

Research Methods

LL301 (Online Asynchronous Course)



Syllabus

Version: *Spring 2022 DePaul University - SCPS*

Kevin F. Downing Ph.D.

Instructor

Contents

RESEARCH METHODS.....	3
Course Description.....	3
The Research Proposal.....	3
COURSE LEARNING OUTCOMES	4
General Outcomes	4
Specific Outcomes	4
LEARNING STRATEGIES	5
COURSE RESOURCES.....	5
Required Textbook:	5
Online Resources:	5
Additional Course Resources	5
GRADING POLICIES AND PRACTICE.....	6
Course Grading	6
Late Work Policy	6
Summary of Assignments, Point Values, and Percentages for Research Methods.....	6
Course Grading Scale	7
DePaul University Rubric for Letter Grades.....	7
ASSIGNMENT RUBRICS FOR RESEARCH METHODS	8
Discussion Forum Rubric.....	8
Exercise Rubric.....	8

Research Proposal Rubric	9
COURSE STRUCTURE.....	11
Course Modules	12
Course Structure and Module Topics	12
Course Readings and Supplementary Resources	15
The Annotated Bibliography Series	15
Summary of Deliverables.....	18
Course Discussions.....	21
WRITING ASSIGNMENT ASSISTANCE	26
NEWS ITEMS AND DISCUSSION FORUMS FOR ONLINE COURSES	26
Instructor's Role.....	27
Office Hours	27
Student's Role.....	27
COURSE POLICIES.....	28
Workload, Time Management, and Attendance	28
Online Participation Guidelines	28
Course Netiquette	28
Course Policies.....	28
Academic Integrity Standards.....	28
Protection of Human Subjects in Research	29
College and University Policies	29
Additional Considerations.....	30
Copyright and Student Privacy	30
Instructor Brief Bio.....	30
Changes to Syllabus	30

RESEARCH METHODS

Course Description

This course introduces you to research methods and their application across liberal and professional studies as preparation for lifelong inquiry. Emphasis is on qualitative and quantitative research approaches, experimental design, sampling, measurement, analysis, ethics in research, and research communication. A comprehensive research proposal in your area of interest is the primary document produced and assessed in *Research Methods*. Note: Completion of a college-level quantitative reasoning course is recommended before taking this course.

The Research Proposal

The Research Methods course is structured such that the core research question you pursue centers on a vital topic in your professional area that will expand your knowledge and contribute to your professional advancement.

The final project for this course is an implementation-ready research proposal employing the most suitable research method(s). This proposal will be the core plan used to accomplish your *Capstone Project*. Most of the exercises in the course contribute to the sequential build-out of the final proposal and they will be integrated into your final proposal.

COURSE LEARNING OUTCOMES

General Outcomes

- Pose questions and use methods of formal inquiry to answer questions and solve problems.
- Identifies focused and appropriate questions within a specified context.
- Reviews existing knowledge about the question and determines directions for additional inquiry.
- Designs methods of gathering and interpreting information to advance knowledge relevant to the question.
- Constructs a proposed research model

Specific Outcomes

After completing this course, you should be able to:

- Discuss the concept and language of research (e.g., hypotheses, variables, types of data, and analysis)
- Undertake a review of the recent and scholarly literature, including key points, patterns, and theories published in your area of inquiry, indicating where knowledge gaps exist for original contributions and innovations.
- Demonstrate the ability to settle on a research topic area and to formulate a research question.
- Discuss and evaluate research validity.
- Discuss the nature of research and distinguish between the three key forms: exploratory research, descriptive research and explanatory research.
- Converse on the topic of research ethics and how it impacts research design and the sorts of research endeavors possible in a civil society.
- Demonstrate the proper application of research ethics principles in a proposal including concepts of informed consent, institutional review, and ethics codes.
- Demonstrate an understanding of key concepts of qualitative research to study phenomena and apply them to participant and direct observations such as interviews, case studies and focus groups.
- Demonstrate an understanding of common types of sampling and an ability to apply an appropriate one to achieve a research proposal objective.
- Discuss concepts of probability and sampling error.
- Identify essential variables related to your inquiry (independent, dependent and control) and incorporate them into the framing of a research question or hypothesis
- Discuss the levels of measurement such as nominal, ordinal interval and ratio and aspects of the quality of measurements such as reliability and validity.
- Demonstrate how to scale data collection and/or build tests and surveys.
- Discuss and provide examples of how to design research to establish cause-effect relationships, including the concept of a control group.
- Determine the various 'threats' to confirming cause-effect relationships in your own proposed research.
- Demonstrate an ability to employ experimental design by formulating a study design with a null hypothesis.

- Demonstrate an understanding and integration of basic statistical procedures into a research proposal, including those that are the foundation of ‘descriptive statistics’ (means, medians, modes, distribution, variation, correlation, analysis of variance and analysis of covariance).
- Communicate proposed research to an audience following a presentation rubric.
- Synthesize the components of research methods into a research proposal.

LEARNING STRATEGIES

This course uses the following learning approaches:

- Weekly discussion forums that center on module topics and exercises.
- Weekly exercises that support the practical application of concepts to the development of a research proposal.
- A Library Refresher assignment to practice discovering relevant scholarly literature.
- A Statistics Workshop to foster learning basic concepts of statistics applicable to research methods.
- Development of a research proposal to synthesize and apply acquired research methods.
- Videos and readings to introduce and reinforce research methods concepts.

COURSE RESOURCES

To buy your books, go to <http://depaul-loop.bncollege.com>. or secure a discounted book through online vendors. Used is fine.

Required Textbook:

Trochim, W. M. K., Donnelly, J. P., & Arora, K. (2016). *Research methods: The essential knowledge base*. Boston, MA: Cengage Learning.

Series: MindTap Course List

Paperback: 448 pages

Publisher: Wadsworth Publishing; 2 edition (January 1, 2015)

Language: English

ISBN-10: 1133954774

ISBN-13: 978-1133954774

Online Resources:

This course extensively uses online resources and videos to support student learning. These resources are aligned with specific modules and are itemized in the syllabus section below ‘Course Readings and Supplementary Resources’ as well as the corresponding Readings and Media section of the course site.

Additional Course Resources

[University Center for Writing-based Learning](#)

[Dean of Students Office](#)

GRADING POLICIES AND PRACTICE

To complete the course, students must fulfill each of the assignments as described in the course and submit them to the instructor by the assigned deadline in the course submission area. In addition, students must participate in the course discussion forum by responding to all discussion instructions and by interacting with fellow classmates as required.

Course Grading

Research Methods is a graded course with the option for Pass/Fail. Students wishing to be graded on the Pass/Fail option must inform the course instructor of this preference before the end of the 2nd week of the quarter. After the 2nd week, requests for a change in the grading basis cannot be approved unless DePaul has provided other options.

Late Work Policy

Points will be deducted for late work that has not been exempted with the instructor (i.e., for medical or significant personal reasons). Work received later than one week after the deadline will receive 0% credit. Discussion forums will generally be 'locked' one week after the deadline to exclude further submissions.

Summary of Assignments, Point Values, and Percentages for Research Methods

Grading Category:	Number of Assignments	Point Value Each	Total Point Value	% of Final Grade:
Discussions	10	20	200	20%
Library Refresher	1	40	40	4%
Statistics Workshop	1	100	100	10%
Exercises	10		260	26%
Exercise 1: Selecting an Area of Research		20		
Exercise 2: Research Ethics		20		
Exercise 3: Annotated Bibliography		50		
Exercise 4: Literature Review		50		
Exercise 5: Initial Research Question/Hypothesis		20		
Exercise 6: Sampling		20		
Exercise 7: Measurement		20		
Exercise 8: Scales		20		
Exercise 9: Cause and Effect		20		
Exercise 10: Null Hypothesis and Research Hypothesis		20		
Partial Draft of Research Proposal	1	100	100	10%
Presentation– Research Proposal Summary	1	50	50	5%
Final Research Proposal	1	250	250	25%
Total			1000 Points	100%

Course Grading Scale

Grading Scale Percentage Verbal Descriptor

A	100-93%	Excellent
A-	92-90%	
B+ to B-	89-80%	Very Good
C+ to C-	79-69%	Satisfactory
D+ to D-	68-60%	Poor
F	< 60%	Unacceptable

DePaul University Rubric for Letter Grades

A The instructor judged the student to have accomplished the stated objectives of the course in an EXCELLENT manner.

B The instructor judged the student to have accomplished the stated objectives of the course in a VERY GOOD manner.

C The instructor judged the student to have accomplished the stated objectives of the course in a SATISFACTORY manner.

D The instructor judged the student to have accomplished the stated objectives of the course in a POOR manner.

F The instructor judged the student NOT to have accomplished the stated objectives of the course.

DePaul University Incomplete Policy

The intent of the Incomplete grade is to allow students extra time to complete their final assignments. This need arises because, in the closing weeks of the course, they have an event of significant magnitude that adversely affects their ability to complete the course, e.g., serious illness, death in the family, overseas deployment, or natural disaster.

You must request an incomplete grade in writing two weeks before the end of the quarter. Incomplete grades will be considered only after you have satisfactorily completed at least 75 percent of the coursework, and you have such an unexpected, uncontrollable event that prevents you from completing your course. Do not assume that you will qualify for an incomplete. Students who are failing the course at the point where they request an incomplete will not receive one, nor will they be granted after the end of the quarter. Incomplete grades are given at the discretion of the instructor.

If you do receive permission from the instructor to take an incomplete in the course, you will be required to complete a contract with the instructor, specifying how you will finish the missing work within the next two quarters (excluding summer). See the [Incomplete Grade Contract Form](#).

Undergraduate and graduate students will have up to two quarters to complete an incomplete. The Instructor will determine the timeframe for the incomplete and may choose to have a much shorter interval for work submission. At the end of the second quarter (excluding summer) following the term in which the

incomplete grade was assigned, remaining incompletes will automatically convert to "F" grades. Ordinarily no incomplete grade may be completed after the grace period has expired. Instructors may not change incomplete grades after the end of the grace period without the permission of a college-based Exceptions Committee. This policy applies to undergraduate, graduate and professional programs. NOTE: In the case of a student who has applied for graduation and who has been approved for an Incomplete in his or her final term, the incomplete must be resolved within the four-week grace period before final degree certification.

ASSIGNMENT RUBRICS FOR RESEARCH METHODS

Discussion Forum Rubric

The instructor expects that students will contribute to discussions each week. For online discussions, the instructor uses the rubric described below (modeled after Pelz, 2004). Take this into consideration as you prepare and participate in class discussions.

Level	Interpretation	Character of the Contribution
4	Excellent	The comment is 1) accurate, 2) original, 3) relevant, 4) teaches us something, and 5) is well written (where posted online). Four-point comments add substantial teaching presence to a course and stimulate additional thought about the issue under discussion. Likewise, a response to another student's postings should also have these qualities.
3	Above Average	The comment lacks at least one of the above qualities but is above average in quality. A level 3 comment makes a significant contribution to our understanding of the issue being discussed.
2	Average	The comment lacks two or three of the required qualities. Comments which are based on personal opinion or personal experience are often within this category.
1	Minimal	The comment presents little or no new information. However, level 1 comment may provide important social presence and contribute to a collegial atmosphere.
0	Unacceptable	The comment adds no value to the discussion.

Exercise Rubric

Level	Interpretation	Character of the Contribution
4	Excellent	The exercise report has the following qualities: 1) the report is complete having addressed all instructions, 2) the report demonstrates an understanding of the central theme/concept of the exercise, 3) the reported information and/or items requested are accurate and 4) report is well written.
3	Above Average	The report lacks at least one of the above qualities but is above average in quality. A level 3 report demonstrates a strong understanding of the issue being discussed.

Level	Interpretation	Character of the Contribution
2	Average	The report lacks or only partially meets several of the required qualities. A level 2 report demonstrates a reasonable understanding of the issue being discussed.
1	Minimal	The report presents little evidence of the above qualities. A level 1 report demonstrates a nominal understanding of the issue being discussed.
0	Unacceptable	The report does not demonstrate understanding of the fieldtrip topics.

Research Proposal Rubric

Level	Interpretation	
4	Excellent	<p>A level 4 Proposal has these qualities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Review of the recent and scholarly literature has uncovered knowledge gaps that exist for original contributions and innovations. <input type="checkbox"/> Research question is grounded in a core of scholarly literature that has been critically reviewed. <input type="checkbox"/> Proper use of the concept and language of research (e.g., hypotheses, variables, types of data, and analysis) <input type="checkbox"/> The form of research is identified: exploratory research, descriptive research and explanatory research. <input type="checkbox"/> Proper application of research ethics principles in the proposal including concepts of informed consent, institutional review, and ethics codes. <input type="checkbox"/> If qualitative research is proposed, methods for participant and direct observations such as interviews, case studies and focus groups clear. <input type="checkbox"/> Sampling strategy proposed is appropriate to achieve a research proposal objective. <input type="checkbox"/> Probability and sampling error are discussed (as relevant). <input type="checkbox"/> Reliability and validity are considered. <input type="checkbox"/> Variables are identified (independent, dependent and control) and incorporated into the framing of the research question or hypothesis.

		<ul style="list-style-type: none"> <input type="checkbox"/> Scaled, test or survey data collection instrument is sound (as applicable) <input type="checkbox"/> Cause-effect relationships and experimental design is clear. <input type="checkbox"/> Null and Alternative (i.e., research) hypothesis are clearly defined <input type="checkbox"/> Basic statistical procedures are incorporated into the research proposal as appropriate (means, medians, modes, distribution, variation, correlation, analysis of variance and analysis of covariance). <input type="checkbox"/> Proposal is well written (grammar, flow and spelling). <input type="checkbox"/> Final Proposal adheres to the required organization and format. <input type="checkbox"/> Overall, components of research methods are well-synthesized into the research proposal.
3	Above Average	The Proposal lacks several of the above qualities but is above average in quality. A level 3 report demonstrates a strong understanding of the issues being discussed and the application of research methods into the proposal.
2	Average	The Proposal lacks a significant number of the required qualities. A level 2 report demonstrates only a reasonable understanding of the issue being discussed and the application of research methods into the proposal draft.
1	Minimal	The Proposal presents little evidence of the above qualities. A level 1 report demonstrates a nominal understanding of the issue being discussed and the incorporation of research methods.
0	Unacceptable	The Proposal does not demonstrate understanding of the research methods concepts or their application.

COURSE STRUCTURE

This course consists of ten modules, each of which takes one week to complete, as indicated in the course schedule below. Due dates are provided in the online course calendar. This course is NOT a self-study course. This is a paced course and it is important that you keep up with the course activities and contribute to the course discussions.

Note: The workload for this course is heavy, proportional to the 6 credits weighting and cannot be completed in less than a full quarter. You cannot pass the course without turning in your assignments in a timely manner, revising them based on instructor feedback, keeping up with the sequential pace of the assignments, and participating in the discussion forums. To get the most out of the course you should be sure to finish all assignments, but also put to use the textbook and videos.

If you have a general question about an assignment or a requirement, please place them in the course discussion board. Individualized questions should be sent directly to the instructor. Your instructor will be checking the discussion board frequently and will usually respond within 24 hours during the week, 48 hours over the weekend, unless you are advised otherwise. ***This course is also labor-intensive for the instructor so respect your instructor's time and work load.***

In the four tables below, you will find: 1) the **Course Schedule** that summarizes the theme for each module, 2) the **Course Readings and Supplementary Resources** which details what part of the textbook you read each week and the supplemental videos to support your learning, 3) a **Summary of Deliverables** that lists the sequence of exercises, proposal drafts, and other submission assignments, and 4) the **Course Discussions** which previews the themes for weekly discussions.

Course Modules

Each Module of this course is one week in duration and one week in length except for Module 10 that extends through exam Week 11.

Course Structure and Module Topics

Module	Date	Module Topics	Summary	Other Activities
Module 1	Wk1	Foundations of Research Methods	In this first Module and throughout this course, you will learn about research methods and their application to address questions and problems. You will explore what research practice involves from basic discovery research to research that has a direct impact on society. You will first review the concept and language of research (e.g., hypotheses, variables, types of data, and analysis) as well as consider where research topics come from, how to narrow them, and how to develop a research question. Next, you will examine the importance of research validity which is a measure of its quality. Finally, you will learn about the nature of research including three key forms: exploratory research, descriptive research and explanatory research.	Library Research Refresher
Module 2	WK2	Research Ethics & Research Communication	In Module 2, you will explore the concept of research ethics and how it impacts research design and the sorts of research endeavors possible in a civil society. In order to accomplish this, you will be introduced to the history of ethical frameworks for research, particularly as they were a response to atrocities in the 20 th century. The Belmont report, which was foundational to establishing modern ethical parameters, will be reviewed as well as concepts of informed consent, institutional review, and ethics codes.	Library Research Refresher
Module 3	WK3	Qualitative Approaches	This third Module introduces you to key aspects of qualitative research characterized by nonnumerical approaches used to study phenomena. Qualitative methods include participant and direct observations as well as interviews, case	

			studies and focus groups. You will learn to appraise when qualitative approaches are appropriate to address a research question as well as the associated data collection techniques and their assessment.	
Module 4	WK4	Sampling	In this Module, you will examine the important role that sampling plays in conducting research. Sampling involves taking information from a subset of a population often with the intent of trying to generalize about characteristics of the original population. You will learn about several common types of sampling. Finally, the concepts of probability and sampling error will be reviewed.	Begin Statistics Workshop
Module 5	WK5	Introduction to Measurement	This fifth module investigates the levels of measurement such as nominal, ordinal interval and ratio. You will also explore aspects of the quality of measurements such as their reliability and validity.	Statistics Workshop
Module 6	WK6	Scales, Tests and Surveys	Module 6 provides an overview of how to scale data collection, such as by response surveys that permit the establishment of numerical values. You will also examine how tests and indices are built and evaluated for validity and reliability. Lastly, you will review the techniques of survey data including how to choose an appropriate method, how to design a survey, and how to conduct research interviews.	Statistics Workshop
Module 7	WK7	Research Design	In Module 7, you will examine how to design research to establish cause-effect relationships, including the concept of a control group. Likewise, the various 'threats' to confirming cause-effect relationships will be reviewed.	Finish Statistics Workshop
Module 8	WK8	Experimental Design	Module 8 will review how experimental design is conducted by examining how to test a null hypothesis. The two chief experimental design examples you will explore focus on the effectiveness of instruction modes and medical treatments.	
Module 9	WK9	Data Analysis/Basic Statistics/Inferential Analysis	Module 9 fosters your understanding and integration of basic statistical procedures into your research proposal, including those that are the foundation of 'descriptive statistics' (means, medians, modes,	

			distribution, variation, and correlation). Other basic statistical concepts and methods that can be used to evaluate variables, such as the t-test for analysis of variance (ANOVA) and the analysis of covariance (ANCOVA) are considered.	
Module 10	WK10	Finalizing and Communicating your Research	The final module of the course will provide you with examples of how to pitch and present your research proposal. It will also provide you with the learning space, whether onsite or online, to communicate your proposal idea and methods to your classmates and instructor.	
	WK11	Finalizing and Communicating your Research		

Course Readings and Supplementary Resources

Module	Topic	Readings and Supplemental Videos						
Module 1	Foundations of Research Methods	<p>Read:</p> <p>Chapter 1 Trochim et al. 'Foundations of Research Methods'</p> <p>Review:</p> <p>Narrowing a Topic and Developing a Research Question</p> <p>21 Ways of Generating Research Ideas from Previous Research</p> <p>Video 'What is Research I' (3 Minutes)</p> <p>Video 'What is research II' (3 Minutes)</p> <p>Video 'Nature of Research' (6 minutes)</p> <table border="1"> <tr> <td>DePaul Library</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Getting Started with LibrarySearch </td> </tr> <tr> <td> <ul style="list-style-type: none"> • Getting Started with Academic Search Complete </td> </tr> <tr> <td> <ul style="list-style-type: none"> • Finding Subject-Specific Resources </td> </tr> <tr> <td> <ul style="list-style-type: none"> • Developing a Search Strategy Using a Library Database </td> </tr> </table>	DePaul Library	<ul style="list-style-type: none"> • Getting Started with LibrarySearch 	<ul style="list-style-type: none"> • Getting Started with Academic Search Complete 	<ul style="list-style-type: none"> • Finding Subject-Specific Resources 	<ul style="list-style-type: none"> • Developing a Search Strategy Using a Library Database 	
DePaul Library								
<ul style="list-style-type: none"> • Getting Started with LibrarySearch 								
<ul style="list-style-type: none"> • Getting Started with Academic Search Complete 								
<ul style="list-style-type: none"> • Finding Subject-Specific Resources 								
<ul style="list-style-type: none"> • Developing a Search Strategy Using a Library Database 								
Module 2	Research Ethics & Research Communication	<p>Read:</p> <p>Chapter 2 Trochim et al. 'Ethics'</p> <p>Video 'A Public Documentary on the History of Research Ethics' (20 Minutes)</p> <p>Video Belmont Report (3 Minutes)</p> <p>Video Medical Research Example (6 Minutes)</p> <p>Chapter 13 Trochim et al. 'Research Communications'</p> <p>Video 'Introduction to academic research' (5 Minutes)</p> <p>Video 'The Research Proposal' (14 Minutes)</p> <table border="1"> <tr> <td style="text-align: center;">The Annotated Bibliography Series</td> </tr> <tr> <td>Video 'What's an annotated bibliography?' (2 Minutes)</td> </tr> <tr> <td>Video 'How to Write an Annotated Bibliography Step by Step' (2 minutes)</td> </tr> <tr> <td>Video 'How to Read a Scholarly Journal Article' (5 Minutes)</td> </tr> <tr> <td>Video 'How to Read and Take Notes on an Academic Journal' (7 Minutes)</td> </tr> <tr> <td>Differences and Interrelationships between the Annotated Bibliographies and Literature Reviews</td> </tr> </table>	The Annotated Bibliography Series	Video ' What's an annotated bibliography? ' (2 Minutes)	Video ' How to Write an Annotated Bibliography Step by Step ' (2 minutes)	Video ' How to Read a Scholarly Journal Article ' (5 Minutes)	Video ' How to Read and Take Notes on an Academic Journal ' (7 Minutes)	Differences and Interrelationships between the Annotated Bibliographies and Literature Reviews
The Annotated Bibliography Series								
Video ' What's an annotated bibliography? ' (2 Minutes)								
Video ' How to Write an Annotated Bibliography Step by Step ' (2 minutes)								
Video ' How to Read a Scholarly Journal Article ' (5 Minutes)								
Video ' How to Read and Take Notes on an Academic Journal ' (7 Minutes)								
Differences and Interrelationships between the Annotated Bibliographies and Literature Reviews								

		<p>Video 'Literature Reviews and Annotated Bibliographies - Research Essay Writing Tutorial' (7 Minutes)</p>											
Module 3	Qualitative Approaches	<p>Read: Chapter 3 Trochim et al. 'Qualitative Approaches to Research'</p> <p>Video 'Overview of Qualitative Research Methods' (12 Minutes)</p> <p>Video 'Types of qualitative data collection Part I and Part II' (6 Minutes)</p> <table border="1"> <tr> <td>Literature Review Series</td> </tr> <tr> <td>Video 'Literature Review' (10 Minutes)</td> </tr> <tr> <td>Video 'Conducting a Systematic Literature Review' (3 Minutes)</td> </tr> <tr> <td>Video '3 Simple Steps To Get Your Literature Review Done!' (2 Minutes)</td> </tr> </table>	Literature Review Series	Video ' Literature Review ' (10 Minutes)	Video ' Conducting a Systematic Literature Review ' (3 Minutes)	Video ' 3 Simple Steps To Get Your Literature Review Done! ' (2 Minutes)							
Literature Review Series													
Video ' Literature Review ' (10 Minutes)													
Video ' Conducting a Systematic Literature Review ' (3 Minutes)													
Video ' 3 Simple Steps To Get Your Literature Review Done! ' (2 Minutes)													
Module 4	Sampling	<p>Read: Chapter 4 Trochim et al. 'Sampling'</p> <p>Video 'Overview of Quantitative Research Methods' (22 Minutes)</p> <table border="1"> <tr> <td>Sampling</td> </tr> <tr> <td>Video 'Types of Sampling' (5 Minutes)</td> </tr> <tr> <td>Video 'Sampling, reliability, & validity in qualitative research' (17 minutes)</td> </tr> <tr> <td>Video 'Validity versus Reliability' (2 minutes)</td> </tr> </table> <p>Video 'Research Variables' (7 Minutes)</p> <p>Video 'How to Write a Hypothesis' (5 Minutes)</p> <p>Video 'Writing Problem Statements' (3 minutes)</p> <table border="1"> <tr> <td>Statistics Workshop Video Series</td> </tr> <tr> <td>Video: 'Introduction to Statistics'</td> </tr> <tr> <td>Video: 'Displaying Data'</td> </tr> <tr> <td>Video: 'Mode, Median, Mean, Range, and Standard Deviation'</td> </tr> <tr> <td>Video: 'Explanatory and Response Variables, Correlation'</td> </tr> <tr> <td>Video: 'Regression and R-squared'</td> </tr> <tr> <td>Video: 'Student t-Test'</td> </tr> </table>	Sampling	Video ' Types of Sampling ' (5 Minutes)	Video ' Sampling, reliability, & validity in qualitative research ' (17 minutes)	Video ' Validity versus Reliability ' (2 minutes)	Statistics Workshop Video Series	Video: ' Introduction to Statistics '	Video: ' Displaying Data '	Video: ' Mode, Median, Mean, Range, and Standard Deviation '	Video: ' Explanatory and Response Variables, Correlation '	Video: ' Regression and R-squared '	Video: ' Student t-Test '
Sampling													
Video ' Types of Sampling ' (5 Minutes)													
Video ' Sampling, reliability, & validity in qualitative research ' (17 minutes)													
Video ' Validity versus Reliability ' (2 minutes)													
Statistics Workshop Video Series													
Video: ' Introduction to Statistics '													
Video: ' Displaying Data '													
Video: ' Mode, Median, Mean, Range, and Standard Deviation '													
Video: ' Explanatory and Response Variables, Correlation '													
Video: ' Regression and R-squared '													
Video: ' Student t-Test '													

Module 5	Introduction to Measurement	Read: Chapter 5 Trochim et al. 'Introduction to Measurement' Video ' Nominal, ordinal, interval and ratio data: How to... ' (11 Minutes) Video ' Precision and Accuracy ' (5 Minutes) Video ' Validity and Reliability ' (4 Minutes)
Module 6	Scales, Tests and Surveys	Read: Chapter 6 Trochim et al. 'Scales, Tests, and Indices' Video ' Likert Scale Example ' (2 Minutes) Chapter 7 Trochim et al. 'Survey Research' Video ' Survey in 10 Steps ' (5 Minutes)
Module 7	Research Design	Read: Chapter 8 Trochim et al. 'Introduction to Design' Video ' Types of Experimental Design ' (7 Minutes)
Module 8	Experimental Design	Read: Chapter 9 Trochim et al. 'Experimental Design' Video ' What is a null hypothesis? ' Video ' Null Hypothesis, p-Value, Statistical Significance, Type 1 Error and Type 2 Error '
Module 9	Data Analysis/Basic Statistics/Inferential Analysis	Read: Chapter 10 Trochim et al. 'Introduction to Data Analysis' Chapter 11 Trochim et al. 'Introduction to Data Analysis' Videos: How to Pitch your research proposal Example 1 Education (4 Minutes) Example 2 Education (6 Minutes)
Module 10	Finalizing and Communicating your Research	No Readings or Supplements.

Summary of Deliverables

			Deliverables
Module	Date	Module Topics	Submission Assignments
Module 1	Wk1	Foundations of Research Methods	<p>Exercise 1: Selecting an Area of Research in your professional area</p> <p>Due Middle of Module 2</p> <p>Library Research Refresher</p> <p>Due end of Module 3</p>
Module 2	WK2	Research Ethics & Research Communication	<p>Exercise 2: Research Ethics</p> <p>Due End of Module 2</p> <p>Exercise 3: Annotated Bibliography</p> <p>Due End of Module 3</p>
Module 3	WK3	Qualitative Approaches	<p>Exercise 4: Literature Review</p> <p>Due End of Module 4</p> <p>Exercise 5: Initial Research Question/Hypothesis</p> <p>Due End of Module 4</p>
Module 4	WK4	Sampling	<p>Statistics Workshop</p> <p>Due End of Module 7</p> <p>Exercise 6: Sampling</p>

			Due End of Module 4
Module 5	WK5	Introduction to Measurement	Exercise 7: Measurement Due End of Module 5
Module 6	WK6	Scales, Tests and Surveys	Exercise 8: Scales, Tests and Surveys Due End of Module 6 Partial Draft of Research Proposal (Sections 4-6) Due End of Module 7 (START) See the document "Outline and Format Checklist for Your Research Proposal"
Module 7	WK7	Research Design	Exercise 9: Cause and Effect Due End of Module 7 Partial Draft of Research Proposal (Sections 4-6) Due End of Module 7 (FINISH) See the document "Outline and Format Checklist for Your Research Proposal"
Module 8	WK8	Experimental Design	Exercise 10: Null Hypothesis and Research Hypothesis Due End of Module 8 Final Research Proposal (including Sections 1-3; 7-9) Due End of Module 10 (START)

			See the document “Outline and Format Checklist for Your Research Proposal”
Module 9	WK9	Data Analysis/Basic Statistics/Inferential Analysis	<p>Presentation– Research Proposal Summary (and review of classmates)</p> <p>Due Middle of Module 10</p> <p>Final Research Proposal (including Sections 1-3; 7-9)</p> <p>Due End of Module 10</p> <p>See the document “Outline and Format Checklist for Your Research Proposal”</p>
Module 10	WK10	Finalizing and Communicating your Research	<p>Presentation– Research Proposal Summary (and review of classmates)</p> <p>Due Middle of Module 10</p>
	WK11		Final Research Proposal (DUE) (FINISH)

Course Discussions			
Module	Date	Module Topics	Discussions
Module 1	Wk1	Foundations of Research Methods	<p><u>Introduction Discussion</u></p> <p>Introduce yourself to the class, Include the following:</p> <ul style="list-style-type: none"> • Where you are in your program. • What your focus or primary interest area is in your academic program. • Something you like to do outside of your profession. If you would like to post a representative picture, please do. • Greet at least two other classmates. The idea is for you to become comfortable talking together online. <p>Due: Middle of Module 1.</p> <p><u>Discussion 1 Objectives: Defining Research</u> To determine fundamental aspects the fundamental characteristics of research and how humans go about conducting it. To learn about previous research examples that students have undertaken at work, in life, or in an academic setting.</p> <p>Instructions: Part I. Based on your readings and supplemental resources, in 75-100 words, review a concept of ‘research’ that will help us understand it. (Do not repeat another student’s example). Please include a visual from the internet where helpful.</p> <p>Part II: Discuss one example of research you have undertaken at work, in life, or in an academic setting. Discuss whether this was a ‘systematic investigation’ and involved the discovery of something new (50-75 words).</p> <p>Due: End of Module 1.</p>
Module 2	WK2		Research Ethics &

		<p>Research Communication</p>	<p>To convey to classmates what you have learned about ethics in your area based on a review of relevant codes.</p> <p>Instructions:</p> <p>Part I. In about 75-100 words, describe what you have learned about your field of study based on a review of the ethics videos and a relevant code of ethics from the Ethics Code website at http://ethicscodescollection.org/. Be sure to discuss how the ethics considerations in the reviewed code may inform how you conduct your research, if at all (i.e., your methods).</p> <p>Here is an example of what a dental researcher has to consider. American Association for Dental Research http://ethics.iit.edu/ecodes/node/6040</p> <p>Part II: In about 50 words and using one of the ethics ‘mini cases’ at the link below, describe the case’s ethical dilemma and how you would approach it. https://wayback.archive-it.org/8696/20200916190142/https://www.onlineethics.org/18876/Resources?resource-type=29_772</p> <p>Part III: Comment on another student’s example of ethics related to their research area.</p> <p>Due: End of Module 2.</p>
Module 3	WK3	<p>Qualitative Approaches</p>	<p>Discussion 3 Objectives: Qualitative Research To examine and discuss aspects of qualitative approaches to research drawing from information provided in readings and videos. To convey to classmates what you have learned about qualitative approaches to research including whether qualitative approaches are appropriate to address your own research question.</p> <p>Instructions: In about 75-100 words, describe a qualitative research approach that may be useful to apply to your research area and question. Be sure to consider both the strengths and weaknesses of qualitative research. Finally, review and comment on another student’s potential use of a qualitative approach with the aim of improving their application of the described procedure.</p> <p>Due: End of Module 3.</p>

Module 4	WK4	Sampling	<p>Discussion 4 Objectives: Sampling To examine and discuss aspects of sampling approaches to research drawing from information provided in readings, videos and statistics workshop. To convey to classmates what you have learned about sampling approaches including how you will potentially sample from an identified population (e.g., people, objects, animals, etc.) to address your research question.</p> <p>Instructions: In about 75-100 words, describe how you will potentially sample from an identified population (e.g., people, objects, animals, etc.) to address your research question. Be sure to briefly review the character of the nonprobability or probability sampling procedure that best applies to your research. Finally, review and comment on another student’s potential use of a sampling approach with the aim of improving their application of the described procedure. (see Table 4.1 for a summary of approaches)</p> <p>Due: End of Module 4.</p>
Module 5	WK5	Introduction to Measurement	<p>Discussion 5 Objectives: Measurement In this discussion forum you will examine and discuss aspects of research measurements including levels of measurement and measurement reliability and validity drawing from the module readings and videos. You are expected to convey to classmates what measurement level you expect to be working at in your study and other details about the character of your measurements.</p> <p>Instructions: In about 100-125 words, describe what measurement level you expect to be working at in your study. Be sure to provide a basic example and characteristics of your measurements (e.g., my measurements involve <u>ordinal</u> considerations such as the salary levels that employees make in my corporation at particular position ranks). Finally, review and comment on another student’s measurement plan.</p> <p>Due: End of Module 5.</p>

Module 6	WK6	<p align="center">Scales, Tests and Surveys</p>	<p>Discussion 6 Objectives: Data Instruments To examine, discuss and apply an aspects of research scaling.</p> <p>Instructions: In about 50 words, develop a Likert-style question for a 1-5 level response scale (p.153). If you expect scaling sorts of questions to be a part of your research methodology, please make your question relevant to your study. Next, discuss one issue for surveys: population, sampling, questions, content, bias or administrative considerations (p.176-181). Please try to relate the 'issue' to how it may impact your research.</p> <p>Due: End of Module 6.</p>
Module 7	WK7	<p align="center">Research Design</p>	<p>Discussion 7 Objectives: Cause and Effect To examine and discuss aspects of research design such as: 1) research design types, 2) structuring a study <u>to establish cause and effect relationships</u> as well as, 3) recognizing 'threats' that can jeopardize drawing meaningful conclusions and establishing validity about data.</p> <p>Instructions: In about 75-100 words, describe a cause and effect relationship that may exist in your research and that you would like to establish through your investigation. Next, describe a threat (p.211-219) to supporting the validity of this relationship. Finally, using figure 8.9 establish whether your research design is a "true experiment", a "quasi-experiment" or a "non-experiment". (Note: If your research plan does not seek to establish a cause and effect relationship, then derive one from your own experience and discuss it.)</p> <p>Due: End of Module 7.</p>
Module 8	WK8	<p align="center">Experimental Design</p>	<p>Discussion 8 Objectives: Experimental Design You will assess your own research objectives and methods and correspondingly describe how/if aspects of randomization can be built into the study by drawing from your readings and video.</p> <p>Instructions: After reviewing the video on "Types of Experimental design", in about 75-100 words, decide on and describe your own example of a 'randomized block design', 'matched pairs design' <u>or</u> 'completely random design'. You do not have to provide all of the details but should</p>

			<p>come up with a basic strategy and original example from these types of design. If your own research plan will involve such a design, <u>be sure to use it as your example</u>. Be sure to review and comment on a classmate's example.</p> <p>Due: End of Module 8.</p>
Module 9	WK9	<p>Data Analysis/Basic Statistics/Inferential Analysis</p>	<p><u>Discussion 9 Objectives: Data Analysis</u> To discuss aspects of data analysis concepts and techniques you learned in the statistics workshop and their potential application to your proposed study.</p> <p>Instructions: In about 50 words, describe the challenges you encountered in the statistics workshop. Next, in about 100 words, describe the basic statistical concepts and procedures applicable to the analysis of data of your study. For example, what 'descriptive statistics' can be applied (means, medians, distribution, variation, and correlation). What other basic statistical concepts and methods can be used to evaluate variables in your study, such as the t-test for analysis of variance (ANOVA) and the analysis of covariance (ANCOVA)? Do not just list a procedure, <u>be sure</u> to link the discussion to specific components of your study (e.g., what are you trying to correlate and what statistical procedure accomplishes this?).</p> <p>Due: End of Module 9.</p>
Module 10	WK10	<p>Finalizing and Communicating your Research</p>	<p><u>Presentation– Research Proposal Summary (and review of classmates)</u> The final discussion provides you an outlet to present a basic sketch of your research proposal to the class and review other students' presentations.</p> <p>Instructions:</p> <ol style="list-style-type: none"> 1) Using a 4-slide PowerPoint presentation, post a brief summary of what your research plan entails. See p. 339 and 340 of the textbook for a basic outline for this presentation. You should include: 1) an introduction, 2) summary of key literature, 3) summary of methods, 4) expected significance. <p>Since this is a proposal, <u>DO NOT</u> include results and conclusions, but in their place include a section titled "expected significance" which</p>

			<p>briefly describes the possible outcomes of the study, that is, if it is approved and carried out. You may provide a graphic(s) to help convey what your study is about but use graphics sparingly.</p> <p>2) Review and Comment on two classmates ' presentations.</p> <p>Discussion 10 Objectives: In the final class discussion, comment briefly on your learning this quarter in Research Methods including: 1) what was most challenging, 2) what was most rewarding, and 3) what skills you have added that will sharpen your ability to conduct research in your professional life?</p> <p>Due: End of Module 10.</p>
--	--	--	--

WRITING ASSIGNMENT ASSISTANCE

Consider utilizing the Writing Center to discuss your assignments for this course or any others. You may schedule appointments (30 or 50 minutes) on an as-needed or weekly basis, scheduling up to 3 hours' worth of appointments per week. Online services include Feedback-by-Email and IM conferencing (with or without a webcam). All writing center services are *free*.

Writing Center tutors are specially selected and trained graduate and undergraduate students who can help you at almost any stage of your writing. You will not do your work for you, but you can help you focus and develop your ideas, review your drafts, and polish your writing. You can answer questions about grammar, mechanics, different kinds of writing styles, and documentation formats. You also can answer questions and provide feedback online, through IM/webcam chats and email.

Obviously, the tutors won't necessarily be familiar with every class or subject, but you are able to provide valuable help from the perspective of an interested and careful reader as well as a serious and experienced student-writer.

Schedule your appointments with enough time to think about and use the feedback you'll receive. To schedule a Face-to-Face, Written Feedback by Email, or Online Appointment, visit www.depaul.edu/writing.

NEWS ITEMS AND DISCUSSION FORUMS FOR ONLINE COURSES

Discussion Forums are an important component of your online experience. This course contains discussion forums related to the topics you are studying each week. For requirements on your

participation in the Discussion Forums, please see "Discussion Forum" and the "Discussion Rubric" in this syllabus.

A Course Q & A discussion forum has also been established to manage necessary, ongoing social and administrative activities. This is where the management and administrative tasks of the course are conducted, and where you can ask 'process' questions and receive answers throughout the course from the instructor or other students.

Information Area Title	Appropriate Activities
News	Periodically, the instructor may make general postings and updates to course materials (beyond regular updates).
Forum Title	Appropriate Activities
Introductions	A place to tell us a little about yourself and your connection to the course subject matter.
Course Question and Answers	A place for students to ask process general questions about the course activities that may be of interest to other students. Individualized questions should be sent directly to the instructor.
Module Discussion Forums	Student interactions and collaboration around current course topics.

Instructor's Role

The instructor's role in this course is that of a discussion facilitator and learning advisor. It is not their responsibility to make sure students log in regularly and submit their assignments. The instructor will read all postings to the general discussion forums but may not choose to respond to each posting. Most often you will receive individualized feedback to assignments through the D2L assessment system.

Office Hours

As this is an online course there will be no set office hours. However, at the Instructor's discretion, synchronous meetings may be set-up using the Zoom platform. Typically, students will receive a response to emailed or posted queries generally within 48 hours during regular business days. Responses will be usually by e-mail or telephone if prearranged.

Student's Role

Online students must take a proactive approach to the learning. As the course instructor's role is that of a learning guide, the role of the student is that of the leader of their own learning. Students will be managing their own time to assure completion of the readings, activities and assignments for the course. In addition, students are expected to take a more active role in peer learning expressed in the discussion forums.

COURSE POLICIES

Workload, Time Management, and Attendance

This online course is not self-paced and requires a regular time commitment each week throughout the quarter. You are required to log in to the course at least three to four times a week so that you can participate in the ongoing course discussions. Online courses are more flexible but no less time consuming than onsite courses. You will have to dedicate some time every day or at least every second day to your studies. To work towards an excellent grade in *Research Methods*, students should expect to commit **at least 10 hours** of time spread out through each week of the quarter.

Online Participation Guidelines

All the discussion that would ordinarily take place in a classroom takes place in the Discussion Boards in your online course. Just as you are expected to attend a course scheduled to take place in a classroom, you must attend to your online course, at least three times a week. This is done by going to the Discussion Board area to read what is written there and to contribute to the ongoing discussion. Note: The D2L system permits the instructor to evaluate the participation level of students.

Course Netiquette

Online discussions are an important part of the course experience. To ensure a positive learning environment, students should follow the guidelines below:

- Be polite
- Respect other participants' views or opinions
- Think before you write, and ask yourself if you would say the same thing in person
- Use positive phrases (i.e., "Good idea!" or "Thanks for the suggestions," etc.)
- Be sensitive to cultural differences
- Avoid hostile, curt or sarcastic comments
- No objectionable, sexist, or racist language will be tolerated
- Create a positive online community by offering assistance and support to other participants.
- Use correct grammar and syntax

Course Policies

Academic Integrity Standards

This course abides by DePaul University's Academic Integrity policy. In particular students should avoid cheating and plagiarism as defined below.

1. Cheating. Cheating is any action that violates university norms or instructor guidelines for the preparation and submission of assignments. This includes, but is not limited to: unauthorized access to examination materials prior to the examination itself; use or possession of unauthorized materials during the examination or quiz; having someone take an examination in one's place; copying from another student; unauthorized assistance to another student; or acceptance of such assistance.

2. Plagiarism. Plagiarism occurs when one uses words, ideas, or work products attributed to an identifiable source, without attributing the work to the source from which it was obtained, in a situation where there is a legitimate expectation of original authorship in order to obtain benefit, credit, or gain. Plagiarism includes but is not limited to the following:
 1. The direct copying of any source, such as written and verbal material, computer files, audio disks, video programs or musical scores, whether published or unpublished, in whole or part, without proper acknowledgement that it is someone else's.
 2. Copying of any source in whole or part without proper acknowledgement.
 1. This includes using others' work and;
 2. The reuse or repurposing of any previously submitted version of one's own work-product or data into a "new" product without requesting permission from the current instructor (also known as "self-plagiarism").

Protection of Human Subjects in Research

Demonstrating competence sometimes involves human interactions, including interviewing and or observing people outside of the course, discussing those interactions with class members and reporting on the interactions in written format(s). As such, these interactions qualify as human subjects research and are subject to University and Federal guidelines. Research which takes place in the context of this course is exempt from approval by the School for New Learning's Local Review Board *only under the following conditions*:

1. The data collected is *exclusively* for the purpose of class discussion and may not be used for any other purpose, whether during the course or at any time afterwards. If there is any possibility that the data could be used in further research or for publication, then students must obtain approval from the Local Review Board before beginning.
2. Students assess the risk of harm to the individual, whether physical, mental or social, and ensure that no harm does or could result from interviews, observations, discussion and/or reports.
3. The privacy and confidentiality of those interviewed, observed, or discussed in the course are protected. Unless the student receives written permission from an individual to use the individual's name, all names should be changed or eliminated, ensuring that identity cannot be determined from the data provided.

Written permission can be secured only through an *Informed Consent document*, which your instructor will help you develop, if appropriate. For more information see: <http://research.depaul.edu/>

College and University Policies

This course includes and adheres to the college and university policies described in the links below:

[Academic Integrity Policy](#) (UGRAD)

[Course Withdrawal Timelines and Grade/Fee Consequences](#)

[Accommodations Based on the Impact of a Disability](#)

[Protection of Human Research Participants](#)

[APA citation format](#)

Additional Considerations

Additional information for the instructor's consideration in planning the syllabus may be provided in this section, especially to address unique programmatic needs.

Recording of Classroom Sessions Conducted via Videoconference tools:

- Synchronous teaching sessions can be recorded by the instructor for educational purposes. These recordings will be made available only to students presently enrolled in the course via password protected links. Links will be posted via the course webpages on D2L and viable for the present term only.
- Students are prohibited from sharing class recordings or disclosing the links to a class session to anyone outside of the course.
- Students have the right to protect their privacy during recordings by appearing in an audio-only mode; pseudonymous usernames can be used by students, if shared offline with the instructor.
- Instructors may retain portions of the recordings that contain their intellectual property consistent with University policy, with students' identifying information removed.

Copyright and Student Privacy

In accordance with DePaul's Acceptable Use Policy, commentary and materials within SCPS Online classes shall not be copied, reproduced or published elsewhere without the express written consent of individuals involved.

Instructor Brief Bio

Kevin F. Downing, Professor – DePaul University

Dr. Downing is a Professor at DePaul University's college for adult learners, the School of Continuing and Professional Studies. His research interests include the investigation of Miocene fossil mammals, Evaluating Ocean Acidification Events (OAE) From Fossil Coral Skeletons, and online science learning practices. He is the author of numerous publications in geology, paleontology and science education and is the co-author of the book, *Online Science Learning: Best Practices and Technologies*. Dr. Downing received B.S. degrees in Astronomy and Geology (University of Illinois-Champaign), an M.S.T. in Geology (University of Florida-Gainesville), and Ph.D. in Geoscience with sub-specialization in Evolutionary Biology and Ecology (University of Arizona, Tucson).

Changes to Syllabus

This syllabus is subject to change as necessary. If a change occurs, it will be clearly communicated to students.