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**OT531 RESEARCH II 2024**  
**SYLLABUS AND TOPICAL OUTLINE**

**CREDIT HOURS:** 2 credit hours

**FACULTY:** Dr. Gösta Schlegel, PhD, MPS, OTR/L, CHES, CAPS, CDP

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**OFFICE HOURS:** Virtual by appointment

**CLASS DAY AND TIME:** Thursdays 8:00 am to 10:00 am

**CLASS DATES:** 1/9/25 – 4/25/25; week off for Spring Break; independent work during week of conference

**CLASS FORMAT:** Team Based Learning and Online Activities

**COURSE DESCRIPTION**

Research II will apply concepts and content learned in Introduction to Research to actual research activities using single subject research design. Students will engage in a review of the literature and will develop a proposal for a study using single subject research design. Course information will also be applied to data-based decision making for clinical occupational therapy practice in multiple practice settings. Class format will include Team Based Learning. Prerequisite: OT 503

**COURSE RELATIONSHIP TO OCCUPATIONAL THERAPY PRACTICE AND AOTA VISION 2025**

The AOTA vision currently states that “As an inclusive profession, occupational therapy maximizes health, well-being, and quality of life for all people, populations, and communities through effective solutions that facilitate participation in everyday living.” For the profession to make this vision become a reality, practitioners need to understand what the effective solutions are. We must create, read, and use research evidence. This course will focus on one specific type of research—**single subject research (SSR) design**—which is the most likely type that you would most typically engage in during your career as an OT. If each of you completed one

single subject research project in your career- you would be contributing greatly to the evidence-base of the profession. Additionally, the methods used in single subject research design can also be used for data-based decision making. Data-based decision making is a way of basing your clinical decisions about one client on performance data you collect from that client. Therefore, these research methods will help you to be a better clinician, one who uses evidence in practice, regardless of whether you ever do an actual research study.

### **RELATIONSHIP TO CURRICULUM DESIGN**

Our curriculum design is depicted by a longstanding symbol in OT going back to our origins; that of weaving. The warp are the values of the profession, the program, and the university which run throughout the curriculum. The weft are the threads of occupational therapy content knowledge, skills, and experiences that comprise the foundation of our program. This course specifically addresses the values of integrity, justice, and open-mindedness as they relate to research. It is part of the curricular stream of scholarship and evidence-based practice.

### **MY THOUGHTS ABOUT LEARNING IN RELATION TO THIS COURSE**

I believe that all students can learn this material given the sufficient resources, proper instruction, and adequate motivation and effort. I believe that learning takes time, learning takes work, learning takes a supportive classroom environment, learning takes your belief in yourself, and learning takes a belief that the material is important. This means that I believe it takes two to tango. I will do all I can to help you learn this material, but I expect you to make the effort to do so. I will try to convince you that it is important to your future as an OT student, and as an OT professional to know this material- so that you value it and will be motivated to try to learn it. Then I will support you to do so by creating an environment that is tolerant of learning, as fun as possible, and values your effort.

### **WHAT YOU CAN EXPECT FROM ME**

- Your materials will always be available to you at least one week before class (usually much earlier than that).

- I will answer your emails during the work week within 24 hours (Weekends may take longer or at the latest on Monday).
- I will grade your papers and have things back to you within 3 weeks of your turning them in (if you turn them in on time).
- I will explain why we are doing what we are doing. I don't believe in 'busy work' and won't give you any – there is a reason and method to the madness!
- I will have very high standards for your behavior and mine. I believe in Stephen Covey's [7 Habits of Highly Effective People](#). I also believe that the first thing we need to be able to do to be responsible and effective people is having integrity. Integrity starts with making and keeping promises and commitments. I will always try to keep mine. If I am not, please let me know.
- When I am meeting with you, and when I am in class with you, you will have my undivided attention. We will all practice 'being mindful and present' in the moment in our communication with each other. It is an important behavior to learn before working with clients. If it ever seems like I am distracted and not listening fully, please say so. If you ask me a question when I am distracted or when I cannot give you my full attention (for example at the beginning of class if I am setting something up or getting ready for something), I will tell you so and will tell you when I will be able to give you my full attention.
- We will start and end class on time unless there are extreme events beyond our control.
- I spend a lot of time planning what we will do in class and what I think are activities that will help you learn this material- but that will also be fun. I know research can be boring if we let it be. I will try very hard to not let this class be boring.
- I will model the same professional behaviors I expect of all of you. I will treat you as a future colleague and an adult student. Please speak with me if you are having any difficulties with the material or assignments. However, I also believe in personal responsibility.

## **WHAT I EXPECT OF YOU**

I expect you to participate, ask questions, and get help if you need it. I expect you to work in this class with integrity. Plagiarism is unacceptable in any form in this course. I expect that you will all demonstrate the professional behaviors you will need as an occupational therapist. You are spending a lot of money to be in school- I hope you take that as seriously as I do and use your time wisely. Plan in advance to make sure you can meet your commitments and deadlines and use whatever resources you need to ensure you do what you say you will do. Finally, I expect you to be in class unless you are exempted because of a school policy or an important life event agreed to well in advance by me and the department chair.

## **TEACHING AND LEARNING METHODS**

This course will be taught through team-based learning methods, in class experiences, student presentations, and some online activities.

## **COURSE POLICIES**

STUDENT BUDGET FOR COURSE SUPPLIES: None

INDIVIDUAL AND GROUP WORK: All work in this course is individual except for the group quizzes (TRATs) and the TBL in class experiences.

ACADEMIC INTEGRITY: refer to Program Manual

ATTENDANCE: refer to Program Manual

PROFESSIONAL BEHAVIORS: refer to Program Manual

## **ACCESS AND ACCOMMODATIONS**

The [Office of Student Accessibility](#) provides instructional accommodations and services for students with disabilities in compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973.

If you are in need of assistance to access any materials related to this course or anything else related to your learning experience or time on campus, please contact your instructor or visit the [Office of Student Accessibility](#).

## REQUIRED TEXT

None is required and I will try to provide all free open access resources for your readings.

However, this text: Richards, S. B. (2018). *Single subject research: Applications in educational settings*. Cengage Learning, can be very helpful to you in this course and if you think you might want to do an SSR design for your Capstone, or for your level II FW projects. [It is available here for purchase or rent from Cengage](#) or [here from Vital Source](#).

## PULLING IT ALL TOGETHER WITH LEARNING OBJECTIVES

- Each program in OT must meet the same Accreditation Council for Occupational Therapy Education (ACOTE) standards. How they are met varies from program to program. In each program, each standard must be addressed in at least two courses. The standards that are addressed in this course are listed in the table below. This link will allow you to review the current [ACOTE standards](#).
- The course learning objectives are linked to the ACOTE standards as well as the program's objectives, mission and vision, and the overall curricular design. The program's objectives were developed based upon our PRIDE vision. Table 1 shows the connection between the course learning objectives, the program objectives they are linked to, the ACOTE standards that are addressed in this course, as well as how we plan to meet and measure the learning objectives for this course.
- All course expectations are designed according to [Bloom's Taxonomy of Learning Domains](#)---Remember, Understand, Apply, Analyze, Evaluate, and Create. This course requires students to analyze, evaluate, and create.

**Table 1- Learning objectives and ACOTE standards**

Course Learning Objective	Blooms Taxonomy Level	Program Objective	ACOTE Standard	Learning Experiences	How Will the Learning Objective be Measured?
Adopt a model of evidence-based practice to guide clinical decision making	Analyze Evaluate	Engage in continual learning and evidence-based practice with intellectual open-mindedness	B.6.1	Readings Mini lecture Application activities Group quizzes	Individual and group quizzes Final exam SSR Research Presentation Assignment
Use single subject research as part of evidence-based practice and data-based decision-making	Apply	Engage in continual learning and evidence-based practice with intellectual open-mindedness.  Apply ethical reasoning aligned with the AOTA and the program's values to make decisions and practice professionally	B.6.1 B.6.5	Readings Mini lecture Application activities Group quizzes.	Individual and group quizzes Final exam SSR Research Presentation Assignment
Select /Write research questions that can be answered by single subject research methods	Understand Apply	Engage in continual learning and evidence-based practice with intellectual open-mindedness	B.6.1	Readings Mini lecture Application activities Group quizzes.	Individual and group quizzes Final exam SSR Research Presentation Assignment

Select an appropriate single subject design for a given research question	Apply	Engage in continual learning and evidence-based practice with intellectual open-mindedness	B.6.1	Readings Mini lecture Application activities Group quizzes.	Individual and group quizzes Final exam SSR Research Presentation Assignment
Locate potential sources of grant funding and understand the mechanisms of obtaining grants	Apply	Engage in continual learning and evidence-based practice with intellectual open-mindedness	B.6.4	Readings Mini lecture Application activities Group quizzes.	Individual and group quizzes Final exam SSR Research Presentation Assignment
Complete visual data analysis for SSR data	Apply	Engage in continual learning and evidence-based practice with intellectual open-mindedness	B.6.2 B.1.4	Readings Mini lecture Application activities Group quizzes.	Individual and group quizzes Final exam SSR Research Presentation Assignment
Critique the methods of a SSR paper	Analyze Evaluate	Exhibit critical thinking, clinical reasoning, use of evidence, and competence in skills requisite for entry-level, holistic application of the occupational therapy process.	B.6.1 B.6.2	Readings Mini lecture Application activities Group quizzes.	Article critique activity

Create and present a single subject research proposal including a letter of informed consent	Apply Analyze	Exhibit critical thinking, clinical reasoning, use of evidence, and competence in skills requisite for entry-level, holistic application of the occupational therapy process.	B.6.1 B.6.3 B.6.5 B.6.6	Readings Mini lecture Application activities Group quizzes.	SSR Research Presentation Assignment
Communicate professionally and effectively	Apply	Exhibit critical thinking, clinical reasoning, use of evidence, and competence in skills requisite for entry-level, holistic application of the occupational therapy process.	B.6.3 B.6.6	Readings Mini lecture Application activities Group quizzes.	SSR Research Presentation Assignment

**Table 2 Description of Assignments and Grading**

ASSIGNMENT	DESCRIPTION	PERCENT OF GRADE
Pre-class readings and online activities	You will have preparatory work to do before class each week. This work will not be graded directly, but your preparation will be assessed by the individual reading quizzes, and through peer evaluation (see below)	N/A
Individual reading quizzes	You will take individual quizzes on BB on the assigned material (pre class work) for the class sessions as indicated in the topical outline. These will not be every week.	15%
Group reading quizzes	You will then take team quizzes (the exact same quiz as the individual) but you will work as a team to determine the answers.	20%



<p>SSR Research Presentation Assignment</p>	<p>For you to learn to design a research project using single subject research methods, you will complete each step of the research process to prepare and design an SSR study.</p> <ul style="list-style-type: none"> <li>• writing an appropriate research question to study using these methods</li> <li>• completing a literature search and paper trail</li> <li>• compiling the literature into a literature review to create a rationale for your study and your choice of IV, using theory, then writing a rationale paragraph outlining your argument and justification for the study based on the literature AND theory.</li> <li>• writing a letter of informed consent for your proposed subject</li> </ul> <p>You will present your research along with a graph of fake data in an online presentation to a portion of the class.</p> <p>This assignment has multiple steps in addition to the preparation portion as explained in the row above:</p> <ul style="list-style-type: none"> <li>• Selecting the design that you wish to use.</li> <li>• Deciding on how you will measure your DV.</li> <li>• Creating a presentation for your peers that is professional and engaging.</li> <li>• Creating a reference list in APA format</li> <li>• Doing the presentation in a professional manner including dress, language, and style</li> <li>• Using an EBP model and your “faked” data to consider the implications of your study for OT practice.</li> </ul> <p>You will have instruction and activities that prepare you to do all these things.</p> <p>You will be graded on each part, as well as your professionalism in presentation. You should come dressed professionally for your presentation and you should have practiced your presentation.</p> <p>Your research question must be suitable for SSR, of interest to you, and related to occupational therapy. You may consult with your fieldwork supervisor for ideas, or other practitioners you know. Or you can use your PBL cases or your Capstone project as ideas.</p>	<p>45%</p> <p>There are rubrics for each portion on BB</p> <p>Paper trail = 5  Rationale  Paragraph = 10  Letter of informed consent = 10  Design choice and methods = 20  Data graph=5  Presentation style and professionalism = 10  EBP = 5</p>
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ASSIGNMENT	DESCRIPTION	PERCENT OF GRADE
Grant assignment	You will be given a research question, and you will look for appropriate funding sources. You will identify 3 and select which of the 3 you think is best, providing a rationale.	5%
Final exam	The in-class final will be 50 multiple choice questions.	15%
Team application activities (TAA)	The content you have learned for each module will be applied in class with group activities. These will be followed by large group discussion and clarification by the instructor. The TAA will not be graded but will be given a check if completed.	N/A - Formative

## SUMMARY OF GRADING

### Team grades

Group Quizzes 15%

### Individual grades

Everything else

**NOTE:** There will be an appeal process in place for Group quizzes that will be described fully on BB. Teams (not individuals) may appeal for additional points if they disagree with an answer on a group quiz, but the appeal must come in writing within 24 hours and the students must provide a rationale with evidence, and re-write the question to make it clearer.

## TOPICAL OUTLINE

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
<p>Week 1 Jan 9</p>	<p>Comparison of SSR and Group research- Overview of what SSR is and is not for</p> <p>The historical background of SSR with Behaviorism and how it can be used in OT.</p> <p>PPT on BB in week 1- overview of SSR</p> <p>Read</p> <ol style="list-style-type: none"> <li>1. “Essentials of TBL” (p 1-4 and 14-15 “benefits”)</li> <li>2. <a href="#">Overview of Single-Subject Research</a> (4 pp)</li> <li>3. Zuidersma et al <a href="#">Single-Subject Research in Psychiatry: Facts and Fictions</a></li> <li>4. <a href="#">This is another brief overview that can be helpful</a></li> </ol> <p>If you have purchased or rented the Richards text, Chapter 1 will be helpful for this early content.</p> <p>Be able to answer this question:</p> <p><i>What is the same and different about SSR and</i></p>	<p>Determining if a research study paper is of a group comparison design or SSR.</p>	<p><b>Group formation. Please complete the Team formation quiz by tomorrow night (1/10). This will allow me to create the groups. Thank you!</b></p> <p>Team contract Review of research concepts</p> <p>Overview of Team based learning. <b>Mini lecture (No mini-lecture as we are virtual this week).</b> Practice with SSR and group comparison articles- identifying which is which.</p>	<p>Think about possible interventions you are interested in studying and possible populations of clients you are interested in learning more about</p> <p><b>Submit team contract signed by all by 1/12 @ 11:59pm on BB</b></p>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
	<i>group comparison research?</i>		On your own, briefly review the course assignment s- will do this in more detail later in course	
Week 2 Jan 16	<p>View PPT on BB called “Research questions in SSR”</p> <p>Horner, 2005 (this paper provides a nice overview of SSR and all of its features)- on BB</p> <p><a href="#">Dworkin-Valenti Case Study and Single-Subject Research Investigations</a></p> <p>PPT on BB called overview of SSR</p> <p>If you have Richards read Richards Chapter 4 (pp 81-86)</p> <p>Be able to answer this question: <i>What is SSR good for?</i></p>	<p>Determine if SSR is right method to answer a particular research question</p> <p>Write research questions that can be answered by single subject research (SSR)</p>	<p>TRAT (on material from weeks 1 and 2).</p> <p>Mini lecture</p> <p>TAA</p> <p>Practice writing research questions in HMK’s research question format.</p>	<p><b>IRAT due Jan 15 by midnight on last weeks and this week’s readings and PPT</b></p>
Week 3 Jan 23	<p>Overview of all <a href="#">Single-Subject Research Designs</a></p> <p>Here is <a href="#">another version</a> if you prefer this</p>	<p>Select an appropriate single subject design for a given research question.</p>	<p>TRAT</p> <p>Mini lecture</p> <p>TAA</p> <p>Practice matching</p>	<p><b>IRAT due Jan 22 by midnight on this week’s reading and PPT</b></p>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
	<p>View PPT on BB called SSR Designs</p> <p>Basic SSR terminology- baseline, tx, ABCD notations, use of graphs</p> <p>If you prefer video to reading- <a href="#">view this</a></p> <p>Be able to answer this question: <i>What is the purpose of the 3 major designs we will study (Withdrawal, multiple baseline, and alternating treatments)? When would you use each?</i></p>	<p>Critique the methods of a SSR paper</p> <p>“Read” SSR graphs to determine the study design</p> <p>Use single subject research as part of data based decision-making.</p>	<p>designs to specific research scenarios</p>	<p><b>First draft Research question due Jan 22 by midnight Posted to BB</b></p>
<p>Week 4 Jan 30</p>	<p>Models of EBP</p> <p>How SSR fits in to EBP</p> <p>View PPT on BB</p> <p>Be able to answer this question: <i>Why is SSR important for OTs?</i></p> <p><i>Readings in a folder on BB</i></p>	<p>How to use EBP broadly in clinical practice</p> <p>Use single subject research as part of data-based decision-making.</p> <p>Adopt a model of EBP that suits you</p>	<p>Mini lecture TAA Practice with models of EBP and literature searching for EBP</p>	<p><b>No IRAT or TRAT this week- a bit to read with PPT- for an in class activity to be turned in</b></p> <p>Learn more about your possible research question by searching the literature- is your question a good choice? Consider the potential impact of your study on OT practice within the EBP framework you have chosen</p>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
				Second draft of Research question posted by midnight Jan 29
Week 5 Feb 6	<p>Specific SSR designs in detail- the withdrawal or reversal design</p> <p>PPT on BB called SSR Designs- Withdrawal</p> <p>If you have Richards read Ch 6 Be able to answer this question:</p> <p><i>When would you use the withdrawal design and when wouldn't you?</i></p>	<p>When to choose this design Select an appropriate single subject design for a given research question.</p>	<p>TRAT</p> <p>Mini lecture</p> <p>TAA</p> <p>“Read” and label SSR graphs of the withdrawal design</p> <p>Matching questions to the withdrawal design</p>	<b>IRAT due Feb 5 by midnight on this week's PPT</b>
Week 6 Feb 13	<p><b>Asynchronous</b></p> <p>View PPT on BB called “Funding research”</p> <p>Examine <a href="#">Finding funding</a></p> <p>View Kanji (2015) <a href="#">Grants 101</a> and <a href="#">Grant eligibility</a></p>	<p>Locate potential sources of grant funding and understand the mechanisms of obtaining grants.</p>	<p>asynchronous activities and assignment</p>	<b>You will turn in your grant assignment by 11:59 pm Sunday, Feb 16.</b>
Week 7 Feb 20	<p>Specific SSR designs in detail- the multiple baseline design</p> <p>If you have it, read Richards Ch 8</p> <p>Be able to answer this question:</p>	<p>Select an appropriate single subject design for a given research question.</p>	<p>TRAT (to be done by each via some virtual medium of their choice)</p> <p>Mini lecture</p> <p>TAA</p>	<b>IRAT due Feb 19 by midnight on this week's PPT</b>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
	<i>When would you use the multiple baseline design and when wouldn't you?</i>		<p>“Read” and label SSR graphs of the multiple baseline design</p> <p>Matching questions to the MB design</p>	
<p>Week 8 Feb 27</p>	<p>Specific SSR designs in detail- the alternating tx design</p> <p>If you have it, read Richards Ch 9</p>	<p>Select an appropriate single subject design for a given research question.</p>	<p>TRAT</p> <p>Mini lecture</p> <p>TAA</p> <p>“Read” and label SSR graphs of the alternating tx design</p> <p>Complete graph handout</p> <p>Matching questions to the Alt tx design</p>	<p><b>Final research question due Mar 2 by 11:59 pm</b></p> <p><b>IRAT due Feb 26 by 11:59 pm on this week's PPT</b></p>
	<b>Spring Break</b>			
<p>Week 9 Mar 13</p>	<p>Paper trails, literature searches and argument paragraphs</p> <p>Your proposal assignment- audio/video of instructions and all templates provided</p>	<p>Finding literature to support your study methods</p>	<p>Making a paper trail of your literature searches</p> <p>Writing a logic paragraph</p>	<p><b>Paper trail due by Mar 16 at 11:59 pm – articles about your population, your IV (tx) and your DV (outcome)</b></p>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
Week 10 Mar 20	<p>Measuring your DV View</p> <p>PPT on BB called “Measurement in SSR: the DV and IOA”</p> <p>If you have it, read Richards Chapter 3 and Ch 4 (pp 86-96) Graphing Data in SSR</p>	<p>How to create reliable measurement outcomes Data graphing</p>	<p>TRAT Mini lecture TAA Practice measuring your chosen DV Practice with IOA DV worksheets Completing line graphs using MS EXCEL</p>	<p><b>IRAT due Mar 19 by 11:59 pm on this week’s PPT</b></p>
Week 11 Mar 27	<p>Letters of informed consent</p> <p>Implementing your IV with Fidelity and Measuring that you are Doing So</p> <p>PPT on BB called “Measurement in SSR: IV, treatment fidelity and social validity”</p> <p>Three articles posted- but skim through to make sure you understand what treatment fidelity and social validity is, why they are important, and how to measure them</p> <p>1. Sanetti, &amp; Kratowill,, (2009) tx fidelity</p>	<p>Writing letters of informed consent</p>	<p>TRAT Mini lecture TAA Practice writing letters of informed consent Complete lottery for presentation order and due dates</p>	<p><b>IRAT due Mar 26 by 11:59 pm on this week’s PPT</b></p>



DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
	2. Foster, S. L., & Mash, E. J. (1999)  Snodgrass et al (2018) Social validity in SSR review			
Week 12 Apr 3	Conference Week Asynchronous		none	<b>None-Independent work on projects</b>
Week 13 Apr 10	Completing Visual Analysis of SSR Data  View PPT on BB called "Visual Analysis"  Read Articles on BB to clarify concepts Ottenbacher (1986) and Lane & Gast (2013)  3. If you have it read Richards Chapter 10	Doing visual analysis	TRAT TAA Practice analyzing SSR data and examining reliability  Visual analysis activity	<b>IRAT due by Apr 9 11:59 pm on this week's PPT</b>
Week 14 Apr 17	Critiquing SSR Articles View PPT on BB called "critiquing SSR designs"  <b>MAKE SURE TO READ the article to be critiqued before class</b>	Reading and critiquing the rigor of SSR papers	TRAT TAA Practice with an article critique	<b>IRAT due Apr 16 by 11:59 pm on this week's PPT</b>  <b>This article critique will be turned in by the end of class</b>
Week 15 Apr 24	<b>Presentation week</b> <b>Via Online Discussion</b> <b>You will submit your presentation by April 21</b> <b>You will respond to 2 peers by Thursday April 24 at 11:59 pm</b>		You will watch the presentation of two peers. For each, you will write a 150-word discussion post. In your	<b>Your entire SSR assignment is due with all parts- see assignment instructions and rubrics on BB</b>  <b>DUE FOR EVERYONE</b>

DATE	TOPICS/ READINGS	SKILLS LEARNED	IN CLASS	ASSIGNMENT DUE DATES
			discussion, you will offer 3 things (1 positive comment, 1 thing to work on and 1 comment about their methods or design)	<b>April 21 at 11:59 pm</b>  <b>Final exam taken online between Apr 21 and Apr 25</b>