McGILL UNIVERSITY
Faculty of Medicine
School of Communication Sciences & Disorders
FALL 2014

Research and Measurement Methods
SCSD-618
Number of Credits: 3 Credits
Course Time/Room: Monday; 1:00 – 3:00 pm, Rm 869 [08 Sept – 01 Dec]

Instructor:
Karsten Steinhauer, Ph.D.

Office: Rm 817
Office Phone: (514) 398-2413
Office Hours: By appointment (set up by email)
Email: karsten.steinhauer@mcgill.ca

COURSE CONTENT:
The purpose of this course is to cultivate critical thinking and provide a source of current information on how to read, interpret and evaluate research so as to help the student become a critical consumer of research in communication sciences and disorders. The course will also help those who wish to design research that will further their own professional success.

LEARNING OUTCOMES:
After this course, you should be able to ...
• explain the major principles of scientific research
• characterize different research approaches including strengths and weaknesses
• describe and explain criteria for research planning and strong design
• describe how a compelling research paper should be organized
• critically analyze research papers (in the field and beyond)
• carry out literature searches online and describe ways of how to get access to journal articles of interest
INSTRUCTIONAL METHOD:

- Lecture/Seminar, including group projects, power-point presentations and discussions.

COURSE MATERIALS:

Required Readings:

- Textbook: *Evaluating Research in Communicative Disorders* (5th edition)

- Other readings and power point presentations will be posted on MyCourses

REQUIREMENTS & EVALUATION:

It is expected that you have read the assigned chapters and papers prior to the lecture. This includes the papers selected for student presentations.

Your grade will depend upon

- **1 take-home assignment** (06 October 2014, due: 20th Oct) 10%

- **Power point presentation** of your critical analysis of a research article
  (~30 min + discussion; given by groups of 3-4 students) 30%

- **Written update** of the critique (incorporating peers’ suggestions)
  (4 pages max; due Wednesday of the following week, same groups) 20%

- **Final exam (take-home)** due date: 11th December 2014 40%

McGill Policy and Statement:

*McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/students/stu/honest/](http://www.mcgill.ca/students/stu/honest/) for more information).*

*In accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in English or in French any written work that is to be graded.*
## SCHEDULE AND READINGS

(Note: Schedule may change. Please check MyCourses for updates and additional readings.)

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<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>I.</td>
<td>Sept 08</td>
<td>Overview of the Course. Introduction</td>
<td>(Chap 1)</td>
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<td>II.</td>
<td>Sept 15</td>
<td>Types of research Variables, Research Strategies [Problems of inference – Validity]</td>
<td>Chap 1 +2, 4</td>
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<td>III.</td>
<td>Sept 22</td>
<td>Guest lecture by Stefanie Nickels Research planning and design: I. Group designs</td>
<td>Chap 3</td>
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<td>IV.</td>
<td>Sept 29</td>
<td>&quot;Searching the literature&quot; - Workshop (with Pamela Harrison)</td>
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<td>1 pm – 3 pm Cybertheque e-classroom (Redpath library) to be confirmed</td>
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<td>V.</td>
<td>Oct 06</td>
<td>Guest lecture by Stefanie Nickels Research planning and design: II. Single subject designs</td>
<td>Chap 3+5 [pp. 149-166]</td>
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<td>Assignment (due: Oct 20, hard copy + email)</td>
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<td>VI.</td>
<td>Oct 13</td>
<td>NO CLASS</td>
<td>(\rightarrow) THANKSGIVING DAY</td>
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<td>VII.</td>
<td>Oct 20</td>
<td>Organization and Analysis of data</td>
<td>Chap 6</td>
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<td>VIII.</td>
<td>Oct 27</td>
<td>Evaluating research articles I</td>
<td>Chap 7, 8, 10</td>
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<td>IX.</td>
<td>Nov 03</td>
<td>Evaluating research articles II + Peer evaluation for presentations</td>
<td>Chap 7, 8, 10</td>
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<td>X.</td>
<td>Nov 10</td>
<td>2 Student presentations</td>
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<td>XI.</td>
<td>Nov 17</td>
<td>2 Student presentations</td>
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<td>XII.</td>
<td>Nov 23</td>
<td>2 Student presentations</td>
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<td>XIII.</td>
<td>Dec 01</td>
<td>1 Student pres. + Discussion + Assignment of Final Exam</td>
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**Submission deadlines for Student presentations:**

1. **One week before your presentation:**
   - Send research article to be reviewed in your presentation + summary (by email)

2. **Saturday prior to your presentation:**
   - Power point file, handouts (by email)

3. **Wednesday of the following week:**
   - Written update of critique (4 pages, 12pt, 1.5 line spacing)
   - hardcopy + by email: Names_Critique.doc

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"Take-home Final Exam: due Dec 11"

Hard copy + by email, file name: Firstname_Name_FINAL.doc

(include page numbers!; more instructions to follow)
Presentation and written update: A critique (review) of a research article

Procedure:

1. You will build 7 groups of 3-4 students. Each group will prepare a critique of a research article and give a 50-minute power point presentation (including discussion). All 4 students must be involved in both the preparation and the presentation. Based on input from their peers, each group will address questions/suggestions in an updated written version of their critique.

2. Choose an article to review that is pertinent to your own work/research/interests but has not been discussed in any of your courses.

3. Submit a copy of the research article one week before your presentation, and the power point file on the day of presentation.

4. The presentation should last approximately 35 minutes (8-10 minutes per student) and will be followed by a discussion. If you wish, each group can meet with me for ~30 min to discuss their presentation in advance (please schedule a meeting well in advance!).

5. Begin your presentation/paper with a very brief overview of the study. Identify the research question, type of design, the independent variable(s) and dependent variables

6. Next, critique each section of the research article (intro, methods, results, discussion) according to the guidelines in Schiavetti & Metz (Ch7-10). Remember to mention both positive and negative aspects of the article. Note, regarding the results section, while it may be difficult to evaluate the appropriateness of the particular statistical analysis performed, you can still comment on organization, presentation, etc.

7. The length of the written critique should be 4 pages (max) + Title page with your names, article title (type-written sentences with Times 12pt, 1.5 line spacing, 2 cm margins). The critique should focus on the most important issues + integrate feedback received in class. Include page numbers!

8. Grades will be based on the following:

A. Presentation (30%):
A good presentation is characterized by focus on the main points (research question, methods, findings, conclusion, criticism), clarity, good structure (general → details) and appropriate time considerations. 50% of the grade will be based on the peer evaluation forms filled in by your classmates (details will be discussed in class).

B. Written critique (20%):

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20 points total

4 pages total

C. Take-home assignment (worth 10%) and Take-home Final Exam (worth 40%): Note: if appropriate, the target article(s) to be evaluated will be made available in advance! Criteria for the evaluation are (i) thought, detail, accuracy and originality (where applicable), (ii) coherence of argumentation, (iii) structure, organization and focus.
Peer Evaluation of Student Presentation

Your Name: _______________________

1. Clarity:
"The presentation was very clear, contained all relevant information, and was easy to follow"

☐ I strongly disagree
☐ I disagree
☐ Neutral
☐ I agree
☐ I strongly agree

2. Organization:
"The presentation was very well prepared and focused and made good use of examples and illustrations; the different points were presented in a logical order."

☐ I strongly disagree
☐ I disagree
☐ Neutral
☐ I agree
☐ I strongly agree

3. Critique of article:
"The critique was ...

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<th>and original</th>
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<td>☐ I strongly disagree</td>
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4. Overall rating:
"This was an excellent presentation"

☐ I strongly disagree
☐ I disagree
☐ Neutral
☐ I agree
☐ I strongly agree
5. Two or three things I learned that I liked in particular or found interesting:

(a)

(b)

(c)

6. Two or three things I'd like to suggest to the presenting group:

(a)

(b)

(c)

7. Other comments (?)

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