

**WAYLAND BAPTIST UNIVERSITY**

**SCHOOL OF BEHAVIORAL & SOCIAL SCIENCES**

**Virtual Campus**

Wayland Mission Statement:Wayland Baptist University exists to educate students in an academically challenging, learning-focused, and distinctively Christian environment for professional success, and service to God and humankind.

Course Title, Number, and Section: **CNSL 5302 - Research Methods and Data Analysis**

Term:Spring 2020

Instructor:Dr. Jeremy Berry

Office Phone Number and WBU Email Address: **E-mail:** jeremy.berry@wayland.wbu.edu

Cell: (806) 281-8400 - before 10:00 pm Central time, please

Class Meeting Time and Location: Blackboard

Catalog Description: Development of basic research skills and the interpretation of research results.

This course is designed to emphasize Research Methods and Statistics by providing an understanding of research methods and basic statistical analysis, including: The importance of research and opportunities and difficulties in conducting research in the counseling profession; Research methods such as qualitative, quantitative, single-case designs, action research and outcome-based research; and Use of research to improve counseling effectiveness.

Prerequisite:Prerequisite: Students must have either completed an undergraduate statistics or a quantitative research methods course, or passed the CLEP or DANTES statistics test, or taken the statistics tutorial before registering for this course.

# Required Textbook(s) and/or Required Material(s):

| Research Methods for the Behavioral Sciences  | Privitera | Sage | 1st | 2014 | 9781412975117 |
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Course Outcome Competencies: Upon completion of this course, students will be able to:

* Explain why scientific research is needed in counseling.
* Understand the APA and ACA ethics codes for research.
* Able to find and evaluate professional research materials.
* Describe the strengths and weaknesses of the types of research used in counseling.
* Explain the basic designs of experimental and non-experimental research.
* Describe techniques of measurements and sampling,
* Explain basic principles of probability and the normal curve.
* Understand when to use basic descriptive and inferential statistics.
* Read and explain the results of major statistical techniques in counseling journals.
* Apply knowledge to evaluate an area of counseling research.

Attendance Requirements:Virtual Campus Policy: Students are expected to participate in all required instructional activities in their courses. Online courses are no different in this regard; however, participation must be defined in a different manner. Student “attendance” in an online course is defined as active participation in the course as described in the course syllabus. Instructors in online courses are responsible for providing students with clear instructions for how they are required to participate in the course. Additionally, instructors are responsible for incorporating specific instructional activities within their course and will, at a minimum, have weekly mechanisms for documenting student participation. These mechanisms may include, but are not limited to, participating in a weekly discussion board, submitting/completing assignments in Blackboard, or communicating with the instructor. Students aware of necessary absences must inform the professor with as much advance notice as possible in order to make appropriate arrangements. Any student absent 25 percent or more of the online course, i.e., non-participatory during 3 or more weeks of an 11 week term, may receive an F for that course. Instructors may also file a Report of Unsatisfactory Progress for students with excessive non-participation. Any student who has not actively participated in an online class prior to the census date for any given term is considered a “no-show” and will be administratively withdrawn from the class without record. To be counted as actively participating, it is not sufficient to log in and view the course. The student must be submitting work as described in the course syllabus. Additional attendance and participation policies for each course, as defined by the instructor in the course syllabus, are considered a part of the university’s attendance policy.

Statement on Plagiarism and Academic Dishonesty:Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.

Disability Statement:In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university.  The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291- 3765.  Documentation of a disability must accompany any request for accommodations.

# Course Requirements and Grading Criteria:

* 10 article reviews - 20%
* 6 quizzes – 10%
* 2 exams – 30%
* Informed consent document – 5%
* Research proposal – 30%
* Discussion Board – 5%

The University has a standard grade scale: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F= below 60, W = Withdrawal, WP = withdrew passing, WF = withdrew failing, I = incomplete. An incomplete may be given within the last two weeks of a long term or within the last two days of a microterm to a student who is passing, but has not completed a term paper, examination, or other required work for reasons beyond the student’s control. A grade of “incomplete” is changed if the work required is completed prior to the last day of the next long (10 to 15 weeks) term, unless the instructor designates an earlier date for completion.  If the work is not completed by the appropriate date, the I is converted to an F.

# **Evaluation**

**General Schedule:**

Weekly quizzes

Article reviews are due weeks 4 – 8 (2 per week)

Test 1 – week 5

Test 2 – week 11

Informed Consent Document – Week 6

Research proposal (that Monday) – week 10

# Details:

1) Your basic knowledge of terms and concepts will be evaluated by a series of quizzes and exams.

A) You will be required to take six online quizzes on basic ideas covered in the readings.  This ensures that you have indeed encountered the most basic elements of the course (the kind of things that might pop up on a state exam!).  Quizzes are timed. The computer will provide some feedback on your score as soon as you finish the quiz. The average for all the quizzes will count as 10% of your final grade. Many of these questions will also be on the tests and serve as your “study guide” for exams.

B) Two formal exams (tests) will also be given at the end of weeks 5 and 11.  Just like a traditional test, you will only have one shot on this one. They will be given online in a timed format.  The exam may have some multiple choice type questions, but may also have short answer and essay questions that ask you to write out responses to more thought provoking questions.  I will grade these, and feedback will be a bit slower.  Your total score on these exams will be 30% of your final grade. Questions will appear one at a time with no backtracking allowed.

2) You will begin to apply your knowledge by reviewing 10 research articles. The assignments section on the Blackboard main menu has a template file to show you exactly how the reviews are to be done. You will get to choose your own articles, and it is expected that you will choose articles that are relevant to the research proposal assignment described below. These reviews should make research proposal project a lot easier to write!  Assignments will be due by the last day of the week (Saturday) for that section and should be turned in through the assignment links also found in the ‘Assignments’ section in Blackboard. Your scores on these assignments will be 20% (totaled) of your final grade.

3) Meet basic requirements of Discussion Board on Blackboard each week.

4) You will also complete a research proposal during the term. In the end, this project will look like the first half of a scientific research article: you will do the introduction and proposed methods, but NOT actually carry out the research or collect data. (So you will NOT include a Results section.)

 - Also, as part of this project, you will turn in an Informed Consent document. This document is thus a critical part of doing ethical research and provides information to potential participants to allow them to decide if they are willing to allow you to collect data from them. You will get more information on informed consent in the ethics section of the course and will be provided a template to guide you as you prepare your document. This will count as 10% of your final grade.

**Guide to the research proposal project**

 I know this is a long set of instructions, but – please – take time to read them carefully and refer back to them as you work on your research proposal project!

The first step of this proposal will involve searching for published scientific articles related to your specific question, reading and evaluating the articles and writing a report that describes what we know and don’t know about this area of research and about where you think the research should go next. This will be the ‘Introduction’ of the paper. See page 177 of your textbook.

Start this project (and I recommend that you START THIS NOW – or very soon!) by thinking about a question that needs to be addressed. Try to choose a specific question. A few examples: Do antidepressant medications really increase suicides in adolescents? Is ADHD diagnosed too often? Are medications necessary to treat ADHD effectively? Has high-stakes testing in public schools improved math achievement? I encourage you to choose a topic that would be relevant to work that you see happening around you right now. Teachers and counselors, and the organizations they work for, are often involved in evaluating the effectiveness of the work that they do. This can involve surveys to determine needs and attitudes or experiments to assess the effectiveness of interventions, as well as other issues. Counselors might also become involved in testing more theoretical issues about the aspects of specific counseling techniques or about the nature of a particular disorder.  **Your research question(s) needs to be approved by me no later than the end of week 2.** I will post a discussion thread for this purpose. A few reasons for this – one it allows everyone to see what is being researched. If someone comes across an article that might help you – they can let you know. It also helps me to keep track of what has been approved and what has not been approved. (Yes, students will actually try to go the entire term and wait until week 10 to write a paper and then find out their topic won’t work – DON’T try this.)

# Searching for articles

Once you have a question, you will need to begin to read and find out what is already known about the area. It will need to draw exclusively on professional sources, mainly research articles published in scientific journals. Time magazine, Psychology Today and TV documentaries are NOT professional sources. [A clarification: you may want to start with some more general sources to find ideas and get an overview of your topic, but the actual project should be based only on professional sources.]

The best source for these articles is the PsycInfo database on the Wayland library (LRC) website. It is, by far, the most comprehensive source for psychology. There are other good databases, though, and you can access all of Wayland’s databases by using the ‘Simple Search’ on the main articles and databases page on the WBU LRC website. Be sure to click the ‘peer review’ button before you do the search in order to limit your search to professional quality materials and filter out most of the junk. Once you do your first search, you will find a box on the left to limit your searches. [These items are illustrated in the tutorial video linked below.] You can also find an ‘advanced search’ option near the top of the search screen that will allow you to better define your options.

One other good source is Google Scholar [ <http://scholar.google.com/schhp?hl=en> ]. It also pulls from professional sources and may link you to full-text versions that are not available in our library database.

The research articles will give you lots of good ideas about how real research is done. You will also begin to learn a lot about the subtleties and complexities of your question. You may find issues you had never really considered! AN IMPORTANT CAUTION: In order to get a complete set of journal articles for your topic, you will likely have to use interlibrary loan. Our library databases give full-text access to a number of journals, but there are thousands of journals out there and we cannot subscribe to them all. If you limit your searches to just full-text available, then you will likely miss out on some of the most important and relevant research. We can, though, get virtually any article that you need (for free!) if you put in a request to the library. This process may take a week or two – so DO NOT WAIT TO START looking for and requesting articles!! We will start the searching process in week 2, so get ready!

Tutorials on WBU library resources, including video on finding ‘scholarly sources’: <http://www.wbu.edu/academics/academic_resources/wayland_learning_resource_center_library/tutorials/tutorials.html>

**A few important notes: 1. Do not cite sources that you have not personally read. Sometimes students will find review articles that discuss lots of different studies and use those reviews as their source. They then cite the sources from the reference section in that review article. This doesn’t work - I want you to go “straight to the horse’s mouth” and read the original research articles. 2. Textbooks do not count as sources. 3. Using web-sites like Wikipedia or Answers.com is not an acceptable practice at this level (or any level) of education. Using a site like “freetermpapers.com” is plagiarism at its worst and it will get you removed from the university. I am fanatical about this!**

# Evaluating the information & Structuring your paper

You will then need to read and evaluate the articles, using the principles that you are learning in this class. This is where the article review assignments will really help you. Just realize that you don’t want to read the articles in isolation – you want to pull the information from different articles together into a big picture. This also takes some time! Compare the different articles side-by-side to see if they agree. Often you will find research that covers the same topic, but that have different conclusions. You will need to think about why they do and don’t agree. What conclusions can you make once you have read them all?

Compile the information into a report that describes, discusses, and evaluates the different pieces of evidence (as an ‘Introduction’ to a research article – be sure to pay attention to the intros of the papers you read as examples of what you will be aiming for. I don’t expect yours to be as good or extensive as a professional researcher, but they are great ways to learn.) Draw conclusions about the current state of the research (which may be that we really don’t know yet!) and tell where you think research needs to go next – what questions and studies could be done to further our understanding.

The Introduction should lead up to and end with a hypothesis – a specific prediction that could be tested by new research. The hypothesis should be clearly stated and should be connected to and supported by the research that you have just described.

Your next step will be to design the actual steps of research that would allow you to test your hypothesis. You will write this up as a ‘Methods’ section, just like you have seen in the research articles that you have been reading. You will describe:

* the participants that you would need,
	+ - About how many? What types of people? How would you select them?
* the measurement instruments that you would use
	+ - describe them and cite evidence that they are valid/reliable
		- best to use measurements that already exist (instead of trying to invent new ones) – your literature review should point you to examples.
* procedures for collecting
	+ - step-by-step instructions
		- consider what you could do to avoid bias and collect high-quality data
* analyzing the data
	+ - what statistical procedures/tests would be appropriate?

Here is where you will really put what you have learned in the class to work! Draw on what you have learned about research techniques from the book AND what you have learned from reading the other research articles in your research review in the introduction to make decisions about the best ways to collect data. You will NOT actually have to do the research, so you don’t have to worry about actually being able to get your hands on the people or materials that will be needed. Your main focus will be thinking about pros and cons of the methods to find reliable and valid methods that match your question. \* What type of design would be best – Survey? Experiment? Something else? \* What type of measurement system should you use – do standard instruments already exist? Are they reliable and valid? \* What type of statistical tests would help you determine if your results are statistically meaningful – means and standard deviations? correlations? t-tests?

# Formatting details

The report should be done in APA 6 style (referencing, page formatting, etc.) and sources must be cited clearly. If you are not well-versed on APA format, you might want to check the APA manual or look at these sites:

* 1. You can find a good overview of this style here:

<http://owl.english.purdue.edu/owl/resource/560/01/>

* 1. Or you can go to the APA site which has FAQs as well as a fancy tutorial: <http://www.apastyle.org/>
	2. The WBU Writing Center has also created a new video guide to APA style:

<http://www.wbu.edu/academics/academic_resources/writing_center/videos/default.htm>

The paper should be proof-read carefully! While a mistake or 2 may creep into anyone’s report, **poorly written papers** **will NOT be accepted**. You are also encouraged to make use of the Wayland Writing Center for help with your papers. You can find more information about the writing center at their web page: <http://www.wbu.edu/academics/academic_resources/writing_center/>

The Introduction and Methods section should total 10-12 pages. The title page, abstract and reference sections will be additional pages.

There will be an opportunity for you to submit a draft copy of your project to “SafeAssignment” to check for inadvertent plagiarism. I strongly encourage you to use this feature. There will be no excuses for the final project turn-in. The final paper will also be checked using SafeAssignment. I do not check your draft assignment.

**Be sure to ask questions as you work on this!!** There will be opportunities on the discussion board and you can also email me.

I will give you assignments along the way to make sure you are making progress. This project will count as 30% of your final grade. The **completed project will be** **due the Monday of week 10 at 11:59 PM CT….which is May 2nd**. All other assignments are due no later than 11:59 PM CT on the Saturday of that week. Late assignments are not accepted.

Student grade appeals:

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

# **Tentative Schedule**:

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| --- | --- | --- |
| **WEEK** | **Topic/Assignment** | **Notes** |
| 1 | 1. Read   chapters 1 – 32.   Discussion Board entry |   |
| 2 | 1. Read   Chapters 4 - 62. Quiz 1 (chapters 1 – 3)3.   Discussion Board entry4. Post   preliminary Research hypothesis (see page 5) | Research   hypothesis will be approved only via discussion board – no email traffic for   this item |
|  | Spring Break |   |
| 3  | 1. Read   chapters 7 – 82. Quiz 2   (chapters 4 – 6)3.   Discussion Board Entry |   |
| 4 | 1.   Article Reviews 1 and 22.   Discussion Board entry3. Quiz 3   (chapters 7 – 8)   | You can   turn article reviews in early (and are encouraged to do so).  One assignment per link and assignments   will only be accepted via the assignments link – assignments emailed will not   be accepted.  |
| 5 | 1.   Article Reviews 3 and 42.   Discussion Board entry3. Read   chapters 9 - 104. Test 1   (chapters 1 – 8) | Please go   to my grades and click on your individual quiz grade.  You should see your quiz and your   answers.  You need to look up the   correct answer.  The answer is in the   book – no need to ask me the answer (my way of making you read the book and   study)  |
| 6 | 1.   Article Reviews 5 and 62. IRB   Application3. Read   chapters 11 – 124. Discussion   Board entry | IRB   application gets turned in via the “Assignments” tab.  Please use the template I provide – DO NOT   submit this to the IRB.  You are not   really going through with this research!!! |
| 7 | 1.   Article reviews 7 and 82. Discussion   Board entry3. Read   chapters 13 – 144. Quiz 4   (chapters 9, 10) |     |
| 8 | 1.   Article reviews 9 and 102. Discussion   Board entry3. Quiz 5   (chapters 11-12)4. Read   chapter 15 |   |
| 9 | 1.   Discussion Board entry2. Quiz 6   (chapters 13-15) |  Research   proposal will only be accepted via SafeAssignment..  It is due no later than 11:59:00 PM CT on **Sunday May 3rd**.  No late submissions   allowed.  You, and only you, are   responsible for what is turned in – no “I accidently submitted the wrong   paper” – one submission. |
| 10 | 1.   Discussion Board entry |  |
| 11 | Test 2   (chapters 9 – 15) |   |
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|   |   |   |

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