

Syllabus for CAAM 600: Writing the CAAM Master's Thesis Spring 2008

Instructors: Bill Symes and Jan Hewitt

Goals: Completion of a coherent, accurate, and persuasive MA thesis that meets departmental standards and that clearly answers all Seven Key Questions; improved oral presentation skills sufficient to deliver a persuasive oral defense of the thesis; ability to define 4 professional expectations of the field.

Logistics: 3-hour course; class meets for 2 hours / week for 14 weeks
Time: Wednesdays, 10:00 - noon in Duncan xxx. Class attendance is mandatory.
Additional conferences with Drs. Symes and Hewitt will be scheduled.

Prerequisite: Written approval of MA topic by advisor. Open to second year (and later) graduate students

Grading: This course will be graded. Each week of the syllabus specifies assignments, which will receive grades jointly from Drs. Symes and Hewitt. For each week an assignment is late, we will reduce its grade by one letter (reduction prorated for parts of assignment).

Week One: (9 Jan)

Course overview: Syllabus, expectations, due dates, grading, attendance
Discussion of CAAM departmental Guidelines for Evaluation of the thesis
Thesis Overview (handout)
Discuss Seven Key Questions (handout); answer at least some of them informally in class by way of reviewing approved topics.
Pointers on Slide Design – the LaTeX slide package vs. Powerpoint.
Handout: checklist for evaluating of visuals (discuss)

Assn: Write out the answers to the Seven Key Questions. Prepare a 10 minute (maximum) oral presentation for the group (half the class). Answer all Seven Key Questions, using slides to guide us through your talk. Do a trial run with your officemate, sweetheart, or other willing victim to make sure that your presentation fits within the 10 min limit. 3-5 slides are the most that you should need. Consider your audience: your fellow graduate students. They are mathematically literate, but unfamiliar with your topic. Your task is to inform them about it by answering the Seven Key Questions, in 10 minutes or less, using 3 to 5 slides. **If your committee is not already formed, work with your advisor to choose appropriate members from the faculty. Bring a list of members of your committee to the next class.**

Week Two: (16 Jan)

Committees must be complete; hand in the list.
Oral presentations (half the class); evaluate presentation and answers to the Seven Key Questions.

Evaluate and discuss two photocopied versions of an abstract for completeness and clarity of the answers to the Seven Key Questions. Discuss how to improve the revised version even further; do the rewrite in class.

Discuss the template for taking notes while reading a published paper. (photocopied and on the 600 Web site).

Assn: (1) Choose a paper from the literature relevant to your thesis topic (ask your advisor for suggestions). Find and write the answers to the Seven Key Questions contained in the paper's abstract, and note any that are not answered or not answered clearly. (2) Use the note-taking template to take notes on this paper. Turn in to Drs Hewitt and Symes (their mailboxes) a copy of the paper and your answers to the Seven Key Questions by noon of January 22.

Week Three: (23 Jan)

The remaining oral presentations and discussion about them.

Discuss abstracts of papers chosen by participants from viewpoint of Seven Key Questions.

How to recognize and avoid plagiarism (photocopied).

Assn: Write a paraphrase from either the Results or the Discussion of the paper on which you have been taking notes. Remember that a paraphrase is always shorter than the original. Turn in both the section you paraphrased, together with the original, in hard copy, to Drs Hewitt and Symes by noon of Tuesday, January 29.

Week Four: (30 January)

Discuss your paraphrases of the published sources.

Overview of how to write a good lit review (highly valued in your field).

Discuss the photocopied models.

Handout: "A Scrutiny of the Abstract," K. Landis.

Bonus: How to use BibTex to structure bibliographies and build databases for LaTeX.

Assn: Read at least one more published paper related to your topic (claim), using the note-taking template. Choose a paper or papers that complement, in approach or results or in some way, the first paper, read over the previous two weeks. Fill out the template for each of them. Identify the findings of each author (method, etc.) so that you can correctly summarize and characterize the contribution of each paper. Link those findings to your thesis by showing how they relate to the claim of your thesis. Then write a section of your Literature Review based on those papers you read, summarized, and linked to your claim. Clearly describe the similarities and differences in methods and results amongst your chosen papers. Bring a copy of the papers you read along with 3 copies of the section you wrote for your Literature Review. Remember what you learned about paraphrasing as you write your section.

Read Landis.

Week Five: (6 Feb)

Turn in Lit Review Sections.

Discuss how to write a good abstract, in view of Landis' analysis.

Effective and ineffective uses of passive voice.

Rewrite a sample abstract written completely in passive voice.

Bonus: How to present your results either as a professional paper submitted for publication or as a thesis. What are the similarities? The differences?

Assn: (1) Write a practice abstract about your thesis topic answering the Seven Key Questions and keeping passive voice to an absolute minimum (one sentence max in passive voice). Bring 3 copies to class and send one to symes@caam.rice.edu and jhewitt@rice.edu (Dr. Hewitt can open only Word or pdf files.)

(2) Prepare a 3-minute (1-2 slides) progress report presentation.

Week Six: (13 Feb)

Progress reports (first half).

Exchange Abstracts and evaluate them for precision and clarity of the answers to the Seven Key Questions and for effective use of passive voice.

Exchange the Literature Review sections and discuss their clarity and completeness. Are the comparisons and contrasts clearly spelled out? Are the findings clearly linked to the claim of the writer's paper?

What about abstract (overall plan) or lit review still need improved precision and/or explanation?

Assn:

(1) Rewrite your practice abstract. Bring 3 copies to class and send an electronic copy to Dr. Symes and Dr. Hewitt. (2) Generate the Bibliographic entries for the papers you read. Send them electronically to Drs. Symes and Hewitt, along with revised Lit Review sections.

Week Seven: (20 Feb)

Other half of progress reports.

Effective rhetorical strategies in technical writing.

Exchange your rewritten Practice Abstracts and Lit Review sections, and identify the improvements.

What is the role of a Methods section? How does it look in a "math" paper? In a computational paper?

Discuss professional expectations for the field.

Assn: (1) Revise Lit Review sections in light of comments from your fellow students and Drs. Symes and Hewitt. Add papers to the discussion. Send revision to Drs. Symes and Hewitt and bring one copy to next class.

(2) Begin thinking about how you would write your Methods section. What would a reader need to know in order to duplicate your work? What could you leave out because it is common knowledge even to an advanced undergraduate? Why did you choose this method instead of other possibilities?

Get date, time, room for defense set up, OK'd with committee.

Week Eight: (27 Feb)

Present approved date, time, room for defense.

Evaluate a photocopied sample Methods section.

Evaluate photocopied samples of Results and Discussion sections.
Review departmental Guidelines for Evaluation.

Assn: Complete the selection of papers covered in your Lit Review section, and draft a final version. Draft Results and Discussion section. Bring 3 copies to class and send electronic copies to Drs. Symes and Hewitt. DUE MARCH 12. NO CLASS THE WEEK OF MARCH 5 BECAUSE OF SPRING BREAK.

Week Nine: (12 Mar)

Exchange Methods section and discuss clarity and completeness.

Discuss how well you wrote up your findings in the Results and Discussion sections so that they substantiate your claim.

How to write an Introduction – the Claerbout principles.

Assn: Revise Results and Discussion section in light of comments from class and Drs. Symes and Hewitt. Write a draft of your Introduction, answering all Seven Key Questions. Send revision and draft to Drs. Symes and Hewitt by noon of Tuesday, March 18.

Week Ten: (19 Mar)

Discuss revised Results and Discussion sections.

Evaluate photocopied samples of Introductions for effectiveness.

Assn: Revise your Introduction, write your Abstract, and put together completed first draft of thesis. Bring 3 copies to class and send an electronic copy to Drs. Symes and Hewitt by noon of Tuesday, March 25.

Week Eleven: (26 March)

Draft thesis must be provided to committee at least one week before defense.

Evaluate the revised Introduction and the Abstract. Identify answers to the Seven Key Questions. Evaluate opening sentences of both.

Discussion of how to give an effective defense: slides, script.

Sign up for 20-minute oral presentations of your thesis.

Assn: Start final revisions; revise draft abstract to reflect the final state of the thesis. Draft slides for defense.

Week Twelve: (2 April)

Techniques for reducing wordiness; transitions; coherence.

20-minute oral presentations, plus discussion.

Assn: Bring 3 copies of your completed thesis (or paper for publication); revise slides.

Weeks Thirteen, Fourteen: (9, 16 April)

20-minute oral presentations.

Scientific presentations: how to give them.

Final discussions, evaluation of thesis-writing experience

WEDNESDAY, APRIL 23: DEADLINE TO SUBMIT THESES TO THE OFFICE OF GRADUATE STUDIES FOR MAY GRADUATION. MUST BE IN BY 12:00 NOON. NO EXCEPTIONS!