

THE UNIVERSITY OF WESTERN ONTARIO  
School of Communication Sciences and Disorders

*CSD 9649 – Clinical Applications of Evidence Based Practice for Clinicians*

**1.0 COURSE INFORMATION**

<i>Instructor:</i>	Dr. Lisa Archibald Rm 2597, Elborn College Ext. 82753 larchiba@uwo.ca
<i>Office Hour:</i>	Wednesdays, 11:30 to 12:30, or <i>by appointment</i>
<i>Dates and Times:</i>	Wednesdays, 9am to noon
<i>Working Group Leaders:</i>	Drs. Warr-Leeper, Adams, Archibald
<i>TA:</i>	Laura Pauls

**2.0 TEXTBOOK (OPTIONAL)**

Dollaghan, C. (2007). The handbook of evidence-based practice in communication disorders. Baltimore: Paul H. Brookes Publishing Co.

Recommended:

Domholdt, E. (2005). Rehabilitation research: Principles and Applications, 3<sup>rd</sup> ed. St. Louis: Elsevier Saunders.

Greenlagh, T. (2006). *The basics of evidence-based medicine*, 3<sup>rd</sup> ed. Oxford: Blackwell Publishing.

**3.0 COURSE OBJECTIVES**

**Goal of the course:** Evidence-based practice is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual clients. The goal of CSD 9649 is to provide students with practice in critically evaluating the evidence based relevant to a clinical question.

**Objectives**

- (1) To apply skills gained in CSD9639 to formulate answerable clinical questions, and search for relevant sources of information,
- (2) To apply skills gained in CSD9639 to critically appraise published research,

## 4.0 COURSE FORMAT

The course involves working in a small group. Students will apply the principles of evidence-based practice learned in CSD9639 to evaluate a clinical topic of interest within a working group consisting of students and a faculty supervisor or TA with similar or related interests. Working groups will be formed based on similarities between clinical questions targeted by students and the interests of the supervisor. Although every effort will be made to accommodate student interest, it will be necessary to form groups of similar sizes. Early in the course, students will be asked to indicate a first and second topic choice if possible in order to facilitate this process.

## 5.0 EVALUATION

In this course, your evaluation will be based on your performance throughout the completion of a critical review on a topic of your choosing. This review will be evaluated in stages throughout the course. You will be expected to participate in your working group by giving a presentation to the working group as specified, and engaging in discussion on the topics presented by your peers. Due dates and course weightings are as follows:

<b>Participation: Working Groups</b>	<b>30%</b>	
<b>Working Group Discussions – Suggested Milestones</b>		
Part 1: Generation of the Evidence-based Research Question		<i>by Jan. 30th</i>
Part II: Critical Evaluation of Assembled Materials		<i>by Feb. 7th</i>
Part III: Recommendations		<i>by March 20th</i>
<b>Assignments</b>		
Statement of research question and annotated bibliography	<b>20%</b>	<i>February 6th</i>
Draft of Conference Proceedings: Introduction, Method, Results	<b>50%</b>	<i>March 6th</i>

## 6.0 POLICIES

### Attendance

Attendance and participation in all aspects of the course is an expectation of the course. It is understood that there may be exceptional circumstances that require the student to miss a course lecture. Working group leaders should be informed of any anticipated absences from working group sessions.

### Cheating and Academic Misconduct

Students are responsible for understanding the nature of, and avoiding the occurrence of, plagiarism and other academic offenses. Students are urged to read the section on Scholastic Offenses in the Academic Calendar. Note that such offenses include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. In writing scholarly papers, students must keep firmly in mind the need to avoid plagiarism. Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate, and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offense Policy in the current Academic Calendar). The University of Western Ontario uses software for plagiarism checking. Students may be required to submit their written work in electronic form for plagiarism checking. The penalties for a student guilty of a scholastic offense include refusal of a passing grade

in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

### **Appealing Academic Evaluations**

In the first instance, all appeals of a grade must be made to the course instructor (informal consultation). If the student is not satisfied with the decision of the course instructor, a written appeal must be sent to the Program Director. If the response of the department is considered unsatisfactory to the student, he/she may then appeal to the Dean of the Faculty in which the course of program was taken. Only after receiving a final decision from the Dean, may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office.

### **Rules of Conduct in the Classroom**

Students are expected to maintain the same high standards of conduct and moral judgment in the classroom as will be expected when they become Speech-Language Pathologists/Audiologists. Therefore, they are asked to comply with the following reasonable expectations for classroom conduct:

1. Students and the instructor will behave in a manner that is welcoming, supportive, and respectful of cultural and individual differences at all times.
2. Students are expected to participate in the course by asking questions and contributing comments during lectures.
3. *Conduct that could distract fellow students or the instructor during a lecture must be avoided.* This includes but is not limited to talking when others are speaking, passing notes, sleeping, and overt inattention.
4. Please arrive on time for class. If you are unavoidably late, please enter quietly and take the nearest seat.
5. Cell phones, MP3 players, and PDAs are to be turned off during class. Receiving and sending text messages should not be undertaken during the lecture.
6. Computers may be used solely for course purposes, e.g., taking notes. Students must not browse the web, use email or engage in instant messaging during class.

## TENTATIVE MEETING SCHEDULE

Date/Format	Topic (CSD9649 shown in bold)	Readings	WebCT Quiz
① Jan. 9 Self-study online	What is evidence-based practice? Formulating answerable questions	Text: Doll, ch. 1, 2  Other: Hamilton (2005); ASHA 2005	Quiz 1: Formulating answerable clinical questions
Jan. 16 Mixed: In class from 9:30am	Introduction to 9639 and 9649 Finding the evidence (9639) <b>Topic searches (9649)</b>	View 2 youtube videos linked to webct.  Text: Doll, ch. 3  Other: Johnson (2006); Villeneuve & Maranda (2005)	
② Jan. 23 In-class 9:30am-noon	Research design	Text: Doll, ch. 4  Other: Robey & Dalebout (1998); Cohen (1992)	Quiz 2: Identifying research designs
Jan. 30 *See notes under topic	10:00-11:00am – Optional in-class session on ‘looking at the data’ (equivalent online materials are available)  <b>11:00am – CSD9649 meetings</b>	Other: Streiner (1997)	
③ Feb. 6 In-class 9:30am-noon	Tests of difference	Text: Doll, ch. 5 Other: Greenhalgh (1997c)  Discussion paper: Crosson et al. (2007)	Quiz 3: Tests of Difference
Feb. 13	Reading Week – NO MEETING		
④ Feb. 20 In-class 9:30am-noon	Tests of association Small clinical trials; single subject designs	Other: Backman et al. (1997); Greenhalgh, 1997d; Nourbakhsh & Ottenbacher (1994)  Discussion paper: Wong et al. (2005); Hayward & Schneider (2000); Palmer et al. (1999)	Quiz 4: Tests of Association & Others

Feb. 27 *See notes under topic	9:30-11:00am – Optional data analysis evaluation session (please bring your articles)  <b>11:00am – CSD9649 meetings</b>		
Mar. 6 In-class 9:30-11am  (11am – CSD9649)	Critical appraisal I: Evidence from assessment, treatment, systematic reviews, & guidelines  <b>11:00am – CSD9649 meetings</b>	Text: Doll, ch. 6,7,8  Other: Bain & Dollaghan (1991)	
Mar. 13 In-class 9:30-11am  (11am – CSD9649)	Critical appraisal II: Evidence from qualitative research, surveys, & patients / practice Expert opinion Applying evidence-based practice in clinical practice Proceedings and posters  <b>11:00am – CSD9649 meetings</b>	Text: Doll, ch. 10; Greenhalgh, ch. 13;  Other: Reilly (2004); Gillam & Gillam (2006); Kitson et al. (1998)	
Mar. 20/27/ Apr.2	<b>CSD9649 meetings continue</b>		
Apr. 10	Poster Day! 10am to 1pm		

## CSD 9649 – Clinical Applications of Evidence Based Practice for Clinicians

## Course Assignments

<b>Participation: Working Groups</b>	<b>30%</b>	
<b>Working Group Discussions – Suggested Milestones</b>		
Part I: Generation of the Evidence-based Research Question		<i>by Jan. 30th</i>
Part II: Critical Evaluation of Assembled Materials		<i>by Feb. 27th</i>
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**Participation: Working Groups**

The working groups provide a forum for discussing ongoing search strategies, critical analyses, and recommendations related to your topic. You should be prepared to make a short, 5-minute presentation on your progress related to each of these phases during working group sessions. See below for a description of these phases.

**Working Group Discussions – Suggested Milestones**

Your participation in your working group will be based on your discussion and completion of the three milestones listed under section 5.0. Each of these components is designed to develop specific key competencies, and these competencies are listed within each section.

**Part 1: Generation of the Evidence-based Research Question**

In the course of becoming an effective evidence-based practitioner, one must develop the ability to retrieve and assemble literature on a given topic or problem. For this milestone, you will choose a topic that is relevant to your interests within communication sciences and disorders, and provide an introduction and rationale for the question raised. You are encouraged to outline current controversies related to the question. The final product of this component should be a clearly articulated research question that is based solidly on published research evidence. *Note that you are required to assemble all of the literature that is available to answer your research question – not simply a subset of the literature.* If you have ‘too much information’, you will be advised to narrow the focus of your research question. If you have ‘too little information’, you will be required to broaden the focus of your research question.

The key competencies for this component are:

- ☐ I can ask an evidence-based review question.
- ☐ I can pose specific potential project questions within this topic area
- ☐ I have discussed the strengths and weaknesses of a given topic or question with colleagues and my working group facilitator
- ☐ I have shown both flexibility and critical thinking in adjusting/revising my initial question following further reflection, literature review, and/or interactions with others
- ☐ I can comprehensively review the literature to learn more about my question.
- ☐ I attended a training session by UWO library personnel, and learned how to use a least one search engine in a competent and accurate way. I also understand where I can find journal articles.
- ☐ I have independently completed and documented an initial literature search.

- ☐ I have discussed the results of my initial search, if necessary, with my working group facilitator and/or a librarian to ensure that my search is both focused and complete. If there is 'too much' or 'not enough' literature on my topic, I have adjusted the topic.
- ☐ I have compiled the relevant literature.
- ☐ I have read, understood, and discussed the scope of the literature review, and am aware of the major issues within my topic area.
- ☐ I have revised the initial search and/or my initial topic area in response to what I found during early literature reviews.

## **Part 2: Critical Evaluation of Assembled Materials**

In this portion of your critical review, you will evaluate the methodological strengths and weaknesses of each of the articles that you will be appraising. Some of the methodological components that you should consider are the measurement tools (i.e., questionnaires, biological indicators), the sampling frame and sampling methodology, and the extent to which the experimenter has adequately controlled for experimental confounds. In addition to this, you are to summarize each article in an easily digestible format, providing a comprehensive analysis of the suitability of each article for answering your research question. To facilitate discussion in your working group, check with your working group facilitator prior to discussing your paper in order to determine if he/she requires a copy of your articles. Provide copies, if requested. The key competencies for this component are:

- ☐ I can identify the main research methodologies that are typically used in my area.
- ☐ I have ranked these methods in terms of their degree of experimental control and other design factors that influence whether an experiment is of high or low quality.
- ☐ I integrate the in-class teaching on experimental design, systematic review, and statistical analyses when reviewing the methods in my topic area.
- ☐ I have arrived at a decision for each article, regarding its suitability for use in the direction of clinical practice.

## **Part 3: Recommendations**

This stage of the project represents the final synthesis of your critical review, and involves using the information you have drawn from the articles reviewed to come up with a recommendation for use in practice. This is also your final opportunity to review information with your group before creating your poster presentation. Your recommendations should follow from your review of the results – thus, while you must provide clinically relevant answers to your research question, you should provide your audience with limitations to your conclusion, based on methodological flaws in the reviewed literature.

The key competencies for this component are:

- ☐ My conclusions are based on the articles that I retrieved for my critical review.
- ☐ I have arrived at the best possible conclusion, based on the available body of evidence.
- ☐ I have generated specific recommendations for clinicians, based on my critical review (i.e., my recommendation is more than a statement to the effect that 'more research is needed').
- ☐ I am able to design a well-controlled research study that will test my hypothesis.

## **Statement of research question and annotated bibliography**

Before work on your project begins in earnest, you must settle on an appropriate research question and find relevant articles. You will prepare a 1-page statement that summarizes your question, and lists your articles. Provide a 2-5 sentence annotation describing the purpose and study design described in each article. The key competencies relate to Part 1 (Generation of Evidence-based

Research Question) described above. Be prepared to provide copies of your articles to your working group leader should he/she require them. **The statement should be handed in via webct unless your working group leader directs you otherwise.**

### **Conference Proceedings – Draft**

The purpose of the conference proceedings is to acquaint you with the process of writing a short synopsis of results (4-5 pages in length, including references) – suitable for submission as a brief report to clinical journals. To assist you in formatting your submission, you will find an electronic template, and electronic copies of past years proceedings on webCT.

The conference proceedings will include the following sections, at minimum: Abstract, Introduction, Methods, Results, Recommendations, and References. However, the **draft of your conference proceedings** may only include a subset of these sections. **The draft should be handed in via webct unless your working group leader directs you otherwise. Final conference proceedings must be handed in via webct.**

The key competencies for both the draft are:

- ☐ I have written a summary of the literature that describes my chosen topic area and research question, and accurately reflects the published knowledge base on the topic.
- ☐ My writing style is accurate and professional, and follows APA recommendations for both style and format.

**MARKING SCHEME**  
**Statement of Research Question and Annotated Bibliography**

- |   |    |
|---|----|
| 1. Writing style (i.e., organization, grammar, spelling)                  | /4 |
|   |    |
| 2. Question is clinically relevant, and in an answerable format.          | /4 |
| <i>Notes:</i>   |    |
|   |    |
| 3. Rationale and background information is adequate.                      | /4 |
| <i>Notes:</i>   |    |
|   |    |
| 4. Article list is sufficient and complete.                               | /4 |
| <i>Notes:</i>   |    |
|   |    |
| 5. Annotations provide clear context without critically evaluating study. | /4 |
| <i>Notes:</i>   |    |

**MARKING SCHEME**  
**Conference Proceedings – Draft**

1. Writing style (i.e., organization, grammar, spelling) /20  
*Notes:*
  
2. Student has properly evaluated the methodology of each article. /20  
*Notes:*
  
3. Student has properly evaluated the statistical treatment of data within each article. /20  
*Notes:*
  
4. Student is able to clearly identify the purpose of each article, gauge the extent to which the paper supports its stated hypotheses, and relate it to his/her overall research question. /20  
*Notes:*
  
5. Student makes a clear statement regarding the level of evidence provided by each article. /20  
*Notes:*