COURSE DESCRIPTION
This course provides an in-depth study of single-case research design including assessment, experimental design, data evaluation, and writing research proposals using single-case methodology. Many of the best practices and interventions in the social, behavioral, and educational sciences have been the direct result of single-case research. Single-case designs provide educators, practitioners, and researchers with a structure for systematically collecting data within a framework that will enable them to demonstrate a functional relationship between their practices and changes in behavior. The end result is empirical support of the intervention or instructional method. As such, it is important for graduate students in disciplines such as education, psychology, and social work to have the knowledge to design, implement, and evaluate research using single-case research designs. This course will provide students with an opportunity for detailed study of single-case research designs, the logic behind these designs, and the application of these designs to intervention research. As national attention has recently been placed on the importance of single case research design and on enhancing the scientific rigor of implementation, analysis, and interpretation, this course promises to be invaluable for students interested in conducting applied research!

COURSE OBJECTIVES
- To describe the history of single-case research design.
- To examine the ethics of single-case research design.
- To describe the fundamental assumptions, goals, and practices of single-case research design.
- To determine appropriate strategies for collecting data for single-case research design.
- To produce and interpret graphic data displays.
- To understand the use of various single-case research designs including reversal designs, multiple baseline designs, and comparative designs.
- To produce a well-written single-case research design proposal.
- To critique published single-case research design reports.
- To examine the use of single-case research designs for evaluating the effectiveness of interventions.

IDEA OBJECTIVES
1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, or theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)
“Professionalism in Service of Social Justice” is the conceptual framework infused into all programs within the School of Education. The underlying beliefs or principles that form the foundation of this framework include sensitivity and concern for others as essential societal values, and also the belief that caring for others will enhance the moral core of our communities and via a ripple effect, our society and the world as well. A desire to help others is an admirable first step, but collaborating cross-culturally to make a lasting impact beyond the level of the individual involves a more specialized set of competencies, some of which will be emphasized in this course. Education-related professionals who desire to demonstrate effectiveness in diverse settings (where social justice is of such primary importance) must strive to understand themselves while simultaneously trying to assess the needs, resources, and priorities of the communities they serve. Commitment to the challenging interpersonal work of collaborative research is the tool to be developed here. However, serving students, clients, families, and communities requires a commitment to a larger and more abstract notion of social justice, because a true ‘end’ or measurable goal of social justice may not be immediately apparent. Professionals must aim for fairness or equality for all while planning for various local purposes. Otherwise, they inadvertently reinforce a status quo that contains an inherent socially unjust power imbalance. For professionals, this might mean moving from an attitude of awareness of diversity to actually trying to bring others together. Some of this may come from increasing others’ awareness of diversity. One may lead by example through demonstrating reflection about one’s heritage, social class, and family dynamics, and one’s place in various systems. These skills can also be put to use in collaborations across various fields (including the critical examination and conduct of research). To join a team that is already successful and striving to enhance their current work is a privilege. To join a team that has failed in the past and views itself as being at the mercy of systemic and societal forces is, needless to say, a challenge. Often these organizations are in need of a fresh viewpoint and a renewed commitment to social justice, and it is in addressing this need that students in Loyola’s School of Education are uniquely qualified to assist. The following Conceptual Framework standards are emphasized in this course:

<table>
<thead>
<tr>
<th>CF Standards</th>
<th>Activities</th>
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| **CF1:** …an understanding of a current body of literature and are able to critically evaluate new practices and research in their field. | - Class lectures addressing the state of the field of educational research  
- Development of a topical literature review and practice with available search techniques and resources |
| **CF2:** …knowledge and skills in a variety of school and professional settings. | - Application of research techniques to areas of personal interest |
| **CF3:** …an understanding of issues of social justice and inequity.          | - Class lectures that highlight features of Institutional review board policies |
| **CF4:** …skills that will enable them to work effectively with diverse clients. | - Article critique and research proposal |
| **CF5:** …technological knowledge and skills which enhance education.        | - Development of a research proposal |
| **CF6:** …professional decision-making skills and behaviors in advancing social justice and service. | - Discussion and activities related to designing appropriate research designs  
- Research proposal |
| CF7: | ...how moral and ethical decisions shape actions directed toward service to others. |
| CF8: | ...an ability to apply principles in professional decision-making. |

- Students will be encouraged to explore these issues as they develop research questions - Article critique and research proposal

ALIGNMENT WITH NCATE/ISBE/NASP STANDARDS

**NCATE**
1.3, 2.2, 2.3, 2.4, 11.6
These standards are assessed by students’ participation in class discussions, and through their written assignments involving critiques of published research studies that use a variety of philosophical perspectives and methods.

**ISBE**
Principal standards 1Q, 6O, 2HH
School Leader standards 1Q, 3T, 5F, 1D, 1N, 2Y, 3K, 1S, 2AA, 2CC, 1N, 3K, 4A, 6E, 6F, 6H
Superintendent standards 1I, 2D, 4T,
Standards relating to understanding and using quantitative and qualitative data are assessed through the written assignments where students must evaluate published research, and through the final project that consists of a research study proposal. Ethical issues and policy implications of research are also part of the written assignments and class discussions.

**NASP**
Domain 9 Research and Program Evaluation: School psychologists have knowledge of research design, statistics, measurement, varied data collection and analysis techniques, and program evaluation methods sufficient for understanding research and interpreting data in applied settings. School psychologists demonstrate skills to evaluate and apply research as a foundation for service delivery and, in collaboration with others, use various techniques and technology resources for data collection, measurement, analysis, and program evaluation to support effective practices at the individual, group, and/or systems levels.

REQUIRED READINGS AND MATERIALS

- Purdue Online Writing Lab (APA formatting and style guide) [http://owl.english.purdue.edu/owl/resource/560/01/](http://owl.english.purdue.edu/owl/resource/560/01/)
- Headphones or earbuds. These are required for participation in online office hours.
- Computer, Internet, and webcam access.

Additional readings will be assigned by the instructor and students. Many of these will be empirical journal articles students will search for and download from online databases found at Loyola University’s library site. Other required readings will be posted within units on Sakai.

RECOMMENDED READINGS


METHODS OF INSTRUCTION
This course will consist of online lectures, group discussions, group activities, and student presentations. Students are expected to read the assigned materials and to actively participate in online discussions and other activities.

DIVERSITY
In concert with the mission statement for the SOE, faculty, academic activities, and learning environments will be sensitive to, and driven by, individual, cultural, social and economic diversity awareness and respect.

DISPOSITION
Professional demeanor, suitability for practice and attitude with which the candidate approaches others, learning instruction and the profession will be assessed with the consequences of such conduct influencing successful course completion and program continuation. Dispositions will be assessed each semester according to the forms available in the Student Handbook. The purpose of assessing dispositions including, professionalism, fairness and the belief that all students can learn are important considerations in individual professional development.

ACCESSIBILITY
Students who have disabilities they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: http://www.luc.edu/sswd/.

HARASSMENT (BIAS REPORTING)
It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning,
justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: http://webapps.luc.edu/biasreporting/.

ACADEMIC HONESTY
Academic honesty is an expression of interpersonal justice, responsibility and care (applicable to Loyola University faculty, students, and staff) which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education's Policy on Academic Integrity can be found at: http://www.luc.edu/education/academics_policies_integrity.shtml. For additional academic policies and procedures refer to: http://www.luc.edu/education/academics_policies_main.shtml.

COPYRIGHT POLICY
Copyright law was designed to give rights to the creators of written work, artistic work, computer programs and other creative materials. The Copyright Act requires that people who use or reference the work of others must follow a set of guidelines designed to protect authors’ rights. Unfortunately, copyright law is complex and too often incomprehensible; that does not, however, excuse users from following the rules. The safest practice is to remember (1) to refrain from distributing works used in class (whether distributed by the professor or used for research) that are copyright protected and (2) that any research or creative work should be cited in alignment with APA standards. For Loyola University Chicago’s copyright resources check online: http://www.luc.edu/copyright/highlights.shtml.

PLAGIARISM
It is important to reiterate the policy of Loyola University regarding plagiarism. The following is an excerpt from information shared by The English Department and should serve as a reminder to all students.

“Definition:
Plagiarism is the intentional or unintentional appropriation of ideas, language, or work of another without sufficient acknowledgement that the material is not one’s own. Although, it is generally recognized that everything an individual has thought has probably been influenced to some degree by the previously expressed thoughts and actions of others and that therefore no thought can be purely original, such influences are general ones, affecting an entire way of seeing things and expressing thoughts. Plagiarism, however, involves the taking of specific words or ideas of others without proper acknowledgement.

Some students seem to believe that there are different degrees of plagiarism, some of which are not as bad as others...(I) wish to make clear that there are no distinctions between...
   1. Copying from a published source without proper documentation.
   2. Purchasing a pre-written paper.
   3. Letting someone else write a paper for you or paying someone to do so,
   4. Submitting as your own someone else’s unpublished work, either with or without permission.”

If you have additional questions, I highly recommend the following interactive tutorial about what is and what is not plagiarism at http://www.indiana.edu/~istd/. In addition, I reserve the right to use the TurnItIn program (http://turnitin.com/static/index.html) for any written assignment without prior notice to the class.
CLASS COMMUNICATION

Sakai will be the main method of communication with students enrolled in this course. Because Sakai uses your Loyola computer account, students are responsible for making sure that their account is in good working order. Also, students are responsible for checking their Loyola account for emails related to this class. If you have a personal email you would rather use, you may forward emails from your student account to the personal account.

Given that opportunities for asking general course questions can be challenging in an online class, I have created a forum for “General Course Questions.” This is the place for you to ask questions about the syllabus, assignments, technology, etc. After all, if you have a question, it is likely other students in the class have the same question. Therefore, when you have a question about class, first consider posting it in the “General Course Questions” forum. Furthermore, if questions that are best answered in this forum are emailed to the course instructor, we will redirect you to post the question in the forum instead. The instructor will check this forum and respond to new posts daily.

TECHNOLOGY

Technology is an essential tool for developing one’s own professional skills and for completing any degree program. Given that this is an online course, there are greater technology demands/expectations than other courses. In addition to demonstrating proficiency in word processing (including creating tables, charts, and diagrams), communicating via Loyola GroupWise e-mail and Sakai, downloading Microsoft Word and Acrobat Reader files, and performing article searches via the library databases, you will be expected to use additional technologies such as Voice Thread and Adobe Connect. Instructions for using these technologies will be posted on Sakai. However, it will be up to you to practice and master use of these technologies before an assignment is due. If you have questions regarding the use of technology, please post them to the “General Course Questions” forum.

COURSE REQUIREMENTS & EVALUATION PROCEDURES

Assignments must be completed on time and submitted no later than 11:55pm CST on the dates noted. Ten percent of the total points possible will be deducted for each day past the due date.

All written assignments (unless otherwise specified) must be typewritten and conform to the writing style and formats specified in the Publication Manual of the American Psychological Association, 6th edition.

<table>
<thead>
<tr>
<th>Course Requirement/Assignment</th>
<th>Due Date</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Behavior and Communication</td>
<td>Ongoing</td>
<td>10</td>
</tr>
<tr>
<td>Unit Papers (5 total; 6 points each)</td>
<td>Ongoing</td>
<td>30</td>
</tr>
<tr>
<td>Research Proposal Blog Entries (5 total; 4 points each)</td>
<td>Ongoing</td>
<td>20</td>
</tr>
<tr>
<td>Research Blog Comments (1 constructive comment to each group member for each blog entry)</td>
<td>Ongoing</td>
<td>15</td>
</tr>
<tr>
<td>Article Critique/Discussion Lead (team)</td>
<td>Ongoing</td>
<td>25</td>
</tr>
<tr>
<td>Introductory Video CV</td>
<td>Sat 5/24</td>
<td>5</td>
</tr>
<tr>
<td>CITI Training</td>
<td>W 6/11</td>
<td>15</td>
</tr>
<tr>
<td>Research Proposal</td>
<td>W 6/25</td>
<td>60</td>
</tr>
<tr>
<td>Research Proposal Presentation</td>
<td>F 6/27</td>
<td>20</td>
</tr>
</tbody>
</table>
1. **Professional Behavior and Communication.** Points for professional behavior and communication are earned by demonstrating appropriate communication and behavior throughout the duration of this course. Examples of professional behavior include preparation for each class session; timely completion of assignments; prompt communication; active participation such as offering constructive comments to classmates in blogs, Voice Threads, forums, etc.; and respectful collaboration and communication with classmates and instructor. Professional behavior and communication points are easily earned by being respectful of others and demonstrating the highest academic integrity.

2. **Unit Papers.** You will complete 5 unit papers. Papers will be no longer than 1 single-spaced page and will serve as an opportunity to demonstrate comprehensive preparation for class sessions and understanding of the course material (e.g., lectures, readings, additional resources). The papers will also serve as an opportunity to share with the instructor any lingering questions you might have after having carefully prepared for class sessions. Within each paper, first respond to the prompt provided by the instructor. Then, present 1-2 questions you have about the material in the units.

3. **Research Proposal Blog Entries.** Using “Forums” on Sakai, you will document progress on your research proposal (the capstone assignment for this course) by responding to specific prompts provided by the course instructor. In addition, you will be asked to read and stay abreast of your classmates’ progress and offer constructive comments as they, too, develop their research proposals. Although you are only required to complete 5 blog entries, please feel free to use this feature of Sakai as a place to take notes and journal about your research proposal.

4. **Research Blog Comments.** Using “Forums” on Sakai, you will provide at least one constructive comment to each group member’s blog entry. Given that there will be 5 blog entries, you will constructively comment on each of your group members’ blogs 5 times. As such, if there are 4 total students (including you) in your group, you will have commented at least 15 times by the end of the course. This is an opportunity for you and your group members to offer guidance to one another. Although this assignment must be completed with your assigned group, that does not preclude commenting on your other classmates’ blogs as well.

5. **Article Critique/Discussion Lead.** In teams, you will present an article critique once during the semester. First, you will choose an empirical study using the design you selected (e.g., ABAB) that has been published in a refereed journal and is not one of the required journal readings for this course. This study must have been published within the last year. Email the article to the instructor for approval at least one week before the due date. Once approved, you will prepare a Voice Thread presentation critiquing the selected study. Finally, you will email the link for the presentation to the course instructor by the date noted on the course schedule. The instructor will then post the article and presentation in the appropriate unit, and the instructor and all class members will read the article and watch the presentation. Your classmates will then each post a comment in the forums identifying a strength or weakness of the study’s method that was not identified in your critique or a previous comment. For example, if Ella is the first person to comment on Brian and Cody’s presentation, then she must only identify a strength or weakness that was not mentioned in the presentation. However, if Ella is the tenth student to comment on Brian and Cody’s presentation, then she must identify a strength or weakness that was not mentioned in the presentation or by one of the nine classmates who commented before her.
6. **Introductory Video CV.** To introduce yourself to the instructor and classmates, you will be asked to (1) upload a photo of yourself to your Sakai profile, (2) create and upload a one-page CV to Voice Thread (including future career goals, education history, work history, research interests, and leisure time activities), and (3) create a video description on Voice Thread. Specific instructions are provided within Unit 1, and an example is provided in the “Introductory Video CV” forum. Please post the link for your Voice Thread within this forum.

7. **CITI Training.** Students will complete the Collaborative IRB Training Initiative (CITI) course.

8. **Research Proposal.** The culminating project for the course is a research proposal. You will work individually to develop at least one research question, review the literature, and develop a plan for examining the question(s). Because this is a proposal, you will use future tense in your writing.

9. **Research Proposal Presentation.** Using Voice Thread (or another comparable program), you will present your research proposal to the class. The presentation will last approximately 15-20 minutes.

As needed, scoring rubrics and guidelines for assignments will be posted on Sakai.

Final course grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Total Points Earned</th>
<th>%</th>
<th>Grade</th>
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<tbody>
<tr>
<td>185-200</td>
<td>93-100</td>
<td>A</td>
</tr>
<tr>
<td>179-184</td>
<td>90-92</td>
<td>A-</td>
</tr>
<tr>
<td>173-178</td>
<td>87-89</td>
<td>B+</td>
</tr>
<tr>
<td>165-172</td>
<td>83-86</td>
<td>B</td>
</tr>
<tr>
<td>159-164</td>
<td>80-82</td>
<td>B-</td>
</tr>
<tr>
<td>153-158</td>
<td>77-79</td>
<td>C+</td>
</tr>
<tr>
<td>145-152</td>
<td>73-76</td>
<td>C</td>
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<tr>
<td>139-144</td>
<td>70-72</td>
<td>C-</td>
</tr>
<tr>
<td>133-138</td>
<td>67-69</td>
<td>D+</td>
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<tr>
<td>119-132</td>
<td>60-66</td>
<td>D</td>
</tr>
<tr>
<td>&lt;119</td>
<td>&lt;60</td>
<td>F</td>
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</table>

**FINAL NOTE . . .**

Your role in this course is to come to class prepared to actively discuss the readings and participate in class. I am here to help you in any reasonable way I can. I encourage you to make an appointment with me sooner, rather than later, if you are having difficulty with the course material. I am more than happy to meet with you at a mutually agreeable time. The best way to reach me is through email.
This course consists of 10 units. Lectures will be posted by 11:55pm CST on the dates indicated. By 11:55pm CST on the indicated due date, please view the unit’s lecture, complete the required readings, study any additional materials, and complete/submit the assignments.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Lecture Posted</th>
<th>Due Date</th>
<th>Topics</th>
<th>Assignments Due</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W (5/21)</td>
<td>Sat (5/24)</td>
<td>Course Overview</td>
<td>Introductory Video CV</td>
<td>Chapters 1 and 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Optional In-Person Meetings</td>
<td>Immediate begin thinking about an area of interest for your research proposal.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sun (5/25)</td>
<td>W (5/28)</td>
<td>Assessment</td>
<td>Unit 1 Paper Blog Entry 1 Blog Comments <em>(Email ABAB article for article critique to instructor for approval)</em></td>
<td>Chapters 3, 4, and 5 Journal Readings</td>
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<tr>
<td></td>
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<td></td>
<td>Introduction</td>
<td></td>
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<td></td>
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<td></td>
<td>Underpinnings of Scientific Research</td>
<td></td>
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<tr>
<td>3</td>
<td>W (5/28)</td>
<td>Sat (5/31)</td>
<td>Introduction to Single-Case Research and ABAB Designs</td>
<td><em>(Email MBD article for article critique to instructor for approval)</em></td>
<td>Chapter 6 Journal Readings</td>
</tr>
<tr>
<td>4</td>
<td>Sun (6/1)</td>
<td>W (6/4)</td>
<td>Multiple-Baseline Designs</td>
<td>ABAB Critique <em>(1)</em> <em>(email link to Voice Thread presentation to instructor by 6/1)</em></td>
<td>Student-Selected Articles Chapter 7 Journal Readings</td>
</tr>
<tr>
<td>Day</td>
<td>Week</td>
<td>Saturday</td>
<td>Topic</td>
<td>Notes</td>
<td>Readings</td>
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</table>
| 5    | W (6/4) | Sat (6/7) | Changing-Criterion Designs | **MBD Critique (2)**  
(email link to Voice Thread presentation to instructor by 6/4)  
**Blog Entry 3**  
**Blog Comments**  
**Critique Comment**  
*(Email MTD article for article critique to instructor for approval)* | Student-Selected Articles  
Chapter 8  
Journal Readings |
| 6    | Sun (6/8) | W (6/11) | Multiple-Treatment Designs | **CCD Critique (1)**  
(email link to Voice Thread presentation to instructor by 6/8)  
**Unit 3 Paper**  
**CITI Training**  
**Blog Entry 4**  
**Blog Comments**  
**Critique Comment** | Student-Selected Articles  
Chapter 9  
Journal Readings |
| 7    | W (6/11) | Sat (6/14) | Additional Design Options | **MTD Critique (1)**  
(email link to Voice Thread presentation to instructor by 6/11)  
**Critique Comment** | Student-Selected Articles  
Chapter 10  
Journal Readings |
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Tasks</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Course Evaluations</td>
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</tbody>
</table>
JOURNAL READINGS

Assessment (Unit 2)

TBD

ABAB (Unit 3)


MBD (Unit 4)


CCD (Unit 5)


MTD (Unit 6)


Additional Design Options (Unit 7)


**Quasi-Single-Case Experimental Designs (Unit 8)**