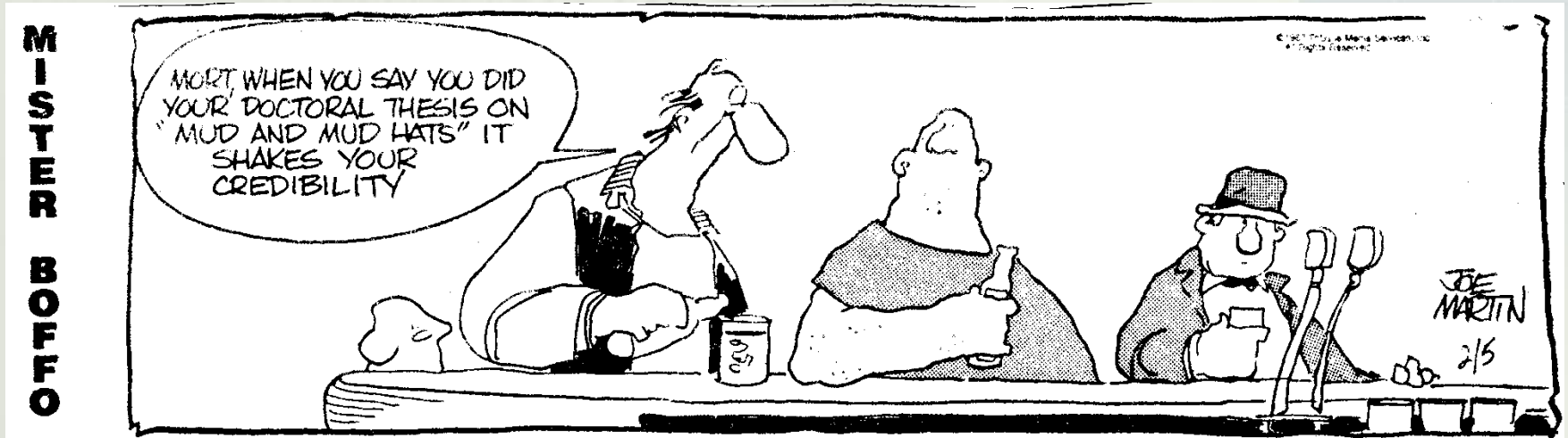




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Thesis Proposals and Theses





Learning Objectives

By the end of this module, you will understand some of the many administrative processes related to thesis proposals and theses.

As well, you will know where to seek help with your thesis:

1. Steve Whitmore (Documentation): whitmore@sfu.ca
2. Alexandra Tzingounakis (Administration): enscugra@sfu.ca
3. ENSC 498 -- Thesis Proposal (Registration):
<https://courses.cs.sfu.ca/forms/ensc-ensc-498-registration-form/>
4. ENSC 499 -- Thesis (Registration):
<https://courses.cs.sfu.ca/forms/ensc-ensc-499-registration-form/>
5. Thesis Website (Examples): <http://www.sfu.ca/~whitmore/enscthesis/>



Why Complete a Thesis?

- If you hope to continue your studies, some graduate schools expect that you will have completed an undergraduate thesis; many require that you submit a sample of your writing. Most graduate schools also require a CGPA > 3.0 . Finally, it's good preparation for writing a Master's thesis.
- Companies are more likely to hire those who have completed an undergraduate thesis than those who have not (demonstrates both literacy and technical skills). This issue becomes all the more important when the economy is depressed.



When Do You Complete the Thesis?

- Semester 7 – ENSC 498, Thesis Proposal (1 credit).
- Semester 8 – ENSC 499, Thesis (9 credits).
- Can combine thesis and proposal into a single semester if very organized. Rarely done and not advised.
- Must have completed 115 credit hours and 2-3 work terms with both a CGPA & UDGPA > 3.0.
- If aiming to graduate in semester immediately after defending thesis, timing is critical:
 - Defences are often difficult to arrange in April, August, or December.
 - Revisions must be completed and accepted 3 weeks before convocation.



Where Do You Do Your Thesis?

- Theses are sometimes completed as part of a 3rd or 4th coop term (economic conditions can delay completion).
- Also sometime done internally with a faculty research project (need to approach various faculty members in ENSC and other depts -- Physics, Kinesiology, Gerontology -- about suitable projects).
- Can also do an entrepreneurial project (Andrew is a possibility for Academic Supervisor).
- Be cautious if doing a thesis while on an international coop as the work may not qualify (e.g., Co-op Japan tends to be research-oriented work rather than design-oriented work).



Who Supervises the Thesis?

- Must have three committee members, **two of whom must have a PEng**, before you can be registered. You can search the following APEGBC link to determine if potential committee members are certified: <https://www.apeg.bc.ca/Member-Directories/APEGBC-Membership-Directory>
- Choice of **Academic Supervisor** is critical:
 - Project must be related to their expertise and interests (see <http://www.ensc.sfu.ca/people/faculty.html>).
 - Should be someone you get along with reasonably well.
 - The Academic Supervisor ensures the project meets academic and professional requirements.
 - Must be SFU Faculty (ENSC & PEng preferred).
 - PhD students cannot act as Academic Supervisor.



Who Supervises (cont'd)?

➤ **Technical Supervisor:**

- Someone with a high level of technical expertise in topic (can be the Academic Supervisor).
- An engineer, scientist, or equivalent (PEng preferred).
- Will have relevant university degree, work experience, and professional qualifications.

➤ **Committee Member:**

- Someone with an interest in topic and usually has some expertise (Mike Sjoerdsma may do this, but only for interesting topics, and **NEVER** if the person is merely looking for an editor).
- May be other faculty or staff members at SFU or may be someone at a company or other academic institution.
- At least one committee member must be from ENSC.



Who Supervises (cont'd)?

- **Communication Faculty** (Steve or Mike):
 - Review thesis if required by Academic Supervisor.
 - Troubleshoot administrative problems.
 - We **DO NOT** edit theses (locate external resources as needed).
 - Maintain the Thesis Website.
- **Undergraduate Program Assistant, UGPA** (Alexandra Tzingounakis):
 - Deals with the administrative issues surrounding the thesis and proposal (registration, confidentiality, defence bookings, receives copies of proposal and thesis, processes grades and grade deferrals, etc.).
 - The most important person involved in the process.



How Does the Process Work (Proposal)?

1. Find a suitable project and identify potential committee members.
2. Contact committee members with description of project.
3. Complete ENSC 498 Registration Form:
(<https://courses.cs.sfu.ca/forms/ensc-ensc-498-registration-form/>)
4. Once approved, Undergrad Assistant will enroll you.
5. Write proposal.
6. Submit proposal to committee members.
7. Make revisions and resubmit.
8. Submit signed proposal to UGPA (all committee members sign-off).



How Does the Process Work (Thesis)?

1. Complete ENSC 499 Registration Form:
(<https://courses.cs.sfu.ca/forms/ensc-ensc-499-registration-form/>).
2. Do the work.
3. Confirm when committee members are available for defence.
4. Write draft of thesis.
5. Submit draft to committee members.
6. Submit draft to Communication Faculty (only if required by Academic Supervisor):
 - Complete *on-line thesis checklist* if not already completed.
 - Thesis must be submitted at least one month before defence.
7. Make appropriate revisions.



How (Thesis cont'd)?

8. Resubmit revised thesis to Academic Supervisor (and Communication Faculty, if required).
9. Determine what times committee members are available for your defence.
10. Complete the defence readiness form, have it signed by your Academic Supervisor, and submit it to the UGPA. The UGPA will reserve a room for the defence.
11. Prepare a PowerPoint presentation for your defence.
12. Defend your thesis.
13. Submit the signed *thesis defense results form* to the UGPA.
14. Make necessary revisions.
15. Submit revised thesis to committee members.



How (Thesis cont'd)?

16. Obtain committee members' signatures on *Thesis Approval Page*.
17. Submit 2 hard copies of the signed *Approval Page* (the UGPA will obtain the Director's signature) to the UGPA.
18. Insert a copy of the signed approval page as page ii of the thesis.
19. Submit an electronic copy of the final thesis (in .pdf format) to the UGPA. Ensure your student number does not appear anywhere in the thesis because the thesis will be posted on a website (after one year, in the case of a confidential thesis).
20. For a bound copy of your thesis, contact SFU Document Solutions. As of March 2018, cost is \$25.00 per copy, including printing on the spine. If there needs to be printing on the cover the cost is \$30.00 per copy. The per-page cost for black and white is \$0.06 per impression and the cost for colour is \$0.25 per impression.
21. Graduation stuff (**woo-hoo, you finally made it!**).



What Is in the Proposal?

- Proposals are usually 8-12 pages in length with the following sections:
 - Title page
 - Approval form
 - Abstract
 - Table of contents
 - List of figures and tables (if required)
 - Introduction (problem, background, block diagram)
 - Description of tasks (includes a Gantt/Milestone/Pert chart – may include budget). The description must explicitly focus upon the design tasks involved in the thesis project.
 - Conclusion
 - References
 - Appendices (if applicable)



What is in the Thesis?

- Title page
- Approval form
- Abstract
- Acknowledgements
- Table of contents
- List of figures and tables
- List of acronyms or technical terms
- Introductory chapter (problem, background, scope, organization)
- Central chapters
- Concluding chapter (summary, what was accomplished, current status of project, what was learned, future plans for project)
- References
- Appendices



What Does the Defence Involve?

- A formal 20 minute presentation that outlines the problem, your research, and your solution/results.
- Following the presentation, audience will ask questions.
- Then the audience will be asked to leave.
- Then your committee may ask some additional questions.
- Then you will be asked to leave while the committee deliberates.
- Possible outcomes:
 - **Passed with Distinction** – no revisions (very rare).
 - **Passed or Passed with Minor Changes** (most common).
 - **Deferred – Major Revisions Needed** (occasionally).
 - **Fail** (extremely rare).



A Few Other Issues

- If your thesis deals with a confidential topic, you must clear this with **ALL** your committee members (can be difficult if you are on co-op and company requires an NDA). **Note that theses will only be kept confidential for a maximum of 2 years.** See the Undergraduate Program Assistant ASAP if this applies to you.
- If you need to defer the completion of your thesis or your proposal, you are responsible for contacting your Academic Supervisor prior to the end of the exam period, and asking him or her to assign you a 'DE' grade. If you fail to do so, an "N" will be recorded on your transcripts. Note that the deferral only lasts until the end of the 1st week of classes of the subsequent semester. **To extend the deferral, your Academic Supervisor must submit a Change of Grade Form which must be approved by the UCC Chair.**
- **A maximum of 2 deferrals is all that is allowed.**



Sources of Information

- Undergraduate Program Assistant (enscugra@sfu.ca)

- Note that the thesis webpage is at the following URL: <http://www.sfu.ca/~whitmore/enscthesis/>. It provides the following info:
 - Example thesis proposal
 - Example theses
 - Example PowerPoint slides for the defense
 - Thesis checklist

- Check to see how current the info is by reading the posted PowerPoint slides.

Conclusion



Any Questions?