GUIDELINES FOR EC345 & EC484 RESEARCH PROJECTS
WITH PROFESSOR DONIHUE – FALL 2003

Schedule for EC345
Your grade on this project will reflect your ability to meet the following schedule. Note that the final version of your paper is due on December 5th and that FINAL PAPERS WILL NOT BE ACCEPTED AFTER THIS DEADLINE.

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<th>Deadline is 12 noon on</th>
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<td>WORKING PAPER</td>
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<td>LATE FINAL PAPERS WILL NOT BE ACCEPTED</td>
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Late Penalties
I do not accept late final papers. I will allow you to miss other deadlines, but not without penalty. A late research proposal or progress report will be assessed a penalty of 1 point per day late, up to a maximum of 10 points. A late working paper will be penalized at a rate of 2 points per day, up to a maximum of 25 points. Your grade for EC345 will be calculated on a 100 point scale, using the point totals above, with any penalty points subtracted.

Format
Everything you hand in to me should be free of typographical and spelling errors. The content of what you hand in should be well thought out in terms of the logical flow from start to finish.

Your working paper must have a title page, a separate page for your abstract, and a bibliographic list of references at the end. While it will be important to include them in the working paper, final formatting and placement of equations, footnotes, charts and/or tables describing your data can wait for the final paper.

I don’t like to put an absolute length on research papers. I’ve seen excellent 10-page, 3 credit papers. I’ve also seen lousy 50-page, 1 credit efforts. Ten pages per
credit seems to be a conventional norm here at Colby. All final papers should be in a format consistent with published economic journal articles. Here are some guidelines:

- Include an abstract and separate title page on your working paper and final paper, including any acknowledgments of financial or mentor support.
- All work handed in to me must be printed using a font no smaller than 12 points, with at least 1 inch margins on each side of the page (excluding headers and footers), and at least 1½ lines of spacing between lines of text.
- Every page (except for the title page) must be numbered. This is true for your proposal and progress report as well.
- You may use either footnotes or endnotes.
- Your citations and bibliography must be in a format consistent with that found in a profession economic journal.
- You may not send any of your written work on your EC345 project to me via electronic mail unless you make special arrangements with me before hand.

Different people have different methods for doing academic research. As I proceed through the various stages of my research I prefer to work from an outline, refining it through successive iterations. One advantage to this approach is that you can divide your project into separate pieces, working on different parts of the project when the going gets tough in another area, or you get held up waiting for data or inter-library loans. Working on your project then becomes an iterative process of refining your outline and adding more detail. As you approach your working paper, you can concentrate on the “connective tissue” that binds together the main points and a thorough edit to ensure consistency across sections.

Take the time to proofread and edit whatever you plan to hand in to me. If you aren’t willing to make sure that your work is written in complete sentences and free from typographical errors then don’t bother to ask me to read it.

**Research Proposal**

Your research proposal should be no more than 2 pages in length and need not be in paragraph form. Outline form is acceptable. A suggested outline for your research proposal is provided below. You do not have to organize your project in this form to get full credit at each stage of your project. As I said, people do research differently. However, the areas outlined below represent the guidelines by which I will evaluate your project in whatever form it takes.
Suggested Outline for Your Research Proposal

I. Introduction
Present your research question and describe what you intend to do. Motivate your proposal in a way that gives me a sense for why you think that this is an interesting project.

II. Literature Review
Provide a preliminary list of existing work on this topic and potential data sources.

III. Research Methods
Identify the research methods you intend to use. Some examples of appropriate research methods include: econometric modeling; case study applications of economic theory; game theoretic analyses of economic behavior; mathematical modeling; or empirical analyses or economic events.

IV. Empirical Evidence
If you plan to do an empirical research project, describe your data sources and identify the various types of economic information on which you plan to base your analysis. Note that this does not mean that must have your data collected before presenting your research proposal, but you must have thought carefully about the data you will need to complete this project.

V. Conclusions
Describe your anticipated results.

Linchpins & Pitfalls
Include with your research proposal a list of potential hurdles or possible problems that you anticipate might make this project difficult to complete.

Progress Report
The most difficult part of your project at this stage will probably be the theoretical foundations for your analysis. Let the literature be your guide and don’t try to reinvent the theory. This is an important part of your final project and your progress report should begin to flesh out the economic theory that provides a foundation for your analysis. Your progress report should be no more than 5 pages in length. The standards noted above for formatting your proposal (i.e., line spacing, page numbers, font size, etc.) must also
be applied to your progress report. Your progress report should be divided into clearly labeled sections. At this stage your project should have a preliminary title and a summary analysis of any data you have collected.

**SUGGESTED OUTLINE FOR YOUR PROGRESS REPORT**

I. **Introduction**
   Provide a more complete statement of your research project and describe why you think it is interesting and important.

II. **Literature Review**
   Provide a preliminary bibliographic list of references relevant to your project and a brief description of those you have investigated thus far.

III. **Theoretical Foundations**
    Provide an overview of the theoretical underpinnings of your project.

IV. **Research Methods**
    You should now be able to provide a considerable amount of detail about your model or the methodological approach to your project.

V. **Empirical Evidence**
    Provide a preliminary analysis of the data you have obtained thus far. Your data set need not be complete at this stage, but if you have not yet begun to assemble your data your project is in serious trouble.

VI. **Conclusions**
    You should have some sense for where your research is going and whether or not you are on track in the context of your anticipated results. Identify possible problems that you need help with that might make this project difficult to complete and a self-assessment of your progress to date.

**Working Paper**

An economics working paper is a piece of scholarly work that is ready for outside review by a colleague, an adviser, or editorial referees for a professional journal. It is much more than a draft, but slightly less complete than a final paper. The grade on your working paper will focus on how well you have completed the areas in the suggested outlines above. If your working paper is handed in on time, I will try to return it to you with my comments within one week.
Your working paper must include an abstract and a bibliography. An abstract is simply a very brief paragraph that describes your project. It should summarize the key objectives of the project, your general approach, and your results without revealing all of your interesting findings. Look at the literature in the area of your project for examples of how to write an abstract. Work on being succinct.

The introduction in your working paper should provide a complete overview of your paper and lay out the analysis that follows it in detail. As part of the conclusions in your working paper you should have some firm results and be able to discuss some possible directions for further research.

**Notes on Grading**

Your final grade will depend on how well you have addressed my comments on your working paper and how well you have done on the preceding stages of your project. To receive an A, your paper must pose an interesting question and address it in a creative fashion. Several economic concepts should be carefully integrated throughout your analysis and placed in the context of current research in the area. An A paper will be very well written and reflect a great deal of thought and rigor.

A B paper poses a rather straightforward question and addresses it in a logical fashion. Economic concepts and relevant research are applied accurately, and are integrated into the analysis in a logical fashion. A B paper will be well written and reflect a significant amount of effort. Your approach to the problem is not particularly creative, an early deadline may have been missed, but overall the paper satisfactorily addresses the question in a thoughtful and careful manner.

A C paper poses a rather obvious question and answers it in a straightforward manner with little or no creativity. A paper that makes errors in applying standard economic concepts or fails to apply them in a logical manner is likely to receive a C grade. Such papers are typically not well thought out, do not reflect much effort, are not well written, and are noticeably careless in content and style.

**Academic Honesty**

Colby’s guidelines for academic honesty can be found in the student handbook. Any paper which is found to have plagiarized material from other sources will receive a failing grade. In cases of flagrant dishonesty in any form I will refer the case to the Dean of Students Office for further disciplinary action.
**FAQ: How do I find a topic for my 345?**

Think about what led you to major in Economics in the first place and the topics in your economics classes at Colby you have found most interesting. Look for economic content in important current events. Once you have identified a few general areas, explore the literature in detail. Look at some of the research papers that interested you that you were assigned in your classes and explore their bibliographic references for more depth on a particular topic. Look for authors’ suggestions for further research in an area. Use the reference librarians and the available information technology tools to search the economics literature. Explore the extensive collection of journals in Colby’s library. Think about how you might apply a particular method of analysis to an area it hasn’t often been used before. Then take your ideas to a member of the department and discuss it with him or her to help you focus your research question and define your topic.

**FAQ: When do I use footnotes?**

Here are some general rules I apply for using footnotes in my own work:

- Direct quotes in your text.
- Sources for data or facts cited in you text.
- Representative examples of ideas or related works on a subject described in your text.
- Any time a page number is required to appropriately cite a source.

**FAQ: How do I avoid plagiarism?**

There are resources on the Colby library web site and the Economics department web site that help here.

http://www.colby.edu/library/research/instruction/plagiarism.shtml
http://www.colby.edu/economics/resources/writingpprs.htm#avoidingplagiarism

Be aware that simply citing a source does not absolve you from charges of plagiarism.

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**Useful Sources**

- The staff in the Colby Writers’ Center can be very helpful in preparing your written results. Give them a copy of this document and work with them to improve your writing abilities.
• Colby’s Economics Department Internet home page has many links to potential data sources on its Resources page. General guidelines for writing economic research papers can also be found on the Department’s home page. I strongly recommend that you read these guidelines. The URL for these guidelines is:
http://www.colby.edu/economics/resources/writingpprs.htm

• The Colby Library home page also maintains links to a wide variety of useful data sources. The URL for these resources is:
http://www.colby.edu/library/research/guides/economics.shtml

• The Colby Library also has information on how to cite sources, including electronic sources, at the reference desk and on-line on their home page. The url for this information is:
http://www.colby.edu/library/research/web_reference/links.shtml#style

• As noted above, the format of the body of your paper must be consistent with that of a paper published in a standard economic journal. My preference is the style guide used by the Journal of Economic Perspectives including in-line citations, footnotes, and a complete description of your data set. See the information at the url:

• A particularly good example of an appropriate style that includes references and citations from a wide variety of resources can be found in the JEP article “Teaching Statistics and Econometrics to Undergraduates,” by William E. Becker and William H. Greene. I strongly recommend that you take a look at the format of the citations, footnotes, and references that appear throughout this article.

• Samples of abstracts can be found by selecting of any of the articles in the current issue of the JEP at the url:

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**EC484: Senior Thesis**

A senior thesis (EC484) begins with your EC345 project. If you are considering extending your research for the entire academic year as a senior thesis, let me know before the EC345 progress report deadline so that we can discuss the dimensions of your project in detail. Deadlines and the scope of work completed at each stage of a senior thesis will be significantly different from those described here for EC345 projects and we need to agree on these early in your project. All senior theses require departmental approval.
Senior Thesis Application

Your application to the department to pursue a senior thesis must be handed in to me by noon on Wednesday, November 19, 2003. I will then present the application on your behalf at the next meeting of the Economics Department faculty. Your application should be no more than 5 pages long and the format should follow the guidelines above. It should also include:

1. A title with your name and the name of your advising faculty member(s).
2. A one-paragraph abstract that defines your research question, succinctly summarizes your work thus far on your EC345 project, and defines your proposed extensions as a senior thesis.
3. A more complete overview of your senior thesis that includes:
   • a thorough statement of your research question
   • a brief review of the key pieces of literature that apply to your project
   • the analytical framework for your analysis (i.e., the model or research method you plan to use)
   • a description and analysis of any data you have collected up to this point
4. A detailed proposal for work to be completed in your senior thesis.
5. A timeline for completion of your project culminating in a presentation at the Colby Undergraduate Research Symposium.
6. A complete, properly formatted, bibliography of all the literature and data sources you have found to date that pertain to your senior thesis.

Honors

To graduate with Honors in Economics you must receive a grade of A- or higher on your senior thesis and have a GPA in the major of 3.5 or above. In addition, your senior thesis must have a second reader from among the department faculty as part of your EC484 application. You should also include in your proposed timeline a 40 to 50 minute departmental seminar in final celebration of your thesis sometime near the end of the semester in early May.

Grading

My preference is to give you a grade for your EC345 at the end of the first semester that is separate from your senior thesis grade. In some cases this may not be possible (e.g., large data collection efforts that consume most of the first semester). For such projects you will receive a preliminary grade of CR for EC345 that will subsequently be converted to the same grade you receive for EC484 at the end of your senior thesis. In general, my standards for grading a senior thesis follow the guidelines provided above for EC345 projects.