
There will be quizzes, student presentations, term project, and two exams for this class. The total grade $G$ (0-100%) will be a combination of the grades in the following categories:

1. Student method presentations (20%)
2. Quizzes (10%)
3. Term Project (30%)
4. Exams (30%)
5. Home assignments and Participation (10%)

$$G = 100\% \times \sum_{i=1}^{5} \left( 0.01 \frac{W_i}{n_i} \sum_{j=1}^{n_i} 0.01 g_{ij} \right)$$
Here, $g_{ij}$ – a single grade (0-100%) for an assignment $j$ in a category $i$;
$n_i$ – the number of assignments in a category $i$;
$w_i$ – the weight of a category $i$, found above in the parentheses.

**ONE** lowest score for a quiz or homework is dropped. That means, if in one occasion you forget to turn in a homework or need to miss a quiz for reasons other than listed below, the grade will not be affected.

The final percentage points are translated into the letter grades as the following:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
<th>Percentage</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
<td>70 – 76.99</td>
<td>C</td>
</tr>
<tr>
<td>87 – 89.99</td>
<td>B+</td>
<td>67 – 69.99</td>
<td>D+</td>
</tr>
<tr>
<td>80 – 86.99</td>
<td>B</td>
<td>60 – 66.99</td>
<td>D</td>
</tr>
<tr>
<td>77 – 79.99</td>
<td>C+</td>
<td>Below 60</td>
<td>E</td>
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If you noticed a scoring error, please notify the instructor within one week the error was made. No issues regarding scoring will be reviewed beyond this one-week period or after midnight of the last day of the Examination week, whichever comes first.

**Quizzes and Exams**
A short quiz will usually cover the material from the previous theme, but expect occasional questions related to the earlier topics. The quizzes will be closed book. The exams will have the same format and may cover any topic in the course.

There may be quantitative questions, please bring the calculators. Calculator on your smartphone will be ok but using the Internet is not allowed. **For full credit make sure the instructor is able to read through your handwriting.** 100% grade will require full answer to all questions, a returned blank paper will be evaluated 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

**Home assignments**
Occasionally there will be a home assignment which may require simple statistical computations. You can use Excel, which will cover all statistics we are going to use during the course or any other package. You can also use any other software; SPSS (very intuitive for simple analysis, ~$40 for grad students) is very popular with social scientists and R (harder to learn, free) – with natural scientists.

**Project**
During the course, the students will work on group projects (three to four persons per group) on a problem of their interest. The project should follow the steps outlined during the lectures, that is, literature review, research design, data collection, data analysis, and research presentation. Project results should be presented in a form of a research report (due **prior** to the date and time of the final exam) **AND** an oral presentation. Expect 100% grade for using multiple sources of information for preparation of your report, professional data analysis, in-detail presentation of the topic, intelligent answers to
the questions, and active engagement into discussion of the projects during the project meetings. See Appendix for clarifications. For participation in project discussion, expect full grade for asking questions, submitting answers, sharing your opinions and similar class-time participation.

**Method presentation**
The students will be asked to make presentations on the research methods based on scientific papers. Expect full grade for:

- Making good, professionally sound 20 to 25-min presentation;
- Successfully connecting the presentation to the topics discussed in class and to other peer-reviewed literature; answering the questions in a clear, professional manner.

**Group work and academic honesty**
The plagiarism and other violations of the academic honesty will be punished with 0% grade for the assignment; additionally, after the second incident the offender will be reported to the head of department and/or graduate school for possible actions. The UF defines plagiarism in the following way (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code):

“(a) Plagiarism. A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:

1. Quoting oral or written materials including but not limited to those found on the internet, whether published or unpublished, without proper attribution.

2. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student.”

Further, each student is expected to abide by the Honor Code: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity” (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/). Please refer to the abovementioned Honor Code for a complete explanation of the University of Florida Academic Honesty Policy.

**Class policies**

**If you are not able to make it to the class**
Always call ahead or send an email if you are going to miss a class or are not able to return the assignment in time.

**Skipping a quiz or an exam**
It will be possible to retake a quiz missed due to a medical reason (confirmed by a doctor), an official UF sport event in which you are participating as a team member (confirmed by a trainer) or a family emergency (confirmed by a parent). A letter or an email will suffice as a confirmation. The new quiz or exam will be similar to the one taken by other students but you may find it more (or less) difficult. You will not be able to retake quizzes or exams due to other reasons.
Late assignment submission, skipping a quiz or an exam

Closely follow the course logistics with respect to submission of your work. All assignments are due prior to the beginning of the next class. There is a 48-hour grace period for score reduction of 20%. Additionally, one lowest score for a homework or quiz is dropped, therefore, your overall grade will not be affected by missing one deadline for one assignment. Save this “allowance” for a real emergency! No make-up assignments or quizzes will be allowed; in exceptional circumstances (e.g., student athlete’s game travel on a quiz day) a required assignment or quiz will be dropped with no penalty. It is up to the course instructor to decide whether the student should be given this opportunity. A minor sickness or a short travel will not be considered an excuse for not returning the homework. The reason for point deduction is that you always will be given enough time to complete and return an assignment few days before the due date; plan ahead for emergency situations.

Presentations

If you are unable to deliver a presentation due to a confirmed medical reason or family emergency, it will be re-scheduled for a later date if possible; otherwise 0% credit or an “incomplete” grade will be assigned.

Food

Water in bottles and spill-proof cups is allowed by the class policies, but may be prohibited in a specific room; food is not allowed.

Special accommodations

Students requesting special classroom accommodations must first register with the Dean of Students Office. Also, please let the instructor know your needs ASAP.

Miscellanea

1. Please switch off the sound on your phones and refrain from using the Internet, playing games, reading the books and other activity unless it is directly related to the course.
2. Unless an urgent business requires my attention, I will be available for questions after the lecture hours. For more complex questions that require substantial time please secure an appointment by sending in an email.
3. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.”

Course calendar

Please refer to the attached table for tentative course calendar.
Appendix A. Term project

Introduction
During the course, you will be doing a group project on a topic of your interest. Imagine that you are a group of scientists collaborating in a project. Your goal is to analyze the literature in your field of expertise, formulate a sound research proposal, collect the data, perform statistical data analysis, write project report, and make a research presentation.

1. Report structure
- Abstract
- Introduction (Statement of the problems and Literature review)
- Data collection
- Data analysis
- Discussion
- References

2. Report writing
The writing responsibilities can be distributed between the students as they see fit. I suggest that one of the students becomes project leader, responsible for project integrity. All parts have to be completed; there should be seamless flow of the text between the parts.

3. Final presentation
The students will individually present the project, that is, if there are three students in a group, there should be one presentation with the students taking turns. Make sure that your individual talks make one integrated presentation. For example, the project leader may introduce the project and tell why it is interesting/important, the next student will talk about data collection, and the last one will talk about data analysis. When four students work on one report, the fourth student may e.g. discuss implications of the study.

4. Weekly project discussion
There will be weekly project discussions (see the schedule attached), and one day of class is set aside for data collection, but the students should plan to meet outside the class: class meetings are to exchange the ideas and outcomes with a larger audience.

5. Project grading
50% of the grade will be group assigned based on the quality of the final report; 40% of the grade will be individually assigned based on the quality of presentation.
Appendix B. Campus Resources

Health and Wellness

U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.


University Police Department, 392-1111 (or 9-1-1 for emergencies).
http://www.police.ufl.edu/

Sexual Assault Recovery Services (SARS): Student Health Care Center, 392-1161.

Disability resource center: https://drc.dso.ufl.edu, 392-8565, accessUF@ufl.edu.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
http://www.crc.ufl.edu/

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
http://teachingcenter.ufl.edu/


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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>#</th>
<th>Theme</th>
<th>Topics</th>
<th>Reading</th>
<th>Project</th>
<th>Method reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28-Aug</td>
<td>1</td>
<td>Research design</td>
<td>Syllabus; Philosophy of science; Methodology of research; Steps of scientific research; research design</td>
<td>Lecture notes; NJS 1</td>
<td>Intro to research project</td>
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<tr>
<td>2</td>
<td>4-Sep</td>
<td>2</td>
<td>Research foundation</td>
<td>MEET IN LIBRARY WEST, ROOM 211. Literature review. Sources of research literature. Library visit: Working with scientific literature.</td>
<td>NJS 2</td>
<td>On your own: discuss projects, make groups</td>
<td></td>
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<tr>
<td>3</td>
<td>11-Sep</td>
<td>3</td>
<td>Measurement</td>
<td>Variable. Operationalization. Research hypothesis. Data collection, measurements, data quality. Estimating measurement reliability and validity</td>
<td>NJS 2, NJS 5</td>
<td>Planning meeting. Present your updates research ideas, research question and main hypothesis</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>18-Sep</td>
<td>4</td>
<td>Sampling</td>
<td>Population and sample. Different strategies for sampling the data. Sampling error.</td>
<td>NJS 4</td>
<td>Finalize research ideas, research question and main hypothesis. Discuss data. Start data collection</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25-Sep</td>
<td>5</td>
<td>Measuring behavior 1</td>
<td>Methods for testing behavior Data collection and descriptive statistics.</td>
<td>NJS 6, 7</td>
<td>Discuss data collection methodology. Collect pilot data</td>
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<tr>
<td>6</td>
<td>2-Oct</td>
<td>6</td>
<td>Research ethics</td>
<td>Ethics in research. Guest lecture: Intro to IRB process (TBD)</td>
<td>NJS 3b</td>
<td>Present and discuss pilot data.</td>
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<tr>
<td>7</td>
<td>9-Oct</td>
<td>7</td>
<td>Exam 1</td>
<td>EXAM</td>
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<tr>
<td>8</td>
<td>16-Oct</td>
<td>7</td>
<td>Measuring behavior 2</td>
<td>Designing questionnaires: best practices</td>
<td>NJS 7</td>
<td>Discuss the literature.</td>
<td>Grounded Theory</td>
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<td>9</td>
<td>23-Oct</td>
<td>8</td>
<td>Descriptive and Inferential statistics</td>
<td>Descriptive statistics. Inferential statistics. Tests of significance. Type 1 and Type 2 error. Sensitivity and specificity of a classificatory.</td>
<td>NJS 7, 8</td>
<td>Discuss data analysis, how to compare the data, what to report, which software to use.</td>
<td>Interview, Participant Observation</td>
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<tr>
<td>10</td>
<td>30-Oct</td>
<td>9</td>
<td>Correlational research</td>
<td>Correlational analysis. Simple linear regression.</td>
<td>NJS 9, 10</td>
<td>Progress report. Exchange the results of your data analysis.</td>
<td>Case Study</td>
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<tr>
<td>11</td>
<td>6-Nov</td>
<td>10</td>
<td>Writing about</td>
<td>Writing scientific papers; making</td>
<td>NJS 13,14; H 2</td>
<td>Progress report. Exchange the</td>
<td>Historical Research</td>
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<tr>
<td>Date</td>
<td>Event</td>
<td>Details</td>
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<td>12</td>
<td>Research Presentations</td>
<td>Results of your data analysis. Return in a draft multiple-page report; ready to discuss it. What do you think you will need to include into the presentation, and what should go to the report only? What else has to be done?</td>
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<td>20-Nov</td>
<td>Qualitative research</td>
<td>Overview lecture on qualitative research. NJS 10 Discuss project presentation.</td>
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<tr>
<td>27-Nov</td>
<td>Project reports</td>
<td>Group reports on the course projects. Exam review. Project presentation. Return the FINAL report.</td>
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<tr>
<td>4-Dec</td>
<td>Exam 2</td>
<td>EXAM</td>
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