



**GRADUATE ACADEMIC UNIT
OF CIVIL ENGINEERING**

**GRADUATE STUDENT
HANDBOOK
2011 – 2012**



Mission Statement

DEPARTMENT OF CIVIL ENGINEERING UNIVERSITY OF NEW BRUNSWICK FREDERICTON, NB

Our mission is to meet the needs of our changing society by educating tomorrow's civil engineers and by advancing knowledge in Civil Engineering. The Department of Civil Engineering strives to:

- *provide quality education incorporating elements of planning, analysis, design, management, and communications;*
- *prepare students to accept professional engineering responsibilities;*
- *foster a graduate studies and research program reflecting regional, national, and international quality and recognition;*
- *develop active partnerships with industry and government contributing to economic development and other requirements of our changing society;*
- *instill a sense of responsibility toward society and the environment;*
- *attract and educate students with a sense of the global community; and*
- *maintain a positive working and learning environment through supportive respect for diversity.*

(Approved at Departmental Meeting of May 21, 2002)



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Preface

Welcome to Graduate Studies in Civil Engineering at the University of New Brunswick. Engineering studies were introduced to Canada at this university in 1854 and our engineering programs since that time have expanded and evolved to meet the changing needs of society. As a graduate student, you are invited to share in our tradition and our mission of engineering education and research.

This document has been prepared by the Graduate Academic Unit (GAU) of the Department of Civil Engineering and contains a variety of information that will assist you in pursuing your studies. Information in this document is meant to provide assistance by outlining some University policies and procedures that you will be interested in as graduate students. The document does not supersede or take precedence over any academic or other regulation of the School of Graduate Studies or the University of New Brunswick.

Students are specifically directed to consult the School of Graduate Studies General Regulations, Standards and Procedures (approved by UNB Senate May 2006) and familiarize themselves with the following topics and governing regulations:

- 24. Review of Grades
- 27. Academic Appeals
- 29. Academic Offenses (Plagiarism)
- 31. General Conduct

These are available as Calendar Regulations at: <http://www.unb.ca/gradschl/regulations/index.html>

If you have any questions, please do not hesitate to contact me or the Graduate Studies Program Assistant in the Civil Engineering Office.

Eric D. Hildebrand, PhD, PEng
Director of Graduate Studies

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1. The Civil Engineering Graduate Academic Unit

The Department of Civil Engineering is one of five departments in the Faculty of Engineering at the University of New Brunswick. The Department's registration is approximately 275 undergraduate students and approximately 64 graduate students. The main office of the Department is in Room H-124 in the older section of Head Hall, Building 17. The secretarial staff is situated in that office and the Chair of the Department is in the adjacent office, Room H-126B. The classes, laboratories, and offices of faculty members are located throughout Head and Gillin Halls.

The Graduate Academic Unit exists within and as part of the Department of Civil Engineering. Specific inquiries regarding graduate studies can normally be directed towards the Director of Graduate Studies, or the Graduate Studies Program Assistant, who is responsible for many administrative functions of the graduate studies program.

2. Programs of Study

The Graduate Academic Unit of Civil Engineering offers programs of study leading to the degrees of Master of Engineering (MEng), Master of Science in Engineering (MScE), and Doctor of Philosophy (PhD) in Civil Engineering. An MEng in Environmental Studies is an option within the MEng program. The normal duration for the MEng or MScE program is 24 months. The normal duration for the PhD program is 36 months. The Department also offers non-degree diploma programs in the areas of construction and transportation engineering.

2.1 Master of Engineering (MEng)

Candidates for the MEng degree must complete a minimum of 24 credit hours of course work (see calendar for credit hour allocation) and a report on a significant aspect of engineering in the area of specialization. The subject of the report must be approved by the GAU at least six months before the Encaenia or Convocation at which the candidate expects to receive the degree. The report must be based upon work done by the student under the supervision of a faculty member. The student is permitted to carry out this work at the place of employment provided that supervision is maintained by a faculty member. At least 60% of the approved course work must be in the area of specialization. The MEng has no residency requirement, but the minimum time requirement is one calendar year. Students must have a BScE in Civil Engineering or a related engineering degree to enter this program.

Note: due to the requirement of the completion of a report under the supervision of a faculty member, the MEng degree is considered to be a research-based degree as defined by the School of Graduate Studies.

The MEng (Environmental Studies) is an option within the regular MEng program. Details of this multidisciplinary program are available at: www.ee.unb.ca/powereng/archive/MEng/MEng.htm

This program, as well as the regular MEng program, is primarily course based with a report on an acceptable project. The degree requirements for the MEng (Environmental Studies) are the same as those for the regular MEng program as given above.

2.2 Master of Science in Engineering (MScE)

The MScE degree is a research-oriented degree for which a thesis is a major requirement. The subject of the thesis must be approved by the GAU concerned at least six months before the Encaenia or Convocation at which the candidate expects to receive the degree. The master's thesis must demonstrate the candidate's competence to undertake independent research work. It must make a contribution to knowledge in the candidate's field of study. The thesis must show that the candidate is fully aware of the pertinent published material and it must be written in a satisfactory literary style. It should be free from typographical and other mechanical errors.

The program requires a minimum of 15 credit hours of course work (see calendar for credit hour allocation) and a minimum residency requirement of one academic year. At least 60% of the approved course work must be in the area of specialization. Each student, in conference with a faculty advisor, selects courses suited to the appropriate area(s) of specialization. Students whose undergraduate degree is in a field other than the intended graduate program may be required to take additional courses as background material or as prerequisites. Students are encouraged to take suitable courses in mathematics and other relevant fields of engineering when possible.

The minimum time required for completion of the requirements for the master's degree shall be one calendar year of which the equivalent of one academic year must be spent in residence. Only full-time graduate students (with not more than three hours per week of teaching assistantship duties) are eligible to complete the requirements for the degree in this minimum time.

2.3 Doctor of Philosophy (PhD)

The PhD degree is a research degree for which a thesis on original and significant research in the field of Civil Engineering is a major requirement. Candidates are normally required to have a graduate degree in engineering or applied science. To qualify for the PhD degree, a student must maintain a superior grade point average and obtain a passing grade on a Comprehensive Examination administered within the first 12 months. Acceptability and suitability are determined by the candidate's PhD Comprehensive Examination Committee.

A PhD candidate is normally required to take a minimum of 12 credit hours of approved course work. For candidates who have obtained a MScE degree from the GAU of Civil Engineering at UNB and who during that degree obtained more than the minimum 15 credit hours, consideration may be given to transferring credits toward the PhD degree requirements. Such transfer of credit hours will only be made with the approval of the candidate's supervisor(s), the Director of Graduate Studies, and the School of Graduate Studies.

The residency requirement for a student with a relevant bachelor's degree, is a minimum of 8 terms, 6 of which must be during the Fall and Winter terms. For a student with a relevant master's degree, the minimum residency requirement is 5 terms, 4 of which must be during the Fall and Winter terms.

Students who initially enroll in the MScE degree program, but later proceed to the PhD degree program without completion of the Master's degree, will be required to complete at least **27 credit hours** of course work. The Comprehensive Examination for students who transfer into the PhD program will normally be administered at the end of the first term as a PhD candidate.

2.4 Procedure for Transfer from MScE to PhD

Students who initially enroll in the MScE degree program must complete 12 months in the MScE program before a direct transfer to the PhD degree program can be requested. A transfer must be recommended by the student's supervisor to the Director of Graduate Studies, and the PhD research topic is to be indicated. Both the student and the supervisor will agree that the student will undertake a PhD Comprehensive Examination within four months of the transfer. Students who are permitted to transfer are required to do course work equivalent to the MScE degree, 15 ch, plus the PhD degree, 12 ch, for a minimum total of 27 ch of course work.

3. Fields of Study

Graduate studies are available in virtually all traditional areas of Civil Engineering including Structures, Geotechnical, Water and Environmental, Transportation, Pavements, Concrete and Materials, as well as Construction Engineering and Management.

Courses are made available consistent with the needs of the students as well as the availability of faculty. Students are advised to monitor course availability and scheduling as many graduate courses are not provided every year.

Research is conducted through a variety of groups that exist within the Department. There is frequent joint collaboration among faculty members within specific fields of specialization. Collaborative research across groups is also frequent and encouraged. Research groups and Chairs within Civil Engineering include:

- UNB Construction Engineering and Management Group
- UNB Groundwater Studies Group
- UNB Transportation Group
- Collision Investigation Team
- M. Patrick Gillin Chair in Construction Engineering and Management
- D. C. Campbell Chair in Highway Construction and Pavement Research
- Canada Research Chair in Groundwater-Surface Water Interaction

4. Faculty Members of the Graduate Academic Unit (GAU)

Faculty	Discipline	Office	E-mail
Dr. Peter H. Bischoff	Concrete Structures	H-227	bischoff@unb.ca
Dr. Dale I. Bray (retired)	Hydraulics, Hydrology, and Groundwater <i>Professor Emeritus</i>		
Dr. Theodore W. Bremner (retired)	Materials <i>Professor Emeritus</i>	HB-7	bremnert@unb.ca
Dr. A. John Christian (retired)	Construction Engineering & Management <i>Dean & Professor Emeritus</i>	H-229	jchristian@unb.ca
Dr. James S. Christie	Transportation, UNB - Saint John Campus		christie@unbsj.ca
Dr. A. Brian Cooke	Geotechnical, Clay Liners	HC-4	bcooke@unb.ca
Dr. H. ElNaggar	Geotechnical	HB-6	hany.elnaggar@unb.ca
Dr. Katy Haralampides	Environmental Hydraulics	GD-125	katy@unb.ca
Dr. Eldo E. Hildebrand	Pavement Design & Pavement Management Systems	H-127	eldo@unb.ca
Dr. Eric D. Hildebrand	Transportation <i>Coordinator, UNB Transportation Group Director of Graduate Studies</i>	GD-102	edh@unb.ca
Dr. Michael C. Ircha (retired)	Planning and Transportation <i>Associate VP Emeritus, Professor Emeritus</i>		ircha@unb.ca
Dr. Irina L. Kondratova	Information Technology in Engineering <i>NRC Institute for Information Technology e-Business Adjunct Professor</i>	NRC	irina.kondratova@nrc.ca
Dr. Robert C. Landine (retired)	Industrial Wastewater Treatment <i>ADI Industrial Wastewater Research Honorary Research Associate</i>		rcl@unb.ca
Dr. Arvid O. Landva (retired)	Geotechnical		
Dr. Kerry T. MacQuarrie	Groundwater Hydrology; Mathematical Modeling <i>Canada Research Chair in Groundwater-Surface Water Interaction</i>	HB-5	ktm@unb.ca
Dr. Donath M. Mrawira (Leave)	Pavements <i>D.C. Campbell Chair in Highway Construction and Pavement Research</i>	HA-6C	donath@unb.ca
Dr. Jeff H. Rankin	Construction Engineering & Management <i>M. Patrick Gillin Chair in Construction Engineering & Management</i>	H-226	rankin@unb.ca
Dr. Allison B. Schriver	Structures, Earthquake Engineering	GD-106	schriv@unb.ca
Dr. Kripa S. Singh	Environmental, Water & Wastewater Treatment	HB-6	singhk@unb.ca
Dr. Michael D.A. Thomas	Materials & Infrastructure Renewal	HC-7	mdat@unb.ca
Dr. Arun J. Valsangkar (retired)	Geotechnical, Soil Structure Interaction <i>Professor Emeritus</i>	HC-5	valsngkr@unb.ca
Dr. Lloyd M. Waugh	Construction Engineering & Management	H-229	waugh@unb.ca
Dr. Bruce G. Wilson	Environmental, Solid Waste Management <i>Chair, Department of Civil Engineering</i>	H-126	wilsonbg@unb.ca
Dr. Frank R. Wilson (retired)	Transportation & Road Safety <i>Honorary Research Professor/VP Research Emeritus and Professor Emeritus</i>	GD-127	frw@unb.ca
Dr. Yuri Yevdokimov	Transportation; Environmental Economics	Singer - 458	yuri@unb.ca
Dr. Ming Zhong	Transportation	GD-128	ming@unb.ca

5. Graduate Student Supervision

Each graduate student will have or will be assigned a supervisor or supervisors at the initiation of graduate studies with the approval of the Director of Graduate Studies. Where a supervisor has not been assigned, the Director of Graduate Studies will assign a program advisor who will provide assistance and program guidance to a graduate student. Normally a graduate supervisor must be assigned prior to the end of the first term of studies.

The supervisor will consult regularly with the student and provide advice related to program progress, course selection, and research.

Changes of supervision will occur only with the approval of the Director of Graduate Studies.

6. Program Advice

6.1 Program Duration and Progression

Masters degrees are normally expected to take two academic years to complete. PhD degrees should be expected to be completed within a three-year period of full time study. Students intending to do doctoral studies may also find it advantageous to proceed into a PhD program without the completion of the master's degree. Students must complete 12 months in the MScE before a transfer can be requested. These students will be expected to do course work equivalent to the Master's degree plus the PhD degree and to successfully undertake a PhD Comprehensive Examination within four months of the transfer.

6.2 Annual Progress Report Forms

All graduate students are required to complete a short annual progress report form. This form is reviewed and commented on by the student's supervisor(s) and the Director of Graduate Studies. The completed progress report form is then sent to the School of Graduate Studies. Completed progress report forms for 2009-09 must be submitted to Graduate Studies Program Assistant in the Civil Engineering Office on or before April 30, 2010.

6.3 Program Deadlines

Students are advised to monitor all deadlines with respect to the submission of work, theses, and reports. Deadlines published by the School of Graduate Studies for Encaenia and Convocation have been included in Appendix A. It is noted that these deadlines generally refer to the completed document after the oral defence has been conducted. The process of reading and correcting and evaluating a thesis can take several months and careful consideration of these deadlines must be maintained. **Travel and moving arrangements should not be made until the process is completed.**

6.4 PhD Comprehensive Examination Guidelines

The format and timing associated with the PhD Comprehensive Examination is established by the Graduate Academic Unit (GAU). The Department of Civil Engineering has the responsibility of ensuring that each PhD candidate has a good knowledge of his/her general area of research and of determining the competence of the candidate to carry out independent research for his/her proposed thesis topic. The detailed steps presented in

Appendix B complement the general guidelines for the PhD Comprehensive Examination which appear in the Graduate Calendar. For students entering directly into the PhD program, the Comprehensive Examination will be administered within the first twelve months. For students transferring from the MScE into the PhD program, the Comprehensive Examination will normally be administered at the end of the first term as a PhD candidate.

6.5 MScE Thesis Proposal

All MScE candidates must submit an acceptable thesis proposal. The details concerning the proposal, including deadlines and suggested content, are given in Appendix C.

7. Courses

7.1 Registration for Courses

Graduate Students should first register in the appropriate thesis or report course. New and returning students should then make arrangements to pay their fees with Financial Services. After paying or making arrangement to pay fees and on campus new students will need to go to "imaging services"

<http://www.unb.ca/aboutunb/map/?map=1> for your student identification card. Returning students can get their UNB Student Union ID card validated at the School of Graduate Studies or at the Financial Services.

At the **CE Graduate meeting**, scheduled for **3:00 pm, Thursday, September 8, 2011** in **GWD124, Gillin Hall**, you will receive a copy of the CE Graduate Program Timetable. Please seek approval of course selection from your Supervisor. You may then register for your courses using UNB's On-Line Registration system.

Information that is essential for registration:

- Student ID number
- PIN (*Personal Identification Number*)

Once you have registered on-line and activated your PIN, you may then claim your UNB computing account and your E-mail. **Please ensure your address and telephone number is current.**

You will need the proper course ID numbers for each course in which you wish to register. These course ID numbers are listed in the first column of the CE Graduate Program Timetable, next to their corresponding course number. <http://www.unb.ca/schedules/timetable/index.cgi#tables>

You must register for the appropriate thesis or report course each term even if you have not yet commenced work on your thesis or report.

MEng Report	CE 6996	Fall, Winter, Intersession & Summer Session
MScE Thesis	CE 6997	Fall, Winter, Intersession & Summer Session
PhD Thesis	CE 6998	Fall, Winter, Intersession & Summer Session

If a course is to be taken on an AUDIT basis, fill out a 'Course Change Form' (see the CE Graduate Studies Program Assistant for these forms). Have the Instructor of the course sign where indicated, then return the form to the CE Graduate Studies Program Assistant, who will obtain the Director's signature and then forward

the form to the School of Graduate Studies for review and approval by the Dean of Graduate Studies. It will then be forwarded to the Registrar's Office.

Add/Drop Dates for Fall Term

September 21, 2011	Last day to add courses Courses dropped by this date will not show on the transcript
October 21, 2011	Last day to withdraw from courses with pro-rated refund
November 4, 2011	Last day to withdraw from courses without academic penalty

Add/Drop Dates for Winter Term

January 17, 2012	Last day to add courses Courses dropped by this date will not show on the transcript
January 17, 2012	Last day to withdraw from courses with pro-rated refund
February 28, 2012	Last day to withdraw from courses without academic penalty

7.2 Courses Commonly Offered

Note: Not all courses are available in any one year.

Course #	Name	Instructor	# of credit hrs
CE 6013	Structural Wood Design	A. Schriver	3
CE 6023	Theory of Elasticity	TBA	3
CE 6053	Dynamics of Structures	A. Schriver	3
CE 6063	Finite Element Analysis	TBA	3
CE 6073	Plates and Shells in Structures	TBA	3
CE 6083	Earthquake Engineering	A. Schriver	3
CE 6093	Masonry Structures	TBA	3
CE 6103	Soil Mechanics III	TBA	3
CE 6113	Foundation Engineering III	TBA	3
CE 6123	Foundation Engineering IV	A. Schriver	3
CE 6133	Soil Dynamics	A. Schriver	3
CE 6143	Pavement Design II	D. Mrawira/E. E. Hildebrand	3
CE 6153	Environmental Geotechnics	A.B. Cooke	3
CE 6155	Environmental Geotechnics II	A.B. Cooke	3
CE 6163	Embankments II	TBA	3
CE 6203	Transportation Planning and Modeling	M. Zhong	3
CE 6206	Pavement Management Systems	D. Mrawira	3
CE 6207	Asset Mgt System (Civil Infrastructure Asset Management System)	D. Mrawira	3
CE 6210	Spatial Economic Modeling for Integrate Land Use Transportation Planning	M. Zhong	3
CE 6214	Transport Simulation	E. D. Hildebrand	1.5
CE 6215	GIS - Transportation	M. Zhong	3
CE 6222	Traffic Engineering	E. D. Hildebrand	3
CE 6223	Road Safety Engineering	E. D. Hildebrand	3
CE 6232	Transport Facility Design	M. Zhong	3
CE 6234	Intelligent Transportation Systems	E. D. Hildebrand	1.5
CE 6245	Transport Operations and Logistics	J. Christie	1.5
CE 6283	Transportation Policy	E. D. Hildebrand/F. Wilson	3
CE 6293	Transportation Seminar	E. D. Hildebrand	3
CE 6303	Urban Planning	M. Zhong	3
CE 6413	Physical and Chemical Processes in Environmental Engineering	K. Singh	3
CE 6414	River Habitats and Hydraulics	R. Cunjak/K. Haralampides	3
CE 6415	Graduate Seminar in Water and Environment	B. Wilson	1
CE 6416	Industrial Wastewater Treatment	TBA	3
CE 6423	Biological Processes in Environmental Engineering	K. Singh	3
CE 6443	Water Quality Modelling	K. Haralampides	3
CE 6451	Environmental Engineering Lab I	TBA	3
CE 6452	Environmental Engineering Lab II	TBA	3
CE 6453	Water Resources Systems Analysis	B. Wilson	3
CE 6463	Solid Waste Management Systems	B. Wilson	3
CE 6483	Environmental Engineering	K. Singh	3
CE 6503	Concrete Materials	M. Thomas	3
CE 6513	Behaviour of Concrete Structures	P. Bischoff	3
CE 6523	Behaviour of Steel Structures	TBA	3
CE 6533	Prestressed Concrete	P. Bischoff	3
CE 6543	Deterioration of Materials	TBA	3
CE 6553	Pavement Materials	E. E. Hildebrand	3
CE 6563	Repair of Concrete Structures	M. Thomas	3
CE 6573	Advanced Concrete Materials	M. Thomas	3
CE 6583	Chemistry of Cement and Concrete	M. Thomas	3
CE 6593	Analytical Techniques for Cement and Concrete	M. Thomas	3

CE 6603	Construction: Work Improvement	L. Waugh	3
CE 6623	Construction: Organization	J. Rankin	3
CE 6633	Construction: Scheduling	L. Waugh	1
CE 6643	Construction: Management	J. Rankin	3
CE 6653	Construction: Information Technology	L. Waugh	3
CE 6693	Construction: Selected Topics	L. Waugh/J. Rankin	3
CE 6713	Advanced Hydraulics and Sediment Transport	K. Haralampides	3
CE 6763	Numerical Modelling of Groundwater Flow and Solute Transport	K. MacQuarrie	3
CE 6773	Contaminant Hydrogeology	K. MacQuarrie	3
CE 6921	<u>Special Studies</u>	Staff	1.5
CE 6922	<u>Special Studies</u>	Staff	3
CE 6923	<u>Special Studies</u>	Staff	2
CE 6991	CE Graduate Seminar I	TBA	1
CE 6992	CE Graduate Seminar II	TBA	1
CE 6996	Master's Report	E. D. Hildebrand	cr
CE 6997	Master's Thesis	E. D. Hildebrand	cr
CE 6998	PhD Thesis	E. D. Hildebrand	cr

7.3 Credit Units for Undergraduate Courses

For approved undergraduate courses taken by students in this Graduate Academic Unit, the course unit is one less than the undergraduate credit hour value for senior courses; i.e. 4000 and 5000 level courses. The course unit is two less than the undergraduate credit hours for courses on a level below the senior courses; i.e. 3000 level courses.

A maximum of 1/3 of the approved credit hours in a student's graduate degree program can be taken at the undergraduate level.

Warning: Credit hours shown on transcripts reflect the credit hours in the undergraduate calendar, not the reduced credit hours which will be assigned for the graduate degree.

7.4 Association of Professional Engineers and Geoscientists of New Brunswick

Graduate Students who do not have a Bachelor of Science in Engineering degree will normally have to take a substantial number of extra courses to meet the requirement for membership in the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB). These students should contact the Association of Professional Engineers and Geoscientists of New Brunswick for details. Courses taken for this purpose do not necessarily fall within the degree requirements so may be subject to fees beyond the normal graduate program fees.

7.5 Special Studies

In some circumstances, a Special Studies Course may be arranged between a student and faculty members with the supervisor's approval. The intent of this option is to provide the graduate student the opportunity to study a subject not typically included in standard course offerings. To initiate a special study of 1.5, 2 or 3 credit hours a proposal must be submitted to the Director of Graduate Studies. See the Graduate Program Assistant for a proposal form. As a guideline, a maximum of 6 credit hours of Special Studies can be taken at the Masters level.

8. Sources of Funding

There are two main sources of graduate student funding which can be described as scholarships and assistantships. Scholarships generally are given to students in recognition of excellent academic performance and/or need. A partial listing of available scholarships is provided in Appendix D.

Assistantships are given to graduate students through a faculty member and involve the performance of research, teaching, or related tasks. These sources are described as follows:

- GTA:** (*Graduate Teaching Assistantship*) This is money made available by the Department and is given for support of teaching activities including: marking, preparation of course materials, supervision of students in labs, and conducting tutorials. GTAs are treated as employment income. All students must have a valid SIN (social insurance number) see procedure outlined below.
- GRA:** (*Graduate Research Assistantship*) This is money made available to the supervisors by the Department and is given for support of graduate research. This research is assigned by the supervisor in accordance with the supervisor's interests. For full-time Graduate students only.
- GAA:** (*Graduate Academic Assistantship*) This is money made available from funds the supervisor has raised independently. They are monies that have been offered to faculty for authorized research by government or private organizations. Usually the research money is attached to the accomplishment of a specific task or to research in a certain area. Students accepting GAA money can therefore expect to conduct research consistent with the needs of the specific research project.

On average, a fully funded graduate student might expect to work approximately 20 - 25 hours per week in fulfilling the responsibilities associated with receiving this financial aid. Scholarship students are also cautioned regarding accepting remuneration that might invalidate the terms under which the scholarship has been awarded.

For funded graduate students the UNB payroll is on a bi-weekly/direct deposit system. There are 26 pay periods in one calendar year (9 during the fall term, 8 during the winter term and 9 during the intersession/summer session). It typically takes an average of three weeks to process payment forms/documents. Therefore, please remember when you are budgeting that the first month of graduate studies is often the most difficult as there may be a delay in receiving your initial assistantship payment. All students must be registered for the entire time covered by the payment form or it cannot be processed.

If you have been advised that there is no financial assistance available, you will be personally responsible for all costs associated with the program and all living expenses during the period of your study at the University of New Brunswick.

Procedure:

At the onset of their program funded students will receive an "Offer of Financial Assistance". It will outline the support, amounts, and source. Students will sign an "Acceptance of Financial Assistance" which will be included with the "Offer of Financial Assistance" thereby accepting the support. The acceptance will state that the student will not accept other financial support without the consent of the Director of Graduate Studies.

Canadian students and International students receiving GTA require a Social Insurance Number (SIN). Forms are completed by the Graduate Program Assistant. For information on SINs, visit the Social Development Canada Web Site <http://www.servicecanada.gc.ca/eng/fag/sin.shtml> or go to the local office of Service Canada at: 633 Queen Street, Fredericton.

Duration of Support:

Master's students typically receive GRA and/or GTA monies for up to a maximum of two years. PhD students typically receive GRA and/or GTA monies for up to a maximum of three years.

9. Study Space Allocation

The Department of Civil Engineering will attempt to provide appropriate space for students to study and store their study materials. In some cases individuals may be provided office space to share. Some points students should consider with respect to this space are:

- Absolutely no electrical appliances (e.g. hot plates, electric heaters, coffee makers) should be kept in these spaces.
- Do not build individual libraries in your study space. Do not abuse the library research loans system.
- Telephones may be provided in study spaces. Please contact your supervisor to determine what phone services can be provided.
- For security reasons it is advisable to lock your door when you are not in your study space.
- Please keep space tidy.

Keys and Deposits

Keys for your assigned study space are available from the CE Graduate Studies Program Assistant in the Civil Engineering Office. You will be expected to pay a \$10.00 refundable deposit for each key issued to you and sign an agreement accepting responsibility for the study space assigned. At the completion of your program all keys are to be returned to the CE Office. Before deposits are refunded office space will be inspected. Keys for labs will only be issued upon written request of the student's supervisor. Under no circumstances are keys given to students for the Civil Engineering Office.

10. Thesis/Report/Dissertations

10.1 Specifications for Writing Theses/Reports/Dissertations

All theses and reports must meet all the specifications provided in the University of New Brunswick Regulations and Guidelines for the Preparation and Submission of Graduate Theses and Reports.

Regulations and Guidelines for the Preparation and Submission of Graduate Theses and Reports are available on the School of Graduate Studies Web-site. The URL is <http://www.unb.ca/gradschl/guidelines/index.html>.

The University of New Brunswick now provides students with a process with which to submit and deposit their thesis and dissertations (ETDs) electronically. The Thesis Development Site is a service designed to allow graduate students and reviewers to electronically manage all or part of the writing and reviewing of a thesis or dissertation. Space on UNB servers has been allocated for graduate students to store thesis notes, draft chapters, and multimedia components of their work. The Thesis Development Site also offers graduate students flexibility that traditional methods of thesis review do not. These include:

- Ability to provide supervisors with the review method of choice: electronic or paper. If the supervisor wishes, he/she may edit theses and dissertations using tools provided in a preferred editor.
- Students have complete control over who accesses their thesis, the level of access, and when that access takes place.
- Access to thesis drafts from any web browser, for both students and reviewers.
- Easy-to-use storage space for thesis or dissertation files that is backed up nightly to protect the integrity of the student's work.

All UNB graduate students are eligible to use the Thesis Development Site through "my UNB e-Services" and under the ETD tab. Questions? Contact the ITS Help Desk (506 453 5199 or helpdesk@unb.ca)

Students are encouraged to discuss the thesis format with their supervisors at an early stage. **It is a Departmental guideline that the main body of an MScE thesis and PhD dissertation be no longer than 100 pages and 200 pages in length, respectively.** Students should be aware that publication of research findings in scholarly publications (e.g. referred journals) is now commonplace and a thesis format that leads to more efficient publication is an important consideration. Students should give consideration to using the "Articles Format", or a similar format that expedites publication of the research.

Unless otherwise instructed by the supervisor(s), it is recommended that the Canadian Journal for Civil Engineering (CJCE) format for footnotes, references, tables, and figures be used. The instructions to authors in a recent copy of the CJCE should be consulted.

10.2 Acceptance of Thesis/Report/Dissertation

10.2.1 Graduate Academic Unit (GAU) Review of MEng Report/MScE Thesis/PhD Dissertation

The thesis or report must be acceptable to the GAU. This may be determined by one or both of the following:

- a) a meeting of the GAU Examining Board comprising the supervisor(s) and at least two readers (one of which may act as Chair of the meeting). The supervisor(s) must constitute a minority of the GAU Examining Board. A *GAU Review of Thesis/Report* form should be completed and returned to the Director of Graduate Studies. Because a MEng Report receives no further examination beyond the GAU a reader from outside the GAU is desirable, but not mandatory.
- b) a GAU Oral Examination (*optional for MEng and MScE - decided by GAU Examining Board; required for all PhD candidates*) - comprised of a chairperson, supervisor(s) and at least two readers, one of which may Chair the Oral Examination. The supervisor(s) must constitute a minority of the GAU Oral Examining Board. A *GAU Oral Examination of Thesis/Report* form should be completed and returned to the Director of Graduate Studies.

If the GAU wishes to proceed with (b), an oral examination, the Chair of the Examining Board should advise the Director of Graduate Studies of the names of members of the Examining Board, date, time and preferred location. This information should be given in sufficient time (7 days prior to oral examination) so that notices may be distributed to members of the GAU of Civil Engineering and the graduate students. Interested parties will then have an opportunity to read the thesis or report.

It is the student's responsibility to photocopy their thesis/report, and to ensure that the members of the Examining Board receive their copy of the thesis or report.

If (a) and/or (b) have been carried out to the GAU's satisfaction, the University Examining Board may be formed. When the University Examining Board accepts the thesis for defence, a University oral may be scheduled. A *University Oral Examination of Thesis Form* should then be completed and returned to the Director of Graduate Studies.

10.2.2 University Review of MEng Report

This reflects the contents of the School Graduate Studies and its regulations as outlined on page 15 of the "Degree Requirements and Regulations" copied below:

22. (B) Master's Degree Report/Research Essay

A candidate for the Master's degree by report must prepare a report as part of the program and this report must be approved by an Examining Board established by the DoGs of the GAU concerned or designate. The Examining Board will be constituted in the same manner as the Examining Board for a Masters Thesis under Master's Degree Thesis. The report must conform in all respects to the regulations governing the presentation of theses and reports approved by the School of Graduate Studies. One member of the Board may be from outside the GAU. Should the Report be approved, the candidate will be examined orally. The oral examination will be chaired by the Director of Graduate Studies in the student's GAU. The chair will not have a vote. The oral will be open to members of the public and the university. At the discretion of the chair, members of the

public and the university may ask questions but they do not vote. The Director of Graduate Studies will report the decision of the Committee to the Dean of Graduate Studies.

In the Faculty of Engineering the report must be based upon work done by the student under the supervision of a faculty member. The student is permitted to carry out this work at her/his place of employment provided that supervision is maintained by a faculty member. The Faculty of Engineering also requires the student to give an oral presentation of the report unless she /he is excused by the GAU concerned. In all other respects, the regulations are those as described in the previous paragraph.

A candidate for the Master's degree by major research essay must conform in all respects to the regulations governing the supervision, preparation, and presentation of the major research essay as approved by the candidate's GAU, the Executive Committee of the SGS, and the two Senates.

Once the GAU Examining Board has accepted the report and the student has made the necessary revisions, he/she should make arrangements with the Director of Graduate Studies to ensure that the written format conforms with the regulations set out by the School of Graduate Studies. The Director of Graduate Studies will then sign the *Report on Masters Thesis/Report* form (blue) confirming that this has been done.

The student then arranges to make the necessary number of copies of the report and is responsible for delivering the completion forms, along with the original and the copies of the report to the School of Graduate Studies for final approval. It is the student's responsibility to ensure that his/her binding fees are paid to the School of Graduate Studies and outstanding fees, etc. have been settled at the Financial Services Office

10.2.3 University Review of MScE Thesis

This reflects the contents of the School Graduate Studies and its regulations as outlined on page 15 of the "Degree Requirements and Regulations"

<http://www.unb.ca/gradstudies/resources/pdfs/calendarregulations.pdf> copied below:

22. MASTER'S DEGREE REGULATIONS

22. (A) Master's Degree Thesis

A candidate for the Master's degree, unless proceeding to the degree by a report, research essay, or course program, as may be provided for in the candidate's specific program of study, will present a thesis. The subject of the thesis must be approved by the appropriate GAU within the time limits set by the GAU. The Master's thesis must demonstrate the candidate's competence to undertake independent research work; it must make a contribution to knowledge in the candidate's field of study; it must show that the candidate is fully aware of the pertinent published material; and it must be written in a satisfactory literary style. As well, it should be free of typographical and other mechanical errors.

The thesis will, in the first instance, be examined by the GAU and, if approved, will then be submitted to an Examining Board appointed by the DoGs of the GAU concerned or designate (or in the case of an interdisciplinary thesis, the DoGs of the GAUs concerned or their designates). Where an Interdisciplinary thesis is emanating from a degree in the Interdisciplinary GAU of the SGS, the Examining Board will be appointed by the Interdisciplinary Steering Committee of the SGS. The Examining Board will be constituted as follows:

(d) The Examining Board will consist of at least three persons, not more than two of whom have been formally involved in the supervision of the candidate, with Members of the Examining Board who were involved in the supervision of the candidate constituting a minority of the Examining Board;

(e) At least one of the non-supervising members of the Board must be from a GAU other than that in which the candidate has studied. (In the case of a Master's report this requirement, although not mandatory, is desirable.); and

(f) The Chair of an Examining Board will be a member of the candidate's GAU and will not have been formally involved in the supervision of the candidate.

The Examining Board may also include an external reader. Should the Examining Board approve the thesis, it will then examine the candidate orally. The oral examination will be chaired by the Director of Graduate Studies in the student's GAU, who will not vote. The oral examination is open to the public and members of the university. At the discretion of the chair of the oral defence, members of the public and the university will be permitted to question the candidate but will have no vote. The Director of Graduate Studies of the specific GAU will report the decision of the Examining Board to the Dean of Graduate Studies.

The thesis must conform in all respects to the regulations governing the presentation of theses approved by the School of Graduate Studies. The dates for presentation of Master's theses to the GAU, posted on the website and available from the School of Graduate Studies, should be noted. However, theses may be submitted at any time of the year.

The thesis must be acceptable to the University Examining Board. This may be determined by a meeting of the University Examining Board comprised of a chairperson, supervisor(s) and at least one reader (two readers, if two supervisors involved). **An External Reader must also be a part of the University Examining Board.** A *University Review of Thesis* form should be completed and returned to the Director of Graduate Studies.

Once the Examining Board has accepted the thesis, notice of the oral exam should be prepared and distributed to members of the GAU of Civil Engineering, graduate students and the current mailing list provided by the School of Graduate Studies.

It is the student's responsibility to photocopy their thesis, and to ensure that each member of the Examining Board receives his or her copy of the thesis.

Prior to the oral exam, documentation should be prepared and given to the chair of the Examining Board. It is the chair's responsibility to ensure that the forms are completed (especially signatures) and given to the Director of Graduate Studies.

After the student has made the necessary revisions, he or she should make arrangements with the Director of Graduate Studies to ensure that the written format conforms with the regulations set out by the School of Graduate Studies. The Director of Graduate Studies will then sign the *Report on Masters Thesis/Report* form (blue) confirming that this has been done.

The student then arranges to make the necessary number of copies of the thesis and is responsible for delivering the completion forms, along with the original and the copies of the thesis to the School of Graduate Studies for final approval. It is the student's responsibility to ensure that his or her binding fees are paid to the School of Graduate Studies and outstanding fees, etc. have been settled at the Financial Services Office.

10.2.4 University Review of PhD Thesis

Procedures for the Submission and Assessment of Doctoral Dissertations are available on the School of Graduate Studies Web site. <http://www.unb.ca/gradstudies/resources/pdfs/calendarregulations.pdf>

This reflects the contents of the School Graduate Studies and its regulations as outlined on page 13 of the “Degree Requirements and Regulations” copied below:

21. (A) PhD Dissertation

The candidate for the degree of Doctor of Philosophy shall present, either during the student's course of study or at the completion of it, a dissertation embodying the results of investigations on an approved topic. The work upon which the dissertation is based must have been done by the candidate under the direction of an approved supervisor.

The dissertation must demonstrate the candidate's competence to undertake independent research work. It must contribute significantly to knowledge in the candidate's field of study and must be of sufficient merit to suggest publication in an appropriate scholarly journal or other form. The dissertation must show that the candidate is fully aware of the pertinent published material, must be written in a satisfactory literary style, and must be free of typographical and other mechanical errors.

The dissertation proposal must be approved by the GAU concerned within the time limits prescribed by the GAU.

The dissertation must be examined by the GAU concerned and, if approved, will then be submitted to an Examining Board appointed by the Dean of Graduate Studies in consultation with the GAU (please consult the document “Procedures For the Submission and Assessment of Doctoral Dissertations” approved by Senate in 2004 and available on the SGS website and in paper form from the SGS). The Examining Board will consist of the candidate's supervisor(s), and three other members from the School of Graduate Studies, at least one of whom must be from the candidate's GAU and at least one of whom must be from a GAU other than the candidate's. There will also be an external examiner from outside the University of New Brunswick. The Dean of Graduate Studies will name one member of the Examining Board who is not a member of the candidate's GAU as Chair. If the Board, upon examining the dissertation, finds it “capable of being defended” at the oral defence, the School of Graduate Studies will proceed to schedule an oral examination of the candidate.

The oral examination will be open to the public and to all members of the university. At the discretion of the Chair of the oral defence, members of the public and the university will be permitted to question the candidate but will have no vote. The Dean of Graduate Studies, the Associate/Assistant Dean of Graduate Studies, or a Senior Faculty Member appointed by the Dean of Graduate Studies will chair the oral examination. At the conclusion of the oral defence, the examining board will make its decision about recommending the candidate for a degree based on both the content of the dissertation and on the candidate's ability to defend it.

Notwithstanding anything to the contrary herein contained, and either before or after the oral examination, the Examining Board may require the student to make corrections to the thesis/report. The candidate must make such corrections and return the corrected copies of the thesis to the Dean of Graduate Studies in order for the recommendation for a degree to proceed.

The dissertation must conform in all respects to the regulations governing the presentation of dissertations approved by the School of Graduate Studies, as applicable. Copies of these regulations, “Procedures for the Submission and Assessment of Doctoral Dissertations,” may be obtained from the School of Graduate Studies

or may be downloaded from the SGS website. Students should also consult the document “Regulations and Guidelines for the Preparation and Submission of Graduate Theses, PhD. Dissertations, and Reports” available on the SGS website and in paper form from the SGS. The recommended dates for the submission of dissertations to the School of Graduate Studies are posted on the SGS website and available from the SGS. Candidates planning to graduate in a specific encaenia/convocation should pay close attention to the posted deadlines. However, those candidates not attempting to meet graduation deadlines may submit dissertations to the SGS at any time of the year.

The University Review of the PhD Thesis is administered by the School of Graduate Studies.

Once the GAU Examining Board has accepted the thesis and the student has made the necessary revisions, he or she should make arrangements with the Director of Graduate Studies to ensure that the written format conforms to the regulations set out by the School of Graduate Studies. The thesis must have the vita page included for the University Review of the PhD thesis.

The student then arranges to make the necessary number of copies of the thesis and is responsible for delivering the completion forms, along with the original and the copies of the thesis to the School of Graduate Studies for distribution to the University Examining Board.

10.3 Report (Presentation)/Thesis (Oral Defence)

The GAU Oral Defence as well as the MScE University Oral Defence will normally be chaired by the Director of Graduate Studies. The procedural guidelines are:

Introduction: Made by either Chairperson or Supervisor

MEng Presentation:

- Recommended presentation time 20 minutes
- Question period for guests approximately 10 minutes
- 5 minute break to allow guests to leave if they wish
- Question period approximately 20 minutes - About 5 to 8 minutes per examiner
- Total time 1 hour (including post presentation deliberation)

MScE Defence:

- Recommended presentation time 30 minutes
- Question period for guests approximately 10 minutes
- 5 minute break to allow guests to leave if they wish
- Question period approximately 30 minutes - About 5 to 8 minutes per examiner
- Total time 1.50 hours (including post presentation deliberation)

PhD GAU Defence:

- Recommended presentation time 30 minutes
- Question period for guests approximately 10 minutes
- 5 minute break to allow guests to leave if they wish
- Question period approximately 40 minutes - About 5 to 8 minutes per examiner
- Total time 1.75 hours (including post presentation deliberation)

MEng/MScE/PhD:

It is expected that **only the student** will answer the questions addressed during the question period. Comments by faculty members should be kept for the post presentation evaluation whenever possible, unless some situations require intervention by the supervisor to clarify the question to the student.

11. Completion Process

11.1 Master of Engineering (MEng)

a) Application to Graduate

Apply on line <https://eservices.unb.ca/applications/graduationAppl/> should be completed by:

September 1 for October graduation {Convocation}

April 1 for May graduation {Encaenia}

b) From the date the completed report (not a draft copy) is submitted to the supervisor(s), allow **approximately 1 month** for process to be completed.

- Allow approximately 1 week for the GAU Examining Board Members to read report, meet and approve distribution to External Examiner.
- Copy to External Examiner (if applicable).
- University Examining Board Members review the report and may choose to meet to discuss.
- Once approved, and if a presentation is required, a copy of the report (including any required changes) must be in the CE office for one week prior to presentation unless he/she is excused by the GAU.
- A notice of oral presentation must be distributed one week prior to the presentation.
- Presentation is held. Corrections made by student.
- Once the Report is approved by supervisor a final corrected copy of the report is returned to the CE Office for the format review and approval by the Director of Graduate Studies. Any necessary changes are done prior to making final copies for SGS.
- Copies made at Graphic Services (form available in CE office). If copies have been made elsewhere, the form should state this.
- Copies returned to CE Office for approval of thesis/report by the Director of Graduate Studies.
- After consulting with the CE Graduate Program Assistant the Student will take the report and all required forms to the School of Graduate Studies (3rd floor, Sir Howard Douglas Hall).
- The Student will go to Financial Services Office to arrange payment of any outstanding debts to the University.
- Student will return all keys to the CE Office; before the key deposit is returned

11.2 Master of Engineering (MScE)

a) Application to Graduate

Apply on line <https://eservices.unb.ca/applications/graduationAppl/> should be completed by:

September 1 for October graduation {Convocation}
April 1 for May graduation {Encaenia}

b) From the date the completed thesis (not a draft copy) is submitted to the supervisor(s), allow **approximately 1 month** for process to be completed.

- Allow approximately 1 week for the GAU Examining Board Members to read report, meet and approve distribution to External Examiner.
- Copy to External Examiner (if applicable).
- University Examining Board Members review the report and may choose to meet to discuss.
- Once approved, and a defense date is set, a copy of the thesis (including any required changes) must be in the CE office for one week prior to defense and a notice of the oral presentation must be distributed one week prior to the presentation.
- Presentation is held. Corrections made by student.
- Once the thesis is approved and signed off by the supervisor a final corrected copy of the thesis is returned to the CE Office for the format review and approval by the Director of Graduate Studies. Any necessary changes are done prior to making final copies for SGS.
- Copies made at Graphic Services (form available in CE office). If copies have been made elsewhere, the form should state this.
- After consulting with the CE Graduate Program Assistant the Student will take the thesis and all required forms to the School of Graduate Studies (3rd floor, Sir Howard Douglas Hall).
- The Student goes to Financial Services Office to arrange payment of any outstanding debts to the University.
- Student will return all keys to the CE Office; before the key deposit is returned.

11.3 PhD Candidates

a) Application to Graduate

Apply on line <https://eservices.unb.ca/applications/graduationAppl/> should be completed by:

September 1 for October graduation {Convocation}
April 1 for May graduation {Encaenia}

b) All PhD candidates must have both a GAU Defence as well as a University Defence

- PhD students should allow time for GAU Defence and then should allow approximately twelve - eighteen (12-18) weeks for the University Oral after the thesis has been submitted to the School of Graduate Studies. The University Committees and Oral Defence are administered by the School of Graduate Studies.
- The external examiner has four to six (4 to 6) weeks to read the thesis, make comments, and return it to the School of Graduate Studies before the University Defence can be arranged.
- After consulting with the CE Graduate Program Assistant the Student will take the thesis and all required forms to the School of Graduate Studies (3rd floor, Sir Howard Douglas Hall).
- The Student will go to Financial Services Office to arrange payment of any outstanding debts to the University.
- The Student will return all keys to the CE Office before the key deposit is returned

12. Photocopying and Faxing

Photocopying services are available at the Imaging & Print Services – Marshall d’Avery Hall Rm 106. If the copying or faxing is related to a research project, the supervisor may provide funding for services that will be done in the Civil Engineering Office.

13. Safety and Security in the Civil Engineering Labs

The Civil Engineering Department recognizes that much of the laboratory work is done by students and that some of the work cannot be done conveniently during normal working hours.

It is the purpose of these guidelines to encourage effective use of our facilities in such a way as to cause as little inconvenience as possible to laboratory users. The guidelines are issued to address the problems of (i) the safety of laboratory users and (ii) the security of equipment required for research.

13.1 Labs

Our technical staff normally work Monday to Friday from 8:15 to 4:30 in the Fall and Winter terms (from Labour Day until the long weekend in May), and from 7:45 to 4:00 in the Summer term. The Chief Technician should always be consulted when new or unusual procedures are being planned. If he deems the proposed work to be unsafe, the student should consult his/her supervisor.

The following work, and work of a similar nature, should be done only under the supervision of a technician:

- (i) Operation of the overhead crane in Room A15 (unless the Chief Technician and the supervisor have agreed that the student is qualified to perform the designated work, and provided that another qualified person is present).
- (ii) Operation of the concrete mixer in Room A12 (same proviso as above).
- (iii) Work in the soils pit (unless two persons are present and specifically planned work has been approved by the supervisor(s)).
- (iv) Capping of cylinders in Room A12 (unless the Chief Technician or the supervisor agrees that the student is qualified).

Hard hats are required in Room A15. However, if you are going directly to A15A via A15, and if there is no work being done by others in Room A15, you are not required to wear a hard hat.

Students must familiarize themselves with the location(s) of first aid supplies.

13.2 After Hours

The Department requires the practice of the "buddy" system, particularly for after-hours work. This ensures that two persons are in reasonably close proximity to each other when laboratory work is in progress. **Even so, work of a dangerous nature should not be done after hours.**

Undergraduate students are to obtain a permission form from the Chair of the Department to use the Civil Engineering laboratories after hours.

Graduate students may work in the laboratory after hours with the permission of the supervisor and after informing the Chief Technician or his designate.

13.3 Laboratory Security

The A and B level laboratories have been subject to both theft and vandalism; we have lost some valuable research equipment, and several test samples have been destroyed. It is imperative, therefore, that rooms be locked when not occupied, even for short periods of time. It is an inconvenience for us to have to do this, but there seems to be no other way to effectively protect our valuable equipment.

It is important that everybody contribute to maintaining the laboratories in a clean and orderly state.

No one must borrow or otherwise acquire any piece of equipment without first checking with the Chief Technician or with the faculty member who normally works with the equipment in question. Under no circumstances must any equipment or any supplies be removed from any test in progress without first checking with the person performing the test or the person responsible for the test.

14. General Departmental and University Policies

14.1 CE Office Access

Students are not permitted in the CE office beyond the reception counter. Please wait at the counter to be served by one of the office staff.

14.2 Use of University Owned Computers

Please note that computers provided by the Department (or your Supervisor) are the property of the University and these computers are not for personal use. As such, when using these computers please do not:

- download audio or video onto the computer(s),
- store downloaded audio or video on the computer(s),
- access MSN or any other messengers/chat rooms

These activities congest the memory of the computers which can lead to shortage of space for necessary research information, especially where computers are shared by more than one student. It also increases the chance of introducing viruses into the computers.

Also, please do not change the password or language used on the computers from English to any other language. Again, a computer may be shared by more than one student or, upon completion of degree requirements the computer may be turned over to other students to use.

What Students Want to Know about IT: <http://www.unb.ca/its/resources/pdf/whatstudentswanttoknow.pdf>
“NOVELL” - Your Novell account allows you to login to computer labs on campus, access site licensed software, print documents (black/white& color) and store your files on your personal (1GB)H:\drive.

See the ITS website for complete UNB Acceptable Computer Lab Usage Policy detail listings:
<http://www.unbf.ca/its/policies/labusage.htm>

14.3 Scent Reduced Policy

A growing number of people are sensitive or allergic to perfumes and other odour irritants. Consistent with the policy in several other UNB Departments and a large number of other workplaces, the Civil Engineering Department Office is a scent-reduced workplace. Everyone coming into the Departmental Office is asked to refrain from wearing perfume, cologne, after-shave and other highly scented products. Thank you for your cooperation.

14.4 Fire Safety

Head Hall and Gillan Hall form an extremely rambling and complicated structure and students should take the time to identify emergency exits related to any labs and class rooms; if uncertain, ask your supervisor. When fire alarms are heard, students must exit the building quickly, without any hesitation. All fire alarms are to be treated with extreme seriousness.

14.5 UNB Smoking Policy

This policy is:

- a) Smoking will not be permitted in any University building, within a ten meter perimeter of any University building, or adjacent to any ventilation air intake.
- b) All building entrances will be non-smoking areas.
- c) All Residence Buildings, including residence rooms, will be non-smoking.
- d) All buildings or areas where members of the public are invited to assemble, including food service areas, reception areas and meeting rooms, will be non-smoking.

14.6 UNB Declaration of Rights and Responsibilities

The University of New Brunswick is committed to providing a positive learning and working environment, one in which all members of its community are respectful and respected as individuals. For more information on the Declaration of Rights and Responsibilities please see: <http://www.unb.ca/hr/documents/Declaration.pdf>

15. Accommodations

On Campus: The UNB Fredericton Residence Community provides accommodation for full-time students. Graduate students are attracted to McLeod House, a co-ed residence for 200 students, because of the availability of single rooms. Application forms and information about residence rates are available from; <http://www.unbf.ca/housing/reslife/> Tel: (506) 453-4800 Fax:(506) 453-3585 E-mail: resadmin@unb.ca

Student Union off Campus Housing: This is a service offered by the UNB Student Union with the intent to provide safe and affordable living accommodations for UNB students. Call 476-1250 or visit: www.frederictonstudenthousing.com

16. The International Student Advisor's Office

Telephone: 453-4860 Alumni Memorial Building, Room 18 Fax: 453-5005 E-mail: isao@unb.ca

The University of New Brunswick – Fredericton Campus, St. Thomas University, and the University of New Brunswick – Saint John Campus; welcome all international students. We hope your sojourn here will be a pleasant and rewarding one. International students are encouraged to visit the International Student Advisor's Office for information that will help during their transition stages. Students who encounter difficulties in the area of immigration, housing, communications or personal problems should not hesitate to contact the International Student Advisor's Office.

Information regarding the services provided by the International Student Advisor's Office is available on their web page: <http://www.unbf.ca/isao/>

17. Graduate Student Fee Schedule

For detailed information on Tuition and Fees, <http://www.unb.ca/gradschl/aid/index.html>

Maintaining Your Registration:

Once you are registered in the School of Graduate Studies you MUST maintain your registration and pay fees continuously until graduation (i.e. 3 terms per year).

Masters Degree students:

- Full-time students pay the current Program Fee for the first six terms of their degree program. Commencing at the seventh term, all students pay the current Continuing Fee until the completion of the program.
- Part-time students must have paid the equivalent of 4.5 times the full-time program fee in place at first registration.

PhD Degree students:

- Full-time students pay the current Program Fee for the first nine terms of their degree program. Commencing at the tenth term, all students pay the current Continuing Fee until the completion of the program.
- Part-time students must have paid the equivalent of 9 times the full-time program fee in place at first registration.

Canada Student Loans:

Canada Student Loan "Certificates of Eligibility" from the province of NB will be available at Financial Services by mid August. Registration process MUST be completed and picture identification presented before loans can be released.

18. Association of Civil Engineering Graduate Students (ACEGS)

Welcome!

The ACEGS is a graduate student led initiative to organize social events, research forums, and represent your interests to the University administration. We plan to help make your stay here more enjoyable by introducing events to help everyone to get to know each other, and to make sure your concerns are met.

How are graduate studies different?

In graduate studies, students are expected to concentrate more on research and look to course work, perhaps not for old answers, but rather new questions. The student body is also more varied than the typical undergraduate class. Many graduate students are from other countries; some study full-time, while others complete their degree part-time. These students usually have varying degrees of experience when entering Graduate School - perhaps working for several years before returning.

Why is ACEGS here for you?

Previously, Civil Engineering graduate students had no independent association to serve these needs. There is the campus-wide Graduate Students Association (GSA), but the initiative was ours to develop a group that would specifically target Civil Graduate Students. With the efforts of some senior students, the Association of Civil Engineering Graduate Students (ACEGS) of UNB was formed in 1995.

How are we funded?

Our funding comes from an operating grant paid out of a portion of student fees collected by the GSA. With this money, we can organize various social events with the aim of enhancing the graduate student experience for all civil students. We also act as the liaison between our student body and the GSA. ACEGS currently holds two voting seats on the GSA general council, providing a voice for Civil Engineering graduate students at the university level.

Who are the executive?

The Association Executive Committee (*President, Vice-President, Executive Secretary, and Treasurer*) is responsible for conducting the business of the Association and guidance is given by the current Director of Graduate Studies in Civil Engineering.

How can you become involved?

We want you! All Civil Engineering graduate students are encouraged to become involved in the Association or the Executive. We also need to have input from you in matters regarding the Department. We would like to be able to coordinate and assemble student opinions regarding the current program and affect future curriculum changes and laboratory procedures. Remember, the success of the Association depends on your involvement!

We look forward to seeing you at our events. E-mail: acegs@unb.ca URL: www.unbf.ca/clubs/acegs

President & GSA Student Rep:

Barret Kurylyk
Environment Solid Waste Management Group
x7bqq@unb.ca

Vice President & GSA Student Rep:

Ted Moffatt
Materials & Infrastructure Renewal Group
t2b8a@unb.ca

Executive Secretary & Treasurer:

Anna Perriera
Construction Engineering Management Group
d962a@unb.ca

Professor/Rep for Director of Graduate Studies:

Dr. Eric Hildebrand

Appendix A: Academic Dates 2011 - 2012

SCHOOL OF GRADUATE STUDIES CALENDAR OF ACADEMIC DATES FOR 2011-12

Copied from http://www.unb.ca/gradstudies/resources/pdfs/cal_acad_dates_2011_121.pdf

The dates shown below apply to graduate level programs and courses. They do not necessarily apply to undergraduate programs, the Faculty of Law, or to courses offered through the College of Extended Learning, the MBA Saint John or the MBA Fredericton. Students should consult the appropriate calendar, brochure, or with the Graduate Secretary or Director of Graduate Studies in the MBA programs. UNB Saint John to determine appropriate dates for Spring Session:

<http://www.unb.ca/academics/spring-sj.html>

MONTH	DATE	DAY	EVENT
May, 2011	02	Monday	Full Intersession and Mini Session 1 classes begin
	18-19	Wed-Thurs	The 182nd Encaenia – Fredericton Campus. Visit website for more information on the ceremony: http://www.unb.ca/graduation/
	20	Friday	The 37th Spring Convocation – Saint John Campus. Visit website for more information on the ceremony: http://www.unb.ca/graduation
	23	Monday	Victoria Day – University Holiday – no classes*
	24	Tuesday	Last day of classes in Mini Session 1
	25-26	Wed – Thurs	Final examinations for Mini Session 1
	May 27-June 5	Friday-Sunday	Intersession Break - Congress
Jun e	6	Monday	Full Intersession classes resume Mini Session 2 classes begin
	27	Monday	Last day of classes for Full Intersession and Mini Session 2
	28-30	Tues – Thurs	Final examinations for Full Intersession and Mini Session 2
July, 2011	1	Friday	Canada Day – University Holiday – No Classes*
	4	Monday	Full Summer Session and Mini Session 1 classes begin
	15	Friday	Last day to opt-out of International Health Insurance for Summer Term. In order to opt out, please show proof of equivalent coverage to Financial Services in the I.U.C. Physics/Admin. Bldg.
	20	Wed	Last day of classes for Mini Session 1
	21	Thursday	Final Examinations for Mini Session 1
	22	Friday	Mini Session 2 classes begin
August, 2011	1	Monday	New Brunswick Day – University Holiday – No Classes*
	3	Wednesday	Last date for doctoral dissertations to reach the Dean of Graduate Studies for the final examination process if degree to be conferred at Fall Convocation 2011. NO EXCEPTIONS WILL BE MADE. (Note: meeting this deadline does not necessarily guarantee graduation at the subsequent ceremony).
	10	Wed	Last day of classes for Summer Session and Mini Session 2
	11-12	Thurs-Fri	Final Examinations for Summer Session and Mini Session 2

September, 2011	1	Thurs.	Last day to apply on-line to graduate in order for your degree to be conferred at Fall Convocation 2011: http://www.unb.ca/graduation/ (Note: This is an intent to graduate pending on successful completion of degree requirements).
	2 & 6	Monday & Tuesday	Residence open for new students & continuing students visit website for dates: http://www.unb.ca/fredericton/residence/
	5	Monday	Labour Day – University Holiday – No classes*
	6-7	Tues. – Wed.	Academic Programming and Orientation. Please see the Director of Graduate Studies in the Dept./Faculty.
	8	Thursday	Start of Classes. Both Campuses – Fall Term
	15	Thurs.	Last day of submission of all completed degree requirements (including defence & submission of corrected dissertation/thesis/report) to the Dean of Graduate Studies for graduation at Fall Convocation 2011.
	21	Wednesday	Last day to make fee-payment arrangements with Financial Services or students may be withdrawn from the School of Graduate Studies & their graduate programmes. Exception will be made to those students who are defending their thesis/reports/dissertations by the end of this month.
	21	Wednesday	Last day for adding Fall term and full-year courses. Fall term and full-year courses dropped up to and including this date are not shown on the academic record.
	23	Friday	Last day to opt-out of Health & Dental Plan for those students (including International students) who began in September. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgsa.ca/
	23	Friday	Last day to opt out of UNB Health Insurance for International Students. In order to opt out, please show proof of equivalent coverage to Financial Services.
	23	Friday	Deadline to opt-out of bus pass with supervisor's confirmation of address outside the city. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgsa.ca/
	30	Friday	Students completing their degree requirements (including defence & submitting final copies of dissertation/thesis/report) by the last day of the month in which a term commences, will not be required to pay tuition fees for that term. Note: Even if students defend by the end of the month, they must register for the term. Once they have completed by the deadline date, registration for that term will be removed by SGS. They will be eligible to graduate at Encaenia/Spring Convocation in May 2012.
October, 2011	6	Thursday	SGS Executive Committee meeting & approval of the graduation list for Fall Convocation 2011.
	10	Monday	Thanksgiving Day. University Holiday – No Classes*
	20	Thursday	Fall Convocation – UNB Fredericton Visit website for more information on the ceremony: http://www.unb.ca/graduation/
	21	Friday	Fall Convocation – UNB Saint John. Visit website for more information on the ceremony: http://www.unb.ca/graduation/

	21	Friday	Last day to withdraw from Fall term courses with pro-rated refund (see University Refund Policy: https://eservices.unb.ca/calendar/undergraduate/) Last day for adding family members to the Health & Dental Insurance. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgca.ca/
November, 2011	4	Friday	Last day to withdraw from Fall term courses without academic penalty. (no refund) A "W" (Withdrawn) notation will be shown on the academic record.
	11	Friday	Remembrance Day. University Holiday – No classes*
	23	Wednesday	Last day in Fall term to hold class tests. (see Regulations on Examination, Standings and Promotion: https://eservices.unb.ca/calendar/undergraduate/)
December, 2011	7	Wednesday	Last day of Fall term classes.
	8	Thursday	Reading Day
	9	Friday	Final Examinations begin.
	20	Tuesday	Final Examinations end.
	23-30	Friday-Friday	University Holiday 23, 26, 27 & 30 th . No classes*
January, 2012	2	Monday	University Holiday. No classes*
	4	Wednesday	Start of classes for both campuses – Winter term
	17	Tuesday	Last day for adding Winter term courses. Winter term courses dropped up to and including this date are not shown on the academic record. Last day to withdraw from full-year courses without academic penalty. A notation of "W" (withdrawn) will be shown on the academic transcript. Last day to withdraw from Winter term courses with pro- rated refund.
	18	Wednesday	Last day to make fee-payment arrangements with Financial Services or students may be withdrawn from the School of Graduate Studies & their graduate programmes. Exception will be made to those students who are defending their thesis/reports/dissertations by the end of this month
	20	Friday	Last day to opt-out of Health and Dental Plan (including International Students) for those students who enrolled in January 2012. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgca.ca/
	20	Friday	Last day to opt-out of International Health Insurance for those students who enrolled in January 2011. In order to opt out, please show proof of equivalent coverage to Financial Services.
	20	Friday	Deadline to opt-out of bus pass with supervisor's confirmation of address outside the city. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgca.ca/
	31	Tuesday	Students completing their degree requirements (including defence & submitting final copies of dissertation/thesis/report) by the last day of the month in which a term commences, will not be required to pay tuition fees for that term. Note: Even if students defend by the end of the month, they must register for the term. Once they have completed by the deadline date, registration for that term will be removed by SGS. They will be eligible to graduate at Encaenia/Spring Convocation in May 2012.

February, 2012	1 0	Friday	Last date for doctoral dissertations to reach Dean of Graduate Studies for the final examination process if degree to be conferred at Encaenia/Spring Convocation in May 2011. NO EXCEPTIONS WILL BE MADE. (Note: meeting the deadline date does not necessarily guarantee graduation at the subsequent ceremony.)
	1 7	Friday	Last day for adding family members to the Health & Dental Insurance. Please contact the Graduate Student Association at 453-4700 or visit their website: http://www.unbgsa.ca/
	2 8	Tuesday	Last day to withdraw from Winter term courses without academic penalty. A "W" (withdrawn) notation will be shown on the academic record.
March, 2012	5-9	Monday-Friday	Winter Term Break. No Classes*
	9	Friday	Master's theses and reports (with the exception of MEng reports) should reach Director of Graduate Studies of GAU if degree to be conferred at May Encaenia/Spring Convocation 2012.
	22	Thursday	Last day in Winter term to hold class tests (see regulations on Examination, Standings and Promotion) https://eservices.unb.ca/calendar/undergraduate/
	23	Friday	MEng reports should reach Director of Graduate Studies of GAU if degree is to be conferred at May Encaenia/Spring Convocation 2012.
April, 2012	2	Monday	Last day for blue "Application to Graduate" cards to reach the Graduate School in order for your degree to be conferred at Encaenia/Spring Convocation in May 2012 (Note: This is an intent to graduate pending on successful completion of degree requirements).
	5	Thursday	Last day of Winter Term classes.
	6-9	Friday-Monday	Easter. University Holiday – No classes*
	1	Wednesday	Final examinations begin
	13	Friday	Last day for submission of all completed degree requirements (including defence and corrected dissertations/theses/reports) to Dean of Graduate Studies if degree is to be conferred at May Encaenia/Spring Convocation 2012.
	2	Saturday	Final examinations end.
			UNB Saint John to determine appropriate dates for Spring Session: http://www.unb.ca/academics/spring-sj.html
May, 2012	1	Tuesday	Full Intersession and Mini Session 1 classes begin
	3	Thursday	SGS Executive Committee meeting & approval of the graduation list for Spring Encaenia/Convocation in May 2012
	16	Wednesday	Last day to make fee-payment arrangements with Financial Services or students may be withdrawn from the School of Graduate Studies & their graduate programmes. Exception will be made to those students who are defending their thesis/reports/dissertations by the end of this month.
	18	Friday	Last day to opt-out of International Health Insurance for Intersession or Spring Session. In order to opt out, please show proof of equivalent coverage to Financial Services in the I.U.C. Physics/Admin. Bldg.
	2	Monday	Victoria Day – University Holiday – no classes*

	23	Wednesday	Last day of classes in Mini Session 1
	24-25	Thursday-Friday	Final examinations for Mini Session 1
	28	Monday	Mini Session 2 classes begin
	23-24	Wed.-Thurs	The 183rd Encaenia – Fredericton Campus. Visit website for more information on the ceremony: http://www.unb.ca/graduation/
	25	Friday	The 38th Spring Convocation – Saint John Campus. Visit website for more information on the ceremony: http://www.unb.ca/graduation/
	31	Thursday	Students completing their degree requirements (including defence & submitting final copies of dissertation/thesis/report) by the last day of the month in which a term commences, will not be required to pay tuition fees for that term. Note: Even if students defend by the end of the month, they must register for the term. Once they have completed by the deadline date, registration for that term will be removed by SGS. They will be eligible to graduate at Fall Convocation 2012.
June, 2012	18	Monday	Last day of classes for Full Intercession and Mini Session 2
	19-20	Tuesday-Wednesday	Final examinations for Full Intercession and Mini Session 2
July, 2012	2	Monday	Canada Day. University Holiday – No classes*
	3	Tuesday	Full Summer Session and Mini Session 1 classes begin
	13	Friday	Last day to opt-out of International Health Insurance for Summer Term. In order to opt out, please show proof of equivalent coverage to Financial Services
	19	Thursday	Last day of classes for Mini Session 1
	20-21	Friday-Saturday	Final Examinations for Mini Session 1
	23	Monday	Mini Session 2 classes begin
August, 2012	3	Friday	Last date for doctoral dissertations to reach the Dean of Graduate Studies for the final examination process if degree to be conferred at Convocation. NO EXCEPTIONS WILL BE MADE. (Note: meeting the deadline date does not necessarily guarantee graduation at the subsequent ceremony).
	6	Monday	New Brunswick Day. University Holiday – No classes*
	9	Thursday	Last day of classes for Summer Session and Mini Session 2
	10-11	Friday-Saturday	Final Examination for Summer Session and Mini Session 2

*Except for essential operations, most university offices will be closed on the dates indicated as "University Holiday". Essential functions, for example, Security, Heating Plant and the Residences will be staffed and operational. Facilities Management will have staff on call should they be needed. A few departments and facilities such as the libraries, computer labs, Financial Services, Registrar's Offices may offer some services on certain holidays. Those wishing to use such services on any holiday are advised to check with the specific department about operations for that day.

RECOMMENDED FOR SENATE APPROVAL by the Executive Committee of the School of Graduate Studies on February 17, 2011.

APPROVED AT SENATE at UNBSJ on March 23, 2011 and at UNBF on March 29, 2011.

Appendix B: PhD Comprehensive Examination Guidelines

PhD Comprehensive Examination Guidelines

The candidate will submit a written proposal for the PhD thesis to his/her supervisor(s) before the Comprehensive Examination is scheduled. The supervisor(s) will decide on an appropriate date for the Comprehensive Examination. The deadline for submission of the proposal by full-time candidates will normally be within twelve months of their first registration in the PhD program of studies (within two years for part-time candidates). The deadline for submission of the proposal for students who transfer into a PhD from an MScE will normally be at the end of the first term as a PhD Candidate. The deadline for submission of the proposal may be extended with a written request by the candidate's supervisor(s) to the Director of Graduate Studies but must be held within eighteen months of first registration (within three years for part-time candidates).

The supervisor(s) will submit a list to the Director of Graduate Studies of the members proposed for the Examining Committee for the Comprehensive Examination at least a month before the proposed Comprehensive Examination.

The Examining Committee will normally consist of the supervisor(s), at least one other faculty member from the GAU in which the candidate is registered, and at least one faculty member from another GAU at the University of New Brunswick. Normally the Examining Committee should consist of five members.

The Chair of the Examining Committee for the PhD Comprehensive Examination shall be the Director of Graduate Studies or his/her designate. The Chair shall not be a voting member of the Examining Committee. A tie vote will result in a second and final attempt at the PhD Comprehensive Examination. A tie for a second attempt will result in a failure of the PhD Comprehensive Examination.

The UNB members of the Examining Committee for the PhD Comprehensive Examination will normally be the UNB members of the Examining Board for the final thesis submission.

The PhD Comprehensive Examination includes a component related to the candidate's general field of study and a component related to the work proposed for the PhD thesis.

The steps to be followed for the PhD Comprehensive Examination are as follows:

- 1) The candidate, through his/her supervisor, will submit a copy of his/her written proposal for the PhD thesis to the Director of Graduate Studies at least 28 days before the scheduled Comprehensive Examination. The Director of Graduate Studies will provide a copy of the proposal to each member of the Examining Committee within two days of receipt. (The candidate is encouraged to visit members of the Examining Committee before commencing the written component of the Comprehensive Examination to receive any resource material that the member wishes to pass on to the candidate.)

- 2) Each member of the Examining Committee will submit one to three questions related to the candidate's general field of study to the Director of Graduate Studies at least 14 days before the scheduled Comprehensive Examination. These questions will form the written general component of the Comprehensive Examination.

As a guideline, the questions by any one member of the Examining Committee should be completed in writing in a period of less than six hours. The examination will normally be an open book format, however each examiner can require the candidate to write an open book, a closed book, or a combined open book and closed book examination. These questions will also form the basis of the oral parts of the general component of the Comprehensive Examination.

Before providing the questions to the Candidate, the Director of Graduate Studies, in consultation with the supervisor(s), will review the questions to determine if they are in the candidate's general area of study and can be answered in a reasonable period of time. The questions may include areas specifically mentioned in the submitted proposal.

The candidate must not interact with others regarding the written examination. The submitted answers must be the independent work of the candidate. Proper citation of the work of others and complete references must be provided.

- 3) The Director of Graduate Studies will provide the Candidate with the questions for the written component of the Comprehensive Examination from all of the members of the Examining Committee seven days before the scheduled Comprehensive Examination. Copies of all questions will also be distributed to each member of the Examining Committee.

The Director of Graduate Studies will provide a notice of the date, time and place of the PhD Comprehensive Examination to members of the GAU.

- 4) The candidate will submit the written responses to the Director of Graduate Studies at least three days before the Comprehensive Examination. The Director of Graduate Studies will provide the written responses of all submissions to the members of the Examining Committee at least two days before the scheduled Comprehensive Examination. Each member of the Examining Committee will grade the written responses to his/her question(s).
- 5) The Department of Civil Engineering shall be informed one week prior to the Comprehensive Examination. On the day of the Comprehensive Examination the candidate will appear to orally answer questions posed by the members of the Examining Committee and others who are in attendance. All questions will be posed through the Chair who will determine if the questions are in the general research area to be pursued by the candidate.
- 6) The format of the oral portion of the proposal component of the Comprehensive Examination to test the Candidate's knowledge and competence to carry out research on his/her proposed thesis topic will be:

- 6.1) The candidate will give an oral presentation of his/her proposal for up to 20 minutes.
 - 6.2) A general question period will follow for up to 40 minutes. The questions are to be related to the subject area of the proposal.
- 7) The format of the oral portion of the general component of the Comprehensive Examination to test the Candidate's general knowledge of his/her area of study will be:
- 7.1) Examiner #1 (supervisor) will ask the candidate questions that are directly related to the questions that he/she has submitted to the candidate. This will last for up to 10 minutes.

The floor will then be open for follow-up questions that are related to the questions posed by Examiner #1. This will last for up to 10 minutes.
The total time allocated for questions and answers related to those initially submitted by Examiner #1 will be 20 minutes.
 - 7.2) Examiner #2 proceeds in a similar manner to Examiner #1. Then the same procedure will be followed for each of the other members of the Examining Committee.
 - 7.3) Finally the floor is opened up to questions related to the general area of study to be pursued by the candidate. This will last for up to 20 minutes.
 - 7.4) There will be a 15-minute break at this time.
- 8) The assessment of the Comprehensive Examination will be carried out immediately following the oral examination. The Examining Committee and other faculty members will meet to formally assess the performance of the candidate.

The Examining Committee will then decide if the candidate passes or fails the Comprehensive Examination. The Examining Committee shall consider the following when making their decision:

- the submitted written answers to questions posed by the members of the Examining Committee for the general component of the Comprehensive Examination.
 - the oral response to the questions posed in relation to the general component of the formal Comprehensive Examination.
 - the submitted written proposal for the PhD thesis.
 - the oral response to the questions posed in relation to the proposal component of the formal Comprehensive Examination.
- 9) The candidate will be informed in writing by the Director of Graduate Studies or his designate (with a copy to the Dean, School of Graduate Studies) of the decision of the Examining Committee within a period of three days after the completion of the Comprehensive Examination.

The maximum time for the oral portion of the PhD Comprehensive Examination including the general component and the proposal component is:

$\frac{1}{2}$ hour x number of examiners, plus
 $\frac{1}{2}$ hour for general questions, plus

¼ hour for a break, plus
⅓ hour for the presentation of the proposal, plus
⅔ hour for response to questions related to the proposal.

For three examiners the total time is 2 hours 35 minutes.
For four examiners the total time is 2 hours 55 minutes
For five examiners the total time is 3 hours 15 minutes.

It is noted that these are maximum times.

Time from date of PhD Comprehensive Examination (*suggested guidelines*):

- Start The supervisor(s) in consultation with the Director of Graduate Studies will set the date for the oral examination.
- 30 days Establish composition of the Examination Committee by supervisor(s) through Director of Graduate Studies.
- 28 days The candidate submits his/her PhD proposal to supervisor(s) who passes copies to the Director of Graduate Studies (one copy for each member of the Examining Committee, plus a copy for the Director of Graduate Studies).
- 26 days The Director of Graduate Studies provides a copy of the proposal to each member of the Examining Committee.
- 14 days Each member of the Examining Committee submits one to three questions to the Director of Graduate Studies. The Director of Graduate Studies reviews questions and prepares them for submission to the candidate.
- 7 days The Director of Graduate Studies provides questions to the candidate. Written responses by the candidate are submitted to the Director of Graduate Studies within 72 hours after receipt of questions.
 The Director of Graduate Studies circulates a notice of the PhD Comprehensive Examination to faculty members and graduate students of the GAU of Civil Engineering.
- 2 days The Director of Graduate Studies provides copies of written responses to the members of the Examining Committee
- 0 day The Director of Graduate Studies chairs the PhD Comprehensive Examination.

In the event that the Director of Graduate Studies is unable to perform the duties outlined in these procedures, then he/she may designate a member of the GAU to substitute as Chair subject to the approval of the supervisor(s).

The procedures and responsibilities associated with faculty who are members of the Graduate Academic Unit of Civil Engineering PhD Comprehensive Examination Committees are as follows:

Procedures and Responsibilities Associated with Faculty who are Members of PhD Comprehensive Examination Committees

1. Review the candidate's proposal
2. Give the candidate an opportunity to meet with me at least once to discuss the general area on which he/she will be examined. (If appropriate, to indicate the texts or papers which the candidate should study in preparation for the comprehensive component of his/her Comprehensive Examination.)
3. Prepare questions for the written portion of the general component of the Comprehensive Examination. These questions will be in the general field of study being pursued by the candidate. These questions will be provided to the Director of Graduate Studies in the Department of Civil Engineering. Normally the written examination will be open book although it can be closed book, or a combination of both open and closed.

The maximum estimated time to complete the written examination should be six hours per set of questions per examiner.

4. Grade the answers to the written portion of the general component of the Comprehensive Examination.
5. Attend the meeting of the Examining Committee at the oral presentation component of the Comprehensive Examination. The Comprehensive Examination will normally require a 4 - hour block of time. This meeting will include the oral portion of the general component and the oral portion of the proposal component of the Comprehensive Examination.
6. Assess the candidate's overall performance and decide if the candidate passes or fails the Comprehensive Examination.
7. Be willing to serve as a reader on the Examining Board for the candidate's PhD thesis. This is not a firm commitment. However, you will most likely be recommended to serve on the Examining Board when the Examining Board is formalized by the Dean of Graduate Studies.

April, 2000

Appendix C: MScE Written Thesis Proposal

DEPARTMENT OF CIVIL ENGINEERING

**MScE Thesis Proposal
Format and Content**

For all MScE Civil Engineering graduate students there is a requirement for a written Thesis Proposal. The Thesis Proposal must be approved by the student's primary Supervisor(s) and the CE Director of Graduate Studies (or their designate) within nine (9) months (within 18 months for part-time) of first registration. For full-time students the deadline for submission of the proposal may be extended with a written request from the candidate's supervisor(s) to the Director of Graduate Studies but must be submitted within thirteen (13) months of first registration. Students are encouraged to present the proposal orally to their research group.

The Thesis Proposal should not exceed 15 pages, and include the following:

Title Page (topic title, student name, supervisor(s) name, date)
Table of Contents (with headings, page numbers)
Summary <ul style="list-style-type: none">• one page (simple terms, objectives, approach, results, duration)
Introduction (or Problem Development) <ul style="list-style-type: none">• background to problem, why is it significant, etc.• a comprehensive literature review is not expected here; however, the proposal must indicate the knowledge of some recent relevant studies and/or published articles on the proposed topic• clear problem (or opportunity) statement
Goals and Scope <ul style="list-style-type: none">• state the goal of the research• identify realistic and specific objectives that will collectively accomplish this goal• describe the scope of the research by specifically identifying the expected boundaries of the research
Study Methodology <ul style="list-style-type: none">• associated method for each objective• discuss methods for data collection (laboratory testing, literature review, interviews, etc.) and analyzing/applying data (statistical tests, theoretical or empirical equations, design procedures, etc.)• mention alternative approaches (if any exist)• address constraints or limitations of proposed approach
Schedule <ul style="list-style-type: none">• schedule all major activities, including time for preparation of reports and meetings• present schedule in a graphical form
Resources <ul style="list-style-type: none">• identify resources (materials, equipment, personnel) adequately; include your own time
Outcomes <ul style="list-style-type: none">• identify the anticipated significant research findings and propose form(s) of dissemination
References <ul style="list-style-type: none">• provide references in the correct format (e.g. Canadian Journal of Civil Engineering)• cite all references in the body of the Proposal
Appendices (if required) <ul style="list-style-type: none">• may include supporting data or detailed technical discussion/procedures
*New Research Safety Form & Research Environmental Plan Form (required) <ul style="list-style-type: none">• forms are on the CE website under current students

Appendix D: Scholarships/Awards/Grants

Awards:

(As listed on the School of Graduate Studies web site)

Details: https://eservices.unb.ca/calendar/graduate_awards/awards.cgi?id=1&tables=awardsSubLevel1&fac=Engineering

Possible awards available to CE students only:

- ADI Industrial Wastewater Management Graduate Scholarship
- Albert M. Stevens Scholarship
- Bremner Scholarship in Concrete Materials
- Canadian Construction Research Board (New Brunswick Chapter)
- Esterbauer Civil Engineering Graduate Award
- Dr. Michael and Mary M. Ircha Scholarship in Transportation
- R. H. B. McLaughlin Fellowship in Civil Engineering
- Stevens Wilson Graduate Fellowship in Civil Engineering (Transportation)
- Transportation Association of Canada Postgraduate Scholarship Program

Possible awards available to CE students and other disciplines:

- APEGNB Advanced Studies Scholarship
- Beit Fellowship for Scientific Research-Imperial College, University of London
- Canadian Engineering Memorial Foundation Scholarships
- Canadian Water Resources Association Scholarships
- CCPE-Manulife Financial Scholarships
- CCPE-Meloche Monnex Scholarships
- Concrete Research and Education Foundation of ACI International
- Donald Jamieson Fellowship in Structural Engineering
- Emera Graduate Scholarship
- Engineering Futures Graduate Scholarship
- J.-Louis Levesque Fellowship
- J.O. Dineen Memorial Scholarship
- Joanne Keselman Scholarship for Women in Engineering
- Leslie Jaeger Scholarship for the Advancement of Engineering
- Link Foundation Energy Fellowship
- Nova Scotia Habitat Conservation Fund Grants
- NSERC Industrial Postgraduate Scholarships
- NSERC Innovation Challenge Awards
- NSERC-Visiting Fellowships in Canadian Government Laboratories
- Society of Automotive Engineers Doctoral Scholars Forgivable Loan Program
- Soil & Water Conservation Society David A. Williams Soil Conservation Scholarship
- Soil & Water Conservation Society Melville H. Cohee Student Leader Conservation Scholarship
- Soil & Water Conservation Society Kenneth E. Grant Scholarship
- Southern Gulf of St. Lawrence Coalition on Sustainability Scholarship for Sustainability
- The Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering
- The President's Doctoral Tuition Awards
- William & Margaret Brown Cambridge Scholarship
- Yanmar/SAE Scholarship

Possible School of Graduate Studies Student Travel Grant:

Details: <http://www.unb.ca/gradschl/regulations/documents/StudentTravelGrantApplicationForm.pdf>