## CDIS 5013: Research Methods in Communication Disorders Fall 2019

| Course info:  | Tu/Th 12:30-1:45 | JB 104             | https://canvas.okstate.edu/courses/38605 |
|---------------|------------------|--------------------|--|
| Professor:    | Valerie Freeman  | valerie.freeman@ol | <u>kstate.edu</u>                        |
| Office hours: | 007 Murray Hall  | Tuesdays 3:30 & by | appointment                              |

### Course Objective: Build habits supporting Evidence-Based Practice:

- Find reviews and primary research to answer clinical questions
- Evaluate research for its strength and utility in clinical applications
  - o Become familiar with common research methods, study designs, and statistical methods
  - Become comfortable reading primary research
  - o Maintain awareness of ethical considerations in conducting and reporting research
- Identify gaps in the literature and ways to fill them
- Discuss research with colleagues and patients
- Integrate clinical experience, patient preferences, and intercultural issues with external research

#### Workload

- Before each class: read ~25 pages, bring notes and questions to discuss
- In class: discuss readings, practice skills in small groups
- Weekly: work on assignments

#### **Required Materials**

- Meline, T. (2010). A research primer for communication sciences and disorders. Pearson. ISBN: 9780137015979
- **Dollaghan**, C. (2007). The Handbook for Evidence-Based Practice in Communication Disorders. Brookes Publishing. ISBN: 9781557668707
- Other readings to be posted on the course webpage. **Canvas** will be used for course materials, quizzes, assignments, grades, and discussion.

#### **Misc.** Policies

- **Participation** in class discussion and pair/group work are important in this course. Missing more than a couple classes, sleeping, or engaging in non-class-related activities can hurt your grade.
- Discuss planned absences with me ahead of time to make any necessary arrangements. There is
  no need to inform me of an unplanned absence (e.g. if you wake up sick) unless you need to
  make arrangements regarding assignments. It is your responsibility to find out what you miss
  when absent. All class materials are posted to Canvas, often before class check there and ask
  classmates. (Do not email me to ask what you missed!)
- You can always turn in any work to Canvas. If you do assignment on paper, you can **upload a scan/photo** if you can't bring it to class.
- You may turn in work to Canvas within a short time after class without penalty with permission (e.g. if you forgot an assignment at home or want to revise work following in-class feedback). Points may be docked from unexcused **late work**.
- Final grade scheme (no rounding up): A = 90%, B = 80%, C = 70%

# CDIS 5013: EBP/Research Methods – Freeman

| % of fina  | al grade   |
|--|------------|
| Group Foregrounding Question (FQ)  | <u>15%</u> |
| Practice forming and researching clinical questions with a small group.  |            |
| FQ draft (PICO question)   | 1%         |
| FQ + Lit Search Chart  | 7%         |
| Revise your FQ following draft feedback  |            |
| <ul> <li>Conduct a literature search to address your FQ. Keep track of every search, and note<br/>the usefulness of sources you find (fill out LitSearch_chart.xlsx).</li> </ul> |            |
| FQ Conclusion  | 7%         |
| • Write the best answer to your FQ that you can, given the available literature.   |            |
| Summarize your findings like an abstract for a systematic review or clinical practice  |            |
| guideline. Target length: 300-500 words. (See past examples on Canvas).  |            |
| <ul> <li>Use in-line citations and "regular" bibliography with only the sources you cite in your<br/>text, organized alphabetically.</li> </ul>                                  |            |
| Group Client-related Research Question (CRO)   | 55%        |
| Research related to your current clients in the clinic. Work with 1-2 others with similar clients.   | 0070       |
| CRQ draft + interest explanation   | 1%         |
| CRQ + Lit Search Chart   | 12%        |
| CRQ Conclusion   | 7%         |
| Study proposal   | 15%        |
| • Design a study that would answer your CRQ better than current literature or that would   |            |
| improve on existing study(s) from your search. Include:  |            |
| • Introduction:  |            |
| <ul> <li>FQ/CRQ &amp; its importance (why we should care)</li> </ul>   |            |
| <ul> <li>Background &amp; gap in literature: Current knowledge and what's missing</li> </ul>   |            |
| <ul> <li>Study design type and justification for it over other designs</li> </ul>  |            |
| <ul> <li>Hypotheses/predictions</li> </ul>   |            |
| <ul> <li>Methods: include all parts relevant to the design, e.g.:</li> </ul>   |            |
| <ul> <li>Participants (treatment/control groups, their characteristics)</li> </ul>   |            |
| <ul> <li>Measures (tests, measurements)</li> <li>Procedures (who collects, when, where, in what order)</li> </ul>  |            |
| <ul> <li>Data analysis plan (processing, stats)</li> </ul>   |            |
| • Discussion:  |            |
| <ul> <li>how you would interpret possible outcomes</li> </ul>  |            |
| <ul> <li>limitations of the design</li> </ul>  |            |
| <ul> <li>impact/importance of results &amp; applicability to clinical practice</li> </ul>  |            |
| <ul> <li>Bibliography &amp; in-line citations (complete; APA formatting)</li> </ul>  |            |

| Abstract   | 2%  |  |
|--|-----|--|
| • Write a structured abstract for your study proposal. Details TBA.  |     |  |
| Poster   |     |  |
| • Present your study proposal in a poster. Include all your main points and charts, lists, tables, or images that would help your audience grasp your plan while you describe it.                          |     |  |
| Presentation   |     |  |
| • We'll have a poster symposium at the end of the semester. Half your group will present your poster during the first half of the symposium, while the other half visits other posters, then switch roles. |     |  |
| • While you visit other posters, fill out feedback forms for 2 other posters.  |     |  |
| Individual Work  | 30% |  |
| Individual assignments related to your CRQ or other course material.   |     |  |
| Patient history checklists   |     |  |
| <ul> <li>Read two clients' patient history files (can do more clients for extra credit)</li> </ul>   |     |  |
| Client-related research  | 2%  |  |
| • Find disorder/Tx info on two current clients (can do more clients for extra credit)  |     |  |
| Studies labeled by design type (work in CRQ group)   | 2%  |  |
| <ul> <li>Identify the study design types of 2 articles from your CRQ search</li> </ul>   |     |  |
| Critical Appraisals of 3 course readings   | 6%  |  |
| • Fill out 1 CATE, 1 CADE, 1 CASM for assigned articles  |     |  |
| Critical Appraisals of 3 sources from your CRQ search  | 6%  |  |
| • Fill out 3 total CAs (CATE, CADE, CASM, CASC, and/or CABR) for articles from CRQ search  |     |  |
| CAPP for your CRQ client   |     |  |
| Supervisor-conclusion report   | 5%  |  |
| Discuss your CRQ conclusion with your clinic supervisor.   |     |  |
| <ul> <li>Turn in a short report/reflection on what happened in your supervisor meeting.</li> </ul>   |     |  |
| Class participation & misc. small assignments  | 5%  |  |

• Active in lecture, group discussion, pair work, etc.

| Wk | #  | Day | Date   | Class Topic  | Prep for class   |
|----|----|-----|--------|--|--|
| 1  | 1  | Т   | Aug 20 | Intro &<br>Evidence-based practice                                 |  |
|    | 2  | Th  | Aug 22 | Research questions, planning                                       | <ul> <li>Read: Dollaghan ch 1 &amp; 2</li> <li>Read: www.asha.org/Research/EBP/</li> <li>Sign up for an FQ group on Canvas by Fri</li> </ul> |
| 2  | 3  | Т   | Aug 27 | Literature search  | <ul> <li>Read: Dollaghan ch 3</li> <li>Read: Nelson ch 4</li> <li>Bring: FQ draft (post by end of class)</li> </ul>                          |
|    | 4  | Th  | Aug 29 | Reading syntheses  | <ul><li>Read: Meline ch 11 p. 240-247, 261-264</li><li>Read Nelson p. 7-9 "Getting Started"</li></ul>  |
| 3  | 5  | Т   | Sep 3  | Reading research articles  | Due: Patient history checklists  |
|    | 6  | Th  | Sep 5  | Ethics, human subjects   | <ul> <li>Due: Lit Search Chart w/ revised FQ</li> <li>Read: Meline ch 2 (except animal section)</li> <li>Read: Nelson p. 28-30</li> </ul>    |
| 4  | 7  | Т   | Sep 10 | Ethics   | <ul> <li>Read: asha.org/Code-of-Ethics/</li> <li>Read: asha.org/Research/EBP/Making-the-Decision/</li> </ul>                                 |
|    | 8  | Th  | Sep 12 | Validity   | • Read: Dollaghan ch 4   |
| 5  | 9  | Т   | Sep 17 | Measurement,<br>Descriptive stats                                  | <ul> <li>Due: FQ Conclusion</li> <li>Read: Meline ch 4</li> <li>Read: Nelson ch 8 p. 182-186</li> <li>Bring: Clinical RQ ideas</li> </ul>    |
|    | 10 | Th  | Sep 19 | Group designs  | <ul> <li>Sign up for a CRQ group on Canvas</li> <li>Bring: CRQ ideas</li> <li>Read: Meline ch 5</li> </ul>                                   |
| 6  | 11 | Т   | Sep 24 | Group designs, con't   | Due: CRQ draft w/ interest reasons   |
|    | 12 | Th  | Sep 26 | Qualitative designs  | Read: Meline ch 6  |
| 7  | 13 | Т   | Oct 1  | Single-subject designs   | Due: Client-related research     Read: Meline ch 7   |
|    | 14 | Th  | Oct 3  | Non-experimental designs   | Read: Meline ch 8  |
| 8  | 15 | Т   | Oct 8  | Hypothesis testing   | Due: CRQ + Lit Search Chart     Read: Meline ch 9  |
|    | 16 | Th  | Oct 10 | Quantitative analysis,<br>Inferential stats                        | Due: 2 studies labeled by design type     Read: Meline ch 10 p. 207-226  |
| 9  | 17 | Т   | Oct 15 | Importance, effect size  | <ul> <li>Due: CRQ Lit Search revisions</li> <li>Read: Meline ch 10 p. 226-236</li> <li>Read: Dollaghan ch 5</li> </ul>                       |
|    | 18 | Th  | Oct 17 | Evaluating research for practice                                   | Read: Meline ch 12   |
| 10 | 19 | Т   | Oct 22 | Evaluating treatment research                                      | Due: CRQ conclusion     Read: Dollaghan ch 6   |
|    | 20 | Th  | Oct 24 | CATE for assigned article  | <ul> <li>Read: Gross, Linden, &amp; Ostermann (2010)</li> <li>Due &amp; Bring: CATE for Gross et al. article</li> </ul>                      |
| 11 | 21 | Т   | Oct 29 | Evaluating diagnostic research                                     | Read: Dollaghan ch 7   |
|    | 22 | Th  | Oct 31 | CADE for assigned article  | <ul> <li>Read: Smith (2015)</li> <li>Due &amp; Bring: CADE for Smith article</li> </ul>  |
| 12 | 23 | Т   | Nov 5  | Systematic reviews and meta-<br>analyses<br>(Writing & Evaluating) | • Read: Dollaghan ch 8<br>• Read: Meline ch 11 p. 247-261  |

| Wk | #  | Day | Date   | Class Topic  | Prep for class  |
|----|----|-----|--------|--|---|
|    | 24 | Th  | Nov 7  | CASM for assigned article                          | <ul> <li>Read: Kaipa &amp; Danser (2016)</li> <li>Due &amp; Bring: CASM for Kaipa &amp; Danser article</li> </ul> |
| 13 | 25 | Т   | Nov 12 | Evaluating clinical evidence & Patient preferences | • Read: Dollaghan ch 9<br>• Read: Dollaghan ch 10   |
|    | 26 | Th  | Nov 14 | Communication and counseling                       | <ul> <li>Read: Kendall</li> <li>Due &amp; Bring: CAPP for your CRQ client</li> </ul>                              |
| 14 | 27 | Т   | Nov 19 | Publishing & Presenting results (Dissemination)    | <ul> <li>Due: CAs for 3 references from your search(es)</li> <li>Due: Supervisor-conclusion report</li> </ul>     |
|    | 28 | Th  | Nov 21 | Guest speakers/TBD                                 | Due: Study proposal   |
| 15 | 29 | Т   | Nov 26 | Poster design                                      |   |
|    |    | Th  | Nov 28 | no class   | Thanksgiving  |
| 16 | 30 | Т   | Dec 3  | Abstracts  | Due: Poster PDF   |
|    | 31 | Th  | Dec 5  | Poster spiels                                      | Due: Abstracts  |
| 17 | 32 | М   | Dec 9  | Poster Symposium:<br>9:0011:00 am<br>Murray Parlor | <ul> <li>Due: any requested project revisions</li> <li>(Practice your spiels)</li> </ul>                          |