Medical Writing and Presentation Skills

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Course Summary:

Medical educators and researchers must be able to present their work clearly and effectively. However, excellent educational material and important research data are sometimes obscured by poorly delivered presentations or poorly written papers. The main objective of this course is to help students develop excellent medical writing and presentation skills. This objective will be achieved through a combination of lectures, readings, and individual and small-group projects where students will practice specific skills. Students will have the opportunity to be videotaped while they present a talk and will receive anonymous written feedback.

Teaching Objectives: The following table lists the specific teaching objectives of the MEDEDU 2140 sessions.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Students will be able to:</th>
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<tbody>
<tr>
<td>Introduction</td>
<td>Describe how errors in medical writing and lectures inhibit effective communication</td>
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<tr>
<td>General Writing Skills/Elements of Style</td>
<td>Write succinct and well-constructed sentences and paragraphs</td>
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<td></td>
<td>Choose proper voice and tense</td>
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<td>Effectively edit a poorly written document</td>
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<tr>
<td>Writing Scientific Abstracts</td>
<td>Write a clear and focused structured abstract</td>
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<td>Effectively critique an abstract</td>
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<tr>
<td>Case Reports, Curriculum Reports, and Reviews</td>
<td>List the essential components of each type of report</td>
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<td>Write a detailed and organized outline of each type of report</td>
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<td>Original Articles</td>
<td>List the essential components of original articles</td>
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<td>Develop clear and effective tables and/or figures when given a standard set of data</td>
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<td>Effectively critique an original article for style and presentation</td>
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<td>Write a detailed and organized outline for an original article</td>
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<tr>
<td>Submitting and Revising Papers for Publication</td>
<td>Describe the steps that are involved in moving a paper from submission to publication in a peer-reviewed journal</td>
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<td>Explain what peer-reviewers and editors look for in manuscripts about clinical research, medical</td>
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Lecturing Skills

- Practice delivery techniques to capture and maintain audience interest
- Tailor oral presentations to different audiences
- Effectively critique videotaped lectures

Illustrating Lectures with Visual Aides

- Use visual aides appropriately and effectively
- Use Powerpoint software

Preparation of Poster Presentations

- Organize and plan a poster to effectively communicate scientific, curricular, or clinical data
- Develop an effective one-minute “bullet” to quickly summarize the main content of a poster

Final Projects

- Organize and present a 10-minute spoken presentation using Powerpoint
- Graciously receive written, anonymous critique of the oral presentation

Course Mechanics:

- 1 credit (16 contact hours)
- 2 sessions/week for 4 weeks
- 2 hours/session

Grading:

- Class Participation: 25%
- Abstract Preparation: 25%
- Oral Presentation: 25%
- Poster Preparation: 25%

Location: To be determined

Prerequisites: None

Texts:

Additional readings will be distributed in class.

Class Sessions

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Date</th>
<th>Introduction: Why is Effective Communication Important?</th>
<th>Elnicki/Kraemer</th>
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<td>Elements of Style</td>
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<td></td>
<td></td>
<td>Preparation of Scientific Abstracts</td>
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The session will begin with a lecture on the importance of excellent written and oral communication skills in biomedical education and research. Multiple real-life examples will be given to illustrate how poor writing and presentation can obscure otherwise excellent information and lead to confusion on the part of the learners/listeners. There will be a general overview of writing style. Students will complete exercises on writing succinct, well-constructed sentences and paragraphs, and choosing proper voice and tense. In small groups, students will be given a short, poorly written document to edit. Each group will present their final document to the rest of the class.

The second half of session 1 will focus on the preparation of scientific abstracts. General rules for writing an effective, structured abstract will be covered. Examples of effective and ineffective abstracts will be given. Students will be asked to critique several abstracts.

Assignment: Students will write a scientific abstract using a set of data provided to them. (due next session)

<table>
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<tr>
<th>Session 2</th>
<th>Date</th>
<th>Case Reports, Curriculum Reports, and Reviews</th>
<th>Elnicki/Kraemer</th>
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This session will cover the essential components of case reports, curriculum plans/reports, and review articles. Tips for developing each type of report will be given. In small groups, students will develop a detailed and organized outline for one of the report types.

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<th>Session 3</th>
<th>Date</th>
<th>Articles Reporting Original Data</th>
<th>Elnicki/Kraemer</th>
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This session will cover the essential components of articles that report original scientific data. The organization and appropriate content of the title page, abstract, introduction, methods, results, discussion, tables, and figures will be reviewed. In small groups, students will develop clear and effective tables and figures when given a standard set of data.

Assignment: Students will choose an original article to critique. The critique should focus on style and clarity of writing, effective use of tables and figures, and organization. A typed 1-page review will be due next session.

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<tr>
<th>Session 4</th>
<th>Date</th>
<th>Submitting and Revising Articles for Publication</th>
<th>Elnicki/Kraemer</th>
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This session will describe the steps that are involved in moving a paper from submission to publication in a peer-reviewed journal. University of Pittsburgh faculty with extensive experience as editors and reviewers will explain what peer-reviewers and editors look for in manuscripts about clinical research, medical education, and health policy. General guidelines and tips on how to respond to editors’ and reviewers critiques will be reviewed.
This session will review lecturing and public speaking techniques. Students will learn and practice oral delivery techniques designed to capture and maintain audience interest. Students will learn how to tailor oral presentations to different audiences, how to organize talks of different duration, and how to tackle questions from the audience. Student will have the opportunity to critique several short videotaped talks.

This session will cover the appropriate use of visual aides to illustrate lectures. The use and misuse of slides, graphical software, overheads, pointers, and chalk will be reviewed. Most of the session will be a hands-on tutorial on using Powerpoint software for slides and graphics.

This session will cover the organization and planning of a poster to effectively communicate scientific, curricular, or clinical data. Students will learn important pitfalls to avoid when creating a poster. Different options (e.g. panels, single sheet, etc…) for poster presentation will be presented. The instructors will bring a number of examples to class. Students will learn how to develop an effective one-minute “bullet” to quickly summarize the main content of a poster.

The final session will be devoted to student presentations. Students will organize and present a 10-minute spoken presentation using Powerpoint. Students will have the option of receiving: 1) direct verbal critique of their talk from instructors and other students; 2) anonymous written critique; or 3) both verbal and written critique. Students will receive a videotape of their presentation.

Reading List


Woolsey JD. Combating poster fatigue: how to use visual grammar and analysis to effect better visual communications. TINS 1989;12:325-32.


