

NET 450: Senior Thesis

Syllabus

Instructor: John Lavalley

Champlain College: Spring 2008

Instructor Contact Information:

You can contact me any number of ways:

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Champlain telephone: 802-865-6403

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The library web site is: <http://campus.champlain.edu/MIC>. Be sure to check out the Student section for research projects and for the online journal databases.

The writing lab can be reached at: WritingLab@Champlain.edu

You are expected to have **at least 30%** of your literature citations come from non-Google sources. You're expected to use authoritative sites rather than casual, nonprofessional sources. Don't waste time with Google: You'll spend more time wading through irrelevant and non-authoritative resources.

Make friends now with the library web site and the library staff. There are a number of good online, professional databases available through the library and there are a number of good print sources too. Browse the stacks for ideas and sources.

Course Description:

CIS 450, Senior Thesis, is a course that is the capstone for work in the several of Champlain's technical majors. It is the culmination of four years of work and it is an opportunity to demonstrate the knowledge and analytic skills that you have acquired in the program. You will select your own topic with my approval and you will be responsible for completing the thesis in the allotted time.

There is less direct supervision in this course than in other undergraduate courses and you will be responsible for your own time management. I won't nag you but will expect you to meet the deadlines. I am available for help but the primary responsibility for successful completion rests with you. This undergraduate thesis is similar in concept to a graduate Master's thesis but is much smaller in size. It is a **deep dive** into a single topic.

We have created a WebCT course so that you can access important items. It will be the place where I share information about expectations, give examples of previous work by other students, and where occasional discussions will take place amongst all of us about your various topics. It will also be a great place to seek help in doing research and “compare notes” with your classmates. I expect you to check-in frequently...at least once per week throughout the semester. It will also help the “online” students in this class feel a greater sense of the community than they have in the past.

There are several major deliverables. They are: (1) First draft; (2) Second draft; (3) Final written thesis; and (4) The oral thesis defense. The written thesis will be between 30-40 (double-spaced) pages in length exclusive of appendices and the bibliography. The oral defense will take place at the end of the course and will be delivered to a panel of faculty and fellow students. The final grade will be based on these deliverables.

The **process** of creating the thesis is important too. You will be doing research, writing, and problem solving throughout the semester. The skills exercised in the thesis creation will be important to you in your career as you tackle real problems in the real world. The thesis project gives you a chance to hone these skills.

Prerequisites: Senior standing.

Textbook: There is no required textbook. However, you will need to use a wide variety of research materials in order to complete your thesis. The following reference may help to answer questions about the process of doing research and writing about it.

A Pocket Style Manual. Hacker, Diana,
Bedford/St. Martin's, 2004. This is stocked in the
campus bookstore and is a required text for other
courses.

Objectives and Outcomes:

In this course you will:

1. Conduct in-depth independent research on a technical topic related to computer and/or communications technology
2. Synthesize ideas and compare and contrast different bases of fact and opinion
3. Write a detailed thesis on the results of your findings
4. Present your findings to a group of fellow students and faculty

The Thesis:

The project begins with the statement of a thesis in the form of a question. It will form the basis of your project and the focus of your work. You are expected to use this question as the touchstone for your work. It is the fundamental core idea and your project will be built around it. You will be expected to provide a detailed answer to this question.

The thesis question is a simple statement of a position. It should be clear and unambiguous.

Here are some example questions:

1. Has the Telecommunications Reform Act of 1996 fostered genuine competition in the telecommunications industry?
2. Will Web-based education ever replace the traditional ivy covered walls of the university?
3. Can Moore's Law be expected to apply for the next 10 years of processor development?
4. Is it possible to compete with Microsoft and be successful?
5. What are the tradeoffs for building a highly secure corporate information infrastructure?
6. Is it possible to build a highly secure system using Windows or Linux?

Your thesis document and your oral defense are answers to the thesis question. In order to create your response you will need to do research, develop opinions, cite relevant references, and offer hard evidence to support your thesis.

Thesis Format:

Your thesis **must** begin with your question. This is the title of your thesis. Put this in a prominent spot on your first page.

Here are the basic elements for the thesis document. You **must** organize your thesis using this format.

1. Introduction. State the question in one sentence and expand on it. Why is it important? What are the important issues? This section gives the reader an idea of why you chose this topic and why it is worth reading about. Please define any special technical terms in the Introduction to be sure that nobody gets lost with buzz words. You may want to duplicate the definitions in a separate glossary of technical terms at the end of the thesis.
2. Review. Cover the critical background information by citing references, technical papers, interviews, or Internet sites. Don't just list the material or quote it verbatim. Instead summarize and paraphrase it. Do not inject your own opinions at this point. Instead be dispassionate and cite the relevant references without comment. Be sure that the work you cite is relevant and don't try to pad this section with irrelevant material. It should be obvious why each reference is important by the time we reach the end of the thesis. Your Review can be a tutorial to bring the reader "up to speed" on the important technical issues.
3. Discussion. This section is the synthesis of your thinking and it will be the largest part of your thesis. This is where you will provide a definitive answer to your question and where you will defend your answer by referring to the research that you have done. Interpret and analyze the research. Criticize it. How does it support or detract from your position? Be sure to deal with contrary opinions and comment upon them. By the way, don't introduce additional research at this point. All of your research needs to be concentrated in the Review section. The Discussion is a good opportunity to raise the limitations of your own work too.
4. Summary and Conclusions. This will probably be the shortest section. It should wrap up the thesis with a restatement of the question and your response. You may want to take this opportunity to address the implications of your work. In addition, cover additional questions that were raised by your research but which couldn't be addressed in your thesis. Are there things that you could have done given more time or resources?
5. Appendices and Bibliography. This is the place for supplementary material. List your references here. Include books, articles and Web sites. Please divide your Bibliography into two parts. One part should list your formal library resources. The second part should list more informal resources such as Internet sites. Plan on having about 20 to 30 different sources total.

If you spoke with someone please be sure to cite the date of the interview. A Glossary may be included as an Appendix if you are introducing many technical terms in the thesis. A copy of a relevant law or standard could be an Appendix. For example, if you are discussing the Telecommunications Reform Act of 1996 you may want to include a copy as an Appendix. Please do not count the

Appendices in the total page count. The thesis itself should be 30-40 pages long (double spaced) exclusive of the Appendices and Bibliography.

Writing Style:

The way in which you express your ideas is just as important as the ideas themselves. You may want to consult the "Pocket Style Manual" referenced above.

Writing prose can be difficult. You may want to try rewriting several times to polish the prose. Don't be satisfied with a first draft and keep refining your text. Your final thesis should be clear and easy to read. It should entertain the reader without pandering to him/her. You are required to produce two rough drafts prior to the final version. Use these drafts as an opportunity to refine your thesis and polish your writing. Use the Champlain Writing Lab to help with your prose.

Don't plagiarize the work of others. It's very easy to copy and paste from the Internet but don't do it. It's ok to use short selected quotes. However, any quotes should be properly referenced. Please don't use large blocks of verbatim text from others. The thesis must be your own work. Plagiarism is checked via the Turnitin.com site and through other tools.

Thesis Defense:

Your oral defense will begin with a brief summary of the material covered in the thesis document itself. Please do not read your thesis and please do not introduce new material not covered in your thesis. **Your presentation must conclude with your answer to the question.**

There will be 20 minutes for the presentation and 10 minutes for an audience question period. You need to follow these time guidelines as a courtesy to your audience and fellow students.

Use PowerPoint or some other presentation tool of your choosing. Please do not rely on the spoken word alone to get your points across. A reasonable estimate is 5-8 PowerPoint slides for a 20 minute talk. Think about how much time you will need to devote to each slide and adjust the content and number of your slides accordingly.

Handouts for your audience are required. A good approach is to print your PowerPoint slides at 3 slides per page. (This is an option under Print in PowerPoint)

Faculty Advisor:

I am your faculty advisor and I will guide you through the process of creating your thesis. You have a list of specific dates for activities and you are expected to meet these deadlines without prodding from me. Please feel free to contact me at any time but have a reason for the contact. What problem(s) do you need help with? What kinds of guidance do you require? Having an agenda will help to make these meetings efficient and productive for all concerned. Frequent meetings during the semester are encouraged.

Assessment:

The two drafts, the final thesis and the oral defense constitute the major components of the final grade. A portion of your grade will depend on meeting intermediate goals. These are described on the course calendar below. Points will be deducted for failing to meet deadlines or for failing to follow directions. Hey, this is how the "real world" operates.

The thesis will be graded on accuracy, creativity, organization, grammar, spelling and appearance. The coherency and the development of logical arguments will be part of the assessment. The oral defense will be graded on organization, use of presentation tools, ability to speak with confidence, and ability to handle questions.

Grade Calculation:

Grades are not necessarily a reward for hard work [some people have to work harder than others] nor are they an entitlement. Grades are my certification of your level of expertise in a particular subject area.

Here is the weighting scheme for this course:

Thesis document: 40%

Oral defense: 30%

Intermediate deliverables (drafts, etc.) and following directions (format, etc.): 30%.

Course Calendar:

There will be no joint class meetings until the thesis defense. However, you can meet with me on a regular basis as needed, and we will all be interacting via WebCT during the semester. Please note the contact information above and arrange appointments with me. **Please note the date of the defense and schedule your time so that you will be available.**

Date	Activity
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Monday January 7th	Class Officially begins (Begin using WebCT this week)
January 23rd	Deadline to confirm thesis topic and begin research.
February 15th	Deadline for first draft.
February 18 - 22	If necessary meet with me to review first draft.
March 28th	Deadline for second draft.
March 31 – April 4	If necessary meet with me to review second draft.
April 19 - 20	Oral defense. Final printed document due.

Attendance Policy:

Failure to stay in contact and/or a failure to produce deliverables will dramatically affect your grade. **No kidding.** Take these dates seriously or you won't make it in this class.

Academic Honesty:

Here's the formal statement:

- "In the preparation and presentation of any assigned work-including examinations, tests, quizzes, term papers, reports, themes and other written or oral exercises-every student shall conform to a strict standard of academic honesty. Any attempt to deceive a faculty member or to help another student to do so will be considered a violation of this standard. In all assignments, students must acknowledge the words and/or ideas of others taken from print or electronic media, whether a direct quotation or a paraphrase; any omission of this is dishonest. Cheating on examinations or tests consists of knowingly giving, receiving or using-or attempting to give, receive or use-unauthorized assistance during an examination or test. A faculty member may record a grade of "zero" for any assignment on which a student has plagiarized or cheated. For repeat offenses within a single course, the faculty member may record a grade of "F" for the course. Violations of this policy in multiple courses may result in dismissal from the College. A student may appeal these decisions according to the Academic Grievance Procedure."

In practice this means that you should submit only your own original work. It is certainly acceptable to use short quotes from others but don't try to pass off someone else's work as your own. Copy and paste from the Internet is easy to do but also easy to detect. I have a number of sophisticated tools at my disposal. Don't do it. Students have failed this course because of plagiarism. If you have any questions about "copy and paste" please ask before submitting work.

Disability Policy:

If you believe that you have a disability requiring accommodations in this class, please contact the Coordinator of Support Services for Students with Disabilities as soon as possible. After you receive a letter documenting the appropriate accommodations, please see me so I can work with you to implement them in a timely fashion. It is the student's responsibility to seek and secure accommodations prior to the start of a test or project.

Contact:

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