EOSC 447
B.A.Sc. THESIS, GEOLOGICAL ENGINEERING
Thesis Guide

Instructor: Leslie Smith, Office GLSC 254

1. PURPOSE AND SCOPE

The purpose of the Honours Thesis is to provide the senior undergraduate student with an opportunity to carry out a piece of independent professional work, under the guidance of a faculty member or another qualified individual.

The work carried out may include one of the following:

A. A detailed case history description of a geological process such as a landslide, a flood, or an earthquake and its real or potential impact on engineering development, including a consideration of possible remedial measures.

B. A detailed site reconnaissance report for a site containing an interesting geological engineering problem, e.g. a landslide, or a location of building settlement, erosion, contamination or similar, including a consideration of possible remedial measures.

C. A detailed description of a design procedure followed at a real, or hypothetical project involving problematic geological engineering conditions, including for example, stability concerns or hydrogeology.

D. A quantitative regional study of geological engineering conditions or the occurrence of a certain geological process which could have an impact on engineering developments.

E. An in-depth theoretical or experimental study of a specific geological engineering problem.

Other themes, consisting perhaps of combinations of the above, could be considered. Ideally, the project should include components of field work, laboratory and analysis. However, it is not required that each project have all three components. There is no problem in using experience gained during relevant summer employment, although you must provide an acceptable thesis and provide evidence of independent work.

The scope of the project is given by the credit weight of the course. Ordinarily, a 6 credit course should take about 4 to 6 weeks of full time work to complete and this is what you should allow for EOSC 447.

2. PROCEDURE

1) Select a topic and make an agreement with a suitable supervisor. This may be a faculty member in EOS or another Department, or a professional outside the University.

2) Set up a work plan and get it approved by your supervisor, setting out milestones for completion (i.e. field work, analysis, report etc.)

3) Submit "Confirmation of thesis supervisor form to LS (form attached).

4) Start work on thesis.

5) Produce a one-paragraph progress report for submission to LS (form attached).

6) Consult periodically with your supervisor (twice a month minimum is suggested) during the progress of your work.

7) Produce a draft thesis for review by the supervisor.

8) Finalize thesis and submit **two copies** to LS for evaluation. With your thesis, submit Data form (attached)

3. DATES

Please mark the following important deadline dates:

Task	**Deadline (Spring graduation)**	**Deadline (Fall graduation)**
Confirmation of thesis supervisor.	Sept. 30	March 30
Thesis progress report.	January 6	June 1
Draft copy of thesis to supervisor	March 3	September 2
Final copy of thesis to supervisor	March 25	September 15
Submit 2 copies of thesis and Data Form to LS. Supervisor to recommend mark and provide signature.	April 7	September 22

NOTE

The April 7 deadline is not flexible, as I must find faculty members to read and grade all the theses prior to the end of the exam period. Theses submitted after April 7 will be circulated for grading in late May or June (ie. for Fall graduation).

4. SUPPORT

Thesis support in the form of Dept. services is available to the limit of $100 per student covering only the following services provided by the Department
Thin Sections, Microprobe analysis, Scanning electron microscope analysis, X-Ray fluorescence/diffraction, Machine Shop, Computer use.

Students must complete a thesis support form, have it approved by their supervisor then set up an account with Bryon Cranston, Senior Technician, Room 25, to receive support. Direct costs are not covered by the Department and must be paid by the student, the supervisor or an employer.

5. CONTENTS OF THE THESIS

The contents will differ with the type of topic. As a minimum, the following is required:

Abstract - approximately 1/2 page summary of all important findings. The abstract is not a summary of the Table of Contents. It contains a few sentences that outline the objectives of the study, the remainder of the abstract should focus on your key findings.

Table of Contents - with page references

List of Figures and Tables

1. Introduction - statement of purpose and scope of work

2. Study Area - (where applicable) location, topography, climate, bedrock geology, surface geology, drainage, vegetation

3. Literature Review - with appropriate references

4. Method - what was done, how was it done, fieldwork, lab tests, analysis etc.

5. Results - details of all results

6. Conclusions - a list of all findings and results, including discussion of any remaining problems or limitations

7. Recommendations for Further Work

Acknowledgements

List of References

Examples:
- Book:
Bell, F.G., 1993. Engineering Geology., Blackwell Scientific, 1993, p. 120.
- Journal:
Boulton, G.S. and Paul, M.A., 1976. The influence of genetic processes on some geotechnical properties of glacial tills. Quarterly Journal of Eng. Geology, 9:159-170

- Conference:
Hutchinson, J.N. 1992. Landslide hazard assessment. *In* Procs. 6th Inter. Symposium. on Landslides, D.H. Bell (editor). Christchurch, N.Z. 2: 1805-1842.

Appendices - Supporting data not necessarily to be read with the body of the thesis. These include numerous test results, detailed measured sections, etc.

6. OTHER HINTS

Please note the following more detailed information on some aspects of the thesis:

- Title: Should give the details of location and subject.
  Poor: "South Dansey Property"
  Good: "Economic Geology of the South Dansey Property, Highland Valley, Southern British Columbia"
- Paper: 8.5x11
- Type: Times Roman, 12 pt., double-spaced
- Margins: Left 13/4". Right 11/4", Top 1", Bottom 1"
- Page numbers: bottom centre of page.
- Abstract: The abstract should be 250 words or less and is to be bound in with the remainder of the thesis.
- Headings of subdivisions should be numbered, and bold or capitalized e.g. :

1. CHAPTER HEADING

1.1 Section heading

1.1.1 Sub-section heading (if needed)

- Sections or sub-sections should be indented as necessary.
- Tables: Numbered consecutively (e.g. Table 3), or by section (e.g. Table 3.2, if many)
- Figures: Line drawings and photographs, numbered in the same way. Maintain same margins as for text. Remember to include maps properly numbered "in pocket" if that is where they are located.
- Maps: Use an appropriate scale with adequate margins, do not forget a detailed legend, scale, location map and North arrow.

REMEMBER: Neat, coherent presentation is very important to your success in this course and later in practice. Please ask your supervisor for an example of a well completed thesis to look at. A typical thesis has about 50 pages of double-spaced text.

The next four pages give the required forms to be returned and a sample thesis title page:

EOSC 447, THESIS
Confirmation of Thesis Supervisor

Date: _____

Name: _____

Student No.: _____

Contact (telephone and/or e-mail number): _____

Thesis Supervisor: Name: _____

Address: _____

_____

Signature: _____

Fill out in duplicate in consultation with your thesis supervisor. Have your supervisor sign both copies, keeping one copy, and leave the other in L. Smith's mail box.

1. Approximate thesis title:

2. Outline of thesis problem:

EOSC 447, THESIS

Thesis Progress Report

Date: _____

Name: _____

Student No.: _____

Contact (telephone and/or e-mail number): _____

Fill out in consultation with your thesis supervisor, have your supervisor sign and leave the completed form in LS's mail box.

1. Brief statement of progress:

2. Do you plan to meet submission deadlines for spring graduation?

_____ Yes _____ No

Thesis Supervisor Name:
Signature:

SAMPLE THESIS TITLE PAGE
(LIKELY 2 to 3 LINES)

by

Your Name

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF APPLIED SCIENCE

in

GEOLOGICAL ENGINEERING
Faculty of Applied Science
Geological Engineering Program

We accept this thesis as conforming to
the required standard

……..
……..
……..

THE UNIVERSITY OF BRITISH COLUMBIA
MONTH, 2003

EOSC 447, THESIS
Completed Thesis Data Form

Date of submission: _____

Student Name: _____

Student No.: _____

Contact (telephone and/or e-mail number): _____

Supervisor: _____

Thesis Title:

Number of pages:

Study area location (country, locality, NTS number etc.):

Thesis keywords (a collection of about 5-10 carefully selected words or terms that describe the subject of the thesis):