

**NUIP 6390-001**  
**Research Methods**  
**Fall 2023**  
*Hybrid*  
**3 credit hours**

**Instructor:** Katherine Beals, PhD., RD, FACSM, CSSD  
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**Class days/times:** *This course is hybrid. We will meet in the classroom on Thursdays from 2-3:20 pm*  
**Office hours:** Tuesdays 2-3:30 pm. Phone, Zoom or in-person appointments are also available.  
**Course Website:** CANVAS: <https://utah.instructure.com>

**Course Description:** This course will cover basic research design, measurement techniques, and methods of data collection and analysis used in health-related research with an emphasis on the field of nutrition. Special attention will be given to the major components of quantitative research design and implementation including, identifying/defining the research problem/question, protocol design, subject selection and sampling, data collection and analysis as well as interpretation, evaluation and application of research results.

**Course Pre-requisites:** Graduate standing in the College of Health.

**Required Materials**

- Plano-Clark VL and Creswell JW. *Understanding Research: A Consumer's Guide. 2<sup>nd</sup> edition*. Pearson Education, Inc. 2020. (note: on the syllabus this text will be identified as CP&C)
- Additional readings will be available on CANVAS.

**Student Learning Outcomes:** By the end of this course, you will be able to...

- Explain the importance of research in your field of study/practice.
- Identify valid sources of research and demonstrate the ability to locate, access, interpret, evaluate and use professional literature to make ethical, evidence-based practice decisions. (KRDN 1.1 and 1.2)
- Describe the most common types of quantitative research utilized in health-related research and evaluate strengths/weaknesses of each.
- Compare and contrast quantitative and qualitative research designs.
- Describe the common statistical methods used in quantitative research including when and how they should be used.
- Evaluate the validity and applicability of published research articles and apply evidence-based guidelines, systematic reviews and scientific literature in nutrition and dietetics practice. (CRDN 1.2)

- Design a research study in your field of study and describe how you would implement the project.
- Demonstrate professional writing skills in preparing professional communications. (CRDN 2.2)

**Course Format:** Lectures (including audio recorded lectures), large and small group discussions, applied assignments and peer-reviews.

**Teaching and Learning Methods:** The goal of the course is to help you become a better, more informed consumer of health-related research. More specifically, it is my hope that after you have completed this course you will be better able to assess the strengths and limitations of health-related research, interpret and evaluate health-related research findings and apply these findings to your practice in meaningful and useful ways. To achieve these goals, the instructor will employ a variety of teaching methods for this course including voice recorded lectures, supplemental readings, small and large group discussions, individual scientific exploration and peer-evaluations. The goal is to appeal to and engage a variety of learning styles in order to better meet the needs of a diverse group of students.

### **Evaluation of Student Performance**

- **Chapter Quizzes:** There will be *seven*, 10-point chapter quizzes distributed throughout the semester to assess your understanding of the material in the chapter. The quizzes will be open-book and will be administered on CANVAS under the quiz icon.
- **Assignments/Activities:** There will be a variety of assignments interspersed throughout the semester to give you chance to *apply* the information you are learning. The assignments have variable point values. All assignments along with the instructions for assignments will be posted on CANVAS under the “assignments” icon as well as under the corresponding module.
- **Discussions:** The discussions are designed to give you a chance to interact with your fellow classmates as well as with the instructor. There will be a total of *six* (6) discussions throughout the semester each worth 5 points. All discussions close at midnight on the due dates listed in the calendar function on Canvas. General discussion criteria are as follows:
  - Comments are accurate, logical, appropriate, well-defined and relevant to the topic.
  - Communication is well-structured, organized, honest, civil, and respectful.
  - Critical thinking skills (assessment, synthesis, analysis, evaluation, problem solving) are demonstrated where appropriate.
  - For full credit, at least one comment must be provided to another student's post
- **Midterm Exam:** There will be one mid-term exam worth 60 points. It will be an open-book/note exam. Details will be provided on CANVAS at least one week before the exam.

- **Research Study Design and Peer-Evaluation:** This final project also serves as your final exam. It will provide you with a chance to synthesize and apply all of the information you have learned in the course. You will be designing a research study examining a topic and question/problem of interest to you that is applicable to your current (or future profession). More details will be posted on CANVAS.

## Grading Criteria

Component	Points
Chapter Quizzes (7 @ 10 points each)	70
Discussions (6 @ 5 points each)	30
Assignments (number and point values will vary)	140
Midterm Exam (1 @ 60 points)	60
Research Study Design (75 pt) and Peer Evaluation (25 pt)	100
<b>TOTAL</b>	<b>400</b>

Grading Scale			
A	100 % to 92.5%	C	77.4 % to 72.5%
A-	92.4 % to 89.5%	C-	72.4 % to 69.5%
B+	89.4 % to 87.5%	D+	69.4 % to 67.5%
B	87.4 % to 82.5%	D	67.4 % to 62.5%
B-	82.4 % to 79.5%	D-	62.4 % to 59.5%
C+	79.4 % to 77.5%	E	< 59.4 %

## Class Policies and Procedures

- This is a hybrid course meaning that it includes an asynchronous online component conducted via Canvas as well synchronous time in the classroom. This course requires access and use of technology. The deadlines on the Canvas Assignment, Quiz and Discussion pages are the final word on all deadlines.
- Assignments are due on or before the due dates/times as noted on the assignment instructions or as designated by the instructor. Late assignments ( $\leq 1$  week late) will automatically receive 1/2 credit. Assignments turned in **> 1 week late WILL NOT RECEIVE CREDIT!**
- No make-up exams will be given without previous arrangements with the instructor or Examples of unusual circumstances include a death in the family or illness that requires medical treatment (documentation will be requested). Computer and/or printer error on the day an assignment is due is **NOT** considered an unusual circumstance.
- The Code of Student Rights and Responsibilities is provided in detail on the University of Utah web page ([www.admin.utah.edu/ppmanual/8/8-10.html](http://www.admin.utah.edu/ppmanual/8/8-10.html)). Students have specific rights in the classroom as detailed in the code. The code also specifies proscribed conduct that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully to become aware of these issues. Students may receive sanctions for violating one or more of these proscriptions. The instructor of this course will enforce the Code in the course; cheating and

plagiarism will result in appropriate penalties, such as a failing grade on a specific exam or in the course and/or expulsion from the course. Students have the right to appeal such action to the Student Behavior Committee.

## Questions

You are always welcome to contact me using Canvas' email or my university email (for any reason). However, when you have a question, please start on the Questions page, which is linked on our home page. On that page, I have provided information for getting help with Canvas and other technological issues and I have also provided a link to a discussion for course-related questions so that everyone in the class can benefit from hearing the answers.

## Tech Support

Though I hope you do not have any technical difficulties, they sometimes happen in online courses (or F2F courses that have an online component). Send me a Canvas message with any issues I can solve (dead links, for example), but for larger tech issues, contact the UIT Help Desk.

## University Policies and Procedures

- 1. *The Americans with Disabilities Act.*** The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability & Access (CDA; <http://disability.utah.edu/>; 162 Olpin Union Building; 801-581-5020). CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the CDA.
- 2. *University Safety Statement.*** The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).
- 3. *Addressing Sexual Misconduct.*** Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

4. ***The Code of Student Rights and Responsibilities.*** The code, which specifies student rights as well as conduct involving cheating, plagiarism, collusion, fraud, theft, etc., is provided at <http://regulations.utah.edu/academics/6-400.php>.
5. ***Wellness Statement.*** Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness, <http://wellness.utah.edu/>; 801-581-7776.
6. ***Drop/Withdrawal.*** <https://registrar.utah.edu/academic-calendars/> The last day to drop (delete) classes is [date]; the last day to withdraw from this class is [date]. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student's responsibility.
7. ***Veterans Center.*** If you are a student veteran, I want you to know that the U of Utah has a Veterans Support Center on campus. They are located in Room 418 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class for any reason.
8. ***LGBT Resource Center.*** If you are a member of the LGBTQ community, I want you to know that my classroom is a safe environment. Additionally, please know that the U of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Olpin Union Building; their hours are M-F 8-5 pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: <http://lgbt.utah.edu/>. Please also let me know if there is any additional support you need in this class.
9. ***Learners of English as an Additional/Second Language.*** If you are an English language learner, please be aware of several resources on campus that will support you with your language development and writing. These resources include: the Writing Center (<http://writingcenter.utah.edu/>); the Writing Program (<http://writing-program.utah.edu/>); the English Language Institute (<http://continue.utah.edu/eli/>). Please let me know if there is any additional support you would like to discuss for this class.

## Tentative Course Outline/Schedule

Date (week of...)	Topic	Readings/Assignments/ Quizzes
Aug 21	Introduction to Research	PC&C Chapter 1 <ul style="list-style-type: none"> <li>• Discussion 1: Introduction</li> <li>• Assignment 1:</li> </ul>
Aug 28	Identifying valid sources of and resources for research: <i>The literature Review</i>	PC&C Chapter 4 and Assigned Readings <ul style="list-style-type: none"> <li>• Assignment 2:</li> </ul>
Sep 4	Overview of the types of research study design: <i>quantitative, qualitative, and mixed model designs</i>	PC&C Chapter 2 <ul style="list-style-type: none"> <li>• Discussion 2:</li> <li>• Assignment 3</li> <li>• Quiz 1</li> </ul>
Sep 11	Asking the right questions and Solving problems- <i>Identifying &amp; Developing the research question</i>	PC&C Chapters 3-5 <ul style="list-style-type: none"> <li>• Assignment 4</li> <li>• Quiz 2</li> </ul>
Sep 18	Types of Research Study Design: <i>Qualitative-Methodology</i>	PC&C Chapters 9-10 <ul style="list-style-type: none"> <li>• Discussion 3</li> <li>• Assignment 5</li> </ul>
Sep 25	Types of Research Study Design: <i>Qualitative-Data Analysis &amp; Results</i>	PC&C Chapter 11 <ul style="list-style-type: none"> <li>• Assignment 6</li> <li>• Quiz 3</li> </ul>
Oct 2	Types of Research Study Design: <i>Quantitative-overview</i>	PC&C Chapter 6 <ul style="list-style-type: none"> <li>• Assignment 7</li> <li>• Quiz 4</li> </ul>
<b>Oct 9</b>	<b>Fall Break—No Class</b>	
Oct 16	<b>MIDTERM EXAM</b> Ethics in Research-	Assigned Readings <ul style="list-style-type: none"> <li>• Midterm Exam</li> <li>• Discussion 4</li> </ul>
Oct 23	Quantitative research methodology- <i>Sampling</i>	PC&C Chapter 7 and Assigned Readings <ul style="list-style-type: none"> <li>• Discussion 5</li> <li>• Assignment 8</li> <li>• Quiz 5</li> </ul>
Oct 30	Quantitative research methodology- <i>Statistical Analyses</i>	PC&C Chapter 8, pp. 255-269 and Assigned Readings <ul style="list-style-type: none"> <li>• Discussion 6</li> <li>• Assignment 9</li> <li>• Quiz 6</li> </ul>
Nov 6	Quantitative research methodology- <i>Statistical Analyses</i>	PC&C Chapter 8, pp. 255-269 and Assigned Readings
Nov 13	Quantitative research: <i>presentation of the results</i>	PC&C Chapter 8, pp. 270-283 and Assigned Readings <ul style="list-style-type: none"> <li>• Assignment 10</li> <li>• Quiz 7</li> </ul>

Nov 20	Quantitative research: <i>discussion and application</i>	PC&C Chapter 14 and Assigned Readings • Assignment 11
Nov 27	Research proposal preparation	Assigned Readings
Dec 4	Research proposal submissions	• Research proposal submission
Dec 11	Research proposal peer evaluations	• Peer reviews

**\* Note: Assigned Readings will be posted on CANVAS under the respective module.**

**\*\*This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.**