

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND
Academic Council of the School of Graduate Studies
Minutes, December 16, 2013**

PRESENT: Dr. N. Golfman, Dr. F. Murrin, Professor P. Coady, Dr. K. Arnold, Dr. B. Sheppard, Dr. D. Behm, Ms. C. Walsh, Dr. M. Volk, Dr. D. Moralejo, Dr. M. Daneshtalab, Dr. A. Mercier, Dr. B. LeFrancois, Ms. M. Fitzsimmons, Mr. B. Maity, Mr. K. Balogun, Ms. L. Busby, Ms. E. Pittman

APOLOGIES: Dr. S. Carr, Dr. C. Dyck, Dr. R. Hammett, Dr. D. Foster, Dr. S. Matthews, Ms. K. Lord

A welcome was extended to Ms. Echo Pittman, representing the Registrar's Office, and Ms. Kelly Vodden, Grenfell Campus.

1. MINUTES:

It was moved by Ms. Fitzsimmons and seconded by Professor Coady, that the minutes of the meeting held November 18, 2013, be approved as circulated. The motion

CARRIED

2. BUSINESS ARISING

3. CORRESPONDENCE

4. DEAN'S REPORT/REPORT OF SENATE

- a. All items of business that were forwarded to Senate for its meeting of December 10th, 2013, were approved under the Consent Agenda.
- b. The SGS Holiday Reception is scheduled for Wednesday, December 18th, at 3:00 p.m. in Room IIC 2014, Bruneau Centre.

5. REPORT OF THE GRADUATE STUDENTS' UNION

- a. The by-election for the VP (Academic) position of the GSU, was held from November 19-22, 2013. There were three candidates. Mr. Al-Abbass Al-Habashneh was the successful candidate.
- b. Aldrich Conference 2014 – The conference is scheduled for March 21-23, 2014. Advertising has begun and a call for presentations has been sent out.

6. STANDING COMMITTEES

- a. Academic Council Executive
- i) Medicine – New Course 6263

It was moved by Dr. Behm, and seconded by Dr. Moralejo, that the proposed new course 6263 ‘Conducting and Publishing a Systematic Review and Meta-analysis’, which will be inserted under section 26.2.3. of the University Calendar, be approved.

The motion

CARRIED

Course Description 6263:

This course on conducting a systematic review and meta-analysis is designed for graduate students in health related disciplines. The student will be taken through the process of conducting a systematic review of the literature and a subsequent meta-analysis of the eligible articles. The course will include 12 three-hour sessions. Sessions will be in lecture, workshop, and journal club format. The final session will be the examination. The students will also work together in pairs outside of the structured lectures. The course can accommodate up to 10 students who will be divided into five groups of two. Each pair will conduct a systematic review and meta-analysis during the semester and will write up the results in a manuscript form suitable for submission to a journal. Evaluation will consist of a grading of the manuscript (50%) and an examination (MCQs and short answer questions) 50%.

- ii) Archaeology – New Course 6687

It was moved by Dr. Behm, and seconded by Dr. LeFrancois, that the proposed new course 6687 ‘Applied Archaeological Sciences’, which will be inserted under the Courses sections 7.6.2 and 30.2.2 of the University Calendar, be approved. The block of special topics numbers will also reference that 6687 is to be excluded from the existing block of special topics numbers.

The motion

CARRIED

Course Description 6687:

With the advancement of new technologies that are now accessible to archaeologists, the integration of natural science techniques into the practice of archaeology is becoming more widespread. This course will address the broader theoretical concepts of archaeology as science and

the role of nature science in archaeology, while introducing principles of chemistry and biology as applied to archaeology. Case-studies and specific methods applied in archaeological science, including stable isotope analysis, trace element analysis, ancient DNA, and micropaleontology will also be introduced to provide students with a foundation to understand palaeoenvironmental reconstruction, human diet and health, migration as well as artifact sourcing. The primary objective of this course is to provide graduate students with a constructive understanding of the role of natural science in archaeology.

iii) Computational Science – Name Change to Program and Calendar Revisions

It was moved by Dr. Behm, and seconded by Dr. Mercier, that the proposed name change from Computational Science, to Scientific Computing, which better reflects the program, be approved. There are also revisions to existing courses (name changes, adding and removing courses from subsections of the Courses section). The changes are reflected in section 24.10 of the University Calendar.

The motion

CARRIED

24.10 ~~Computational Science~~ Scientific Computing

- **Professor and Program Chair**
- M. Plumer

24.10.1 Administrative Committee

The Administrative Committee, appointed by the Dean of the School of Graduate Studies on the recommendation of the Dean of the Faculty of Science, consists of at least one representative of each participating academic unit, and one member external to the University.

24.10.2 Participating Departments and Organizations

This interdisciplinary program offers the Master of Science Degree in both ~~Computational Science~~ **Scientific Computing** and ~~Computational Science~~ **Scientific Computing** (Co-operative). The departments of Biochemistry, Chemistry, Computer Science, Earth Sciences, Mathematics and Statistics, Physics and Physical Oceanography and the Faculty of Engineering and Applied Science are participants in this program. Other departments and faculties may be involved, depending on the nature of the thesis or project. External organizations may provide placements for co-op students, jointly supervise students, share computing resources and participate in teaching courses.

24.10.3 Admission Criteria and Procedures

1. The criteria for acceptance of an applicant are: his or her anticipated successful and timely completion of the program, and the willingness of a participating faculty member to supervise the applicant.

2. Students will be expected to hold a B.Sc. (Honours) or B.Eng. Degree with honours standing, or equivalent, with a strong computational orientation. At the time of application, the student is expected to provide evidence (for example, transcripts of completed courses) of his or her knowledge of a modern computer language such as Fortran, and/or C and/or C++, and/or Matlab, and/or Python. Evidence of knowledge of differential equations; and/or linear algebra and/or computer graphics would be an asset. Students with an inadequate background may be encouraged to take certain undergraduate courses.

3. Admission decisions will be made by the School of Graduate Studies on the recommendation of the Chair of the Administrative Committee.

24.10.4 Program of Study

1. The goal of ~~Computational Science~~ **Scientific Computing** is to solve technical problems, in science and engineering, using computers and computational methods. Our program is designed to educate students to apply computational, numerical and programming concepts and tools to solve and model complex problems in science and engineering.

2. The Program is offered in thesis and project (non-thesis) versions, with the option of a co-operative education program. It is intended that the overall level of student effort and performance required in each version will be comparable. The normal length of time to complete each option is 24 months.

3. The work for the thesis or project will be carried out under the guidance of a supervisor (or joint supervisors). The home department of the student will be the same as that of the Supervisor. Upon completion of the work for the thesis or project, to be submitted to the School of Graduate Studies for examination, each student is required to present a seminar suitable for the interdisciplinary audience of ~~Computational Science~~ **Scientific Computing** program students.

4. All students are required to complete a minimum of 3 core courses (9 credit hours) selected from the list of **Core Courses** listing below. All students are also recommended to complete CMSC 6950. Additional courses are required in accordance with the program options as outlined below and will normally be selected from the student's discipline of specialization. The course requirements for each student are approved by the Program Chair on the recommendation of the student's supervisor(s), and should reflect the interdisciplinary nature of the program. Students are expected to attend research seminars in their home department as well as those relevant to ~~Computational Science~~ **Scientific Computing**, when advertised.

a. The thesis option requires the completion of a minimum of four graduate courses (12 credit hours) numbered 6000 or higher, which must include three courses (9 credit hours) from the **Core Courses** listing below. Equivalent courses may be considered for substitution with approval of the Program Chair. ~~CMSC 6950 is also recommended.~~ The additional course(s) will normally be chosen from the **Additional Courses** listing below in the same discipline as the thesis work. The submission of an acceptable thesis is required. The thesis is to contain an original scholarly contribution which must be submitted to the School of Graduate Studies for final examination. Each student is also required to present a seminar on their thesis

research topic that demonstrates their use of computational techniques to solve a problem in science or engineering.

b. The project option requires the completion of a minimum of seven graduate courses (21 credit hours) numbered 6000 or higher, which must include at least three courses (9 credit hours) from the **Core Courses** listing below. Equivalent courses may be considered for substitution with approval of the Program Chair. ~~CMSC 6950 is also recommended.~~ An acceptable project report is also required which must be submitted to the School of Graduate Studies for final examination. The additional courses will normally be chosen from the **Additional Courses** listing below in the same discipline as the project work. The project, which will include an in-depth written report, shall require the equivalent of at least one and no more than two semesters of full time work.

24.10.5 Co-operative Education Option

1. A co-operative education option will be available to students who are accepted into the M.Sc. program. Students in this option may follow the thesis or non-thesis version of the program. It is expected to take up to 24 months to complete.
2. Students will normally declare their intention to complete the co-operative education option at the start of the second semester of their academic program.
3. Students will complete two work terms consecutively, normally following the successful completion of two academic semesters.
4. The dates for starting and finishing each work term are shown in the **University Diary**.
5. A competition for work term employment is organized by the Division of Co-operative Education (DCE) in cooperation with a designated faculty member from ~~Computational Science~~ **Scientific Computing**. Students may also obtain their own work term jobs outside the competition. Such jobs must be confirmed by letter from the employer and approved by the Chair of ~~Computational Science~~ **Scientific Computing** and by the DCE on or before the first day of the work term. Work term jobs may be outside St. John's and possibly outside Newfoundland and Labrador. Students who do not wish to accept a work term job arranged by DCE shall be responsible for finding an acceptable alternative. By entering the competition, students give permission for the DCE to supply their Memorial University of Newfoundland transcripts and resumes to potential employers.
6. Each work term placement will be supervised by the student's program supervisor, the on-site supervisor assigned by the employer and the DCE Coordinator. The overall evaluation of the work term is the responsibility of the program Supervisor, on-site Supervisor and DCE Coordinator. The work term shall consist of two components:
 - On-the-job Student Performance as evaluated by the on-site supervisor and DCE Coordinator, in consultation with the program supervisor.
 - A Work Report graded by the DCE Coordinator and the program supervisor in consultation with the on-site supervisor.

Evaluation of the work term will result in the assignment of one of the following final grades:

- *Pass with Distinction*: Indicates OUTSTANDING PERFORMANCE in both the work report and work performance.
- *Pass*: Indicates that PERFORMANCE MEETS EXPECTATIONS in both the work report and work performance.
- *Fail*: Indicates FAILING PERFORMANCE in the work report and/or the work performance. If a student fails to achieve a final grade of Pass or Pass with Distinction, and provided the student has not failed to achieve a grade of 'B' or better in any program course, the student may request to repeat the work term component. The request will be considered by the Chair of ~~Computational Science~~ **Scientific Computing** in consultation with the program supervisor and the DCE Coordinator. Only one repetition of a work term will be permitted in the student's program. Following the completion of the two work terms, each student must complete any remaining course requirements and project report or thesis. Assuming that prior written authorization of the employer and the supervisory committee was obtained and submitted to the School of Graduate Studies, students may include material from the work terms in their reports or theses. For students following the non-thesis version of the program, the two work-term reports may be combined into a single, integrated report for this purpose. All other students must write a thesis on a research project which may be based on research completed during the work terms. Students who are accepted into the co-op option are not guaranteed placements. In the event that a student fails to obtain two semesters of placements, but successfully completes all other requirements of the Degree, he or she will still be eligible for graduation, but without the designation of a co-op degree.

24.10.6 Courses

- **Core Courses**
- Mathematics 6210 Numerical Solutions of Differential Equations
- ~~Computational Science~~ **Scientific Computing** 6910 Matrix Computations and Applications *or Computer Science 6732 Matrix Computations (credit may be obtained for only one of CMSC 6910 and COMP 6732)*
- ~~Computational Science~~ **Scientific Computing** 6920 Applied Scientific Computing Programming
- ~~Computational Science~~ **Scientific Computing** 6930 Algorithms for Distributed and Shared Memory Computers
- **Scientific Computing** 6950 Computer Based Tools and Applications
- Computer Science 6731 Topics in Numerical Methods
- ~~Computational Science 6900-6909 Special Topics~~
- **Additional Courses**
- The following courses are identified as suitable for students in this program. Other courses may be permitted with the approval of the Program Chair.
- **Biochemistry**
- 6420 DNA: The Structure and Function of Genes
- 6421 RNA: Structure, Function and Synthesis

- ~~6422 Regulation of Protein Synthesis~~
- ~~6430 Bioenergetics~~
- ~~6440 Membranes~~
- ~~6450 Proteins~~
- 6000-6009 Special Topics in Biochemistry
- 6010-6019 Special Topics in Nutrition and Metabolism
- 6020-6029 Special Topics in Food Science
- 6400 Control of Intermediary Metabolism
- 6460 Structural Biochemistry
- 6520 Nutritional Biochemistry
- 6530 Food Biochemistry
- 6590 Cellular, Molecular and Developmental Biology (*Credit restricted with Biology 6590 and Medicine 6590*)
- 6630 Marine Biochemistry
- 6680 Processing and Quality of Foods
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- **Chemistry**
- 6201 Bioinorganic Chemistry
- 6204 Mechanisms in Catalysis
- 6205 Photochemistry of Transition Metal Complexes
- 6210 Organometallic Chemistry
- 6300 Quantum Chemistry I
- 6301 Quantum Chemistry II
- 6302 Molecular Spectroscopy
- 6304 Computational Chemistry I
- 6310 Electronic Structure Theory
- 6323 Chemical Thermodynamics I
- 6324 Chemical Thermodynamics II
- 6340 Biophysical Chemistry
- 6350 Electrochemical Kinetics
- 6360 Solid State Chemistry
- 6380 Adsorption on Surfaces
- 6381 Surface and Interface Science
- 6382-6389 Selected Topics in Physical Chemistry
- 6390-6398 Selected Topics in Physical Chemistry
- 6399 Chemical Kinetics and Dynamics
- 6401 Organic Spectroscopic Analysis I
- 6402 Organic Spectroscopic Analysis II
- 6470 Physical Organic Chemistry
- 6590-6599 Selected Topics in Theoretical and Computational Chemistry
- 6600 Applications of Inorganic and Organometallic Chemistry to Toxicology
- ~~Computational Science (CMSC)~~ Scientific Computing
- 601W Work Term 1
- 602W Work Term 2
- ~~6900-6909 Special Topics~~

- 6910 Matrix Computations and Applications (*credit may be obtained for only one of CMSC 6910 and COMP 6732*)
- 6920 **Applied** Scientific Programming
- 6925 Tools of the Trade for Programming High Performance Computers (2 credit hours)
- 6930 Algorithms for Distributed and Shared Memory Computers
- 6950 Computer Based ~~Research~~ Tools and Applications (*credit may be obtained for only one of CMSC 6950 and the former CMSC 6940*)
- **Computer Science**
- 6713 Software Engineering
- 6722 Advanced Computer Architectures
- 6728-6729 Special Topics in Computer Systems - Computer Networks
- 6731 Topics in Numerical Methods
- **6732 Matrix Computations**
- 6738-6739 Special Topics in Numerical Methods
- 6752 Applications of Computer Graphics
- 6756 Digital Image Processing
- **Earth Sciences**
- 6141 Rotation of the Earth
- 6142 Theory of Global Geodynamics
- 6171 Advanced Exploration Seismology
- 6172 Borehole Seismic
- 6175 Gravity and Magnetic Methods
- 6177 Mathematical Formulations of Seismic Wave Phenomena
- 6918 Airborne and Borehole Electromagnetic Methods
- 6994 Special Topics in Earth Sciences - Geophysical Inversion and Applications
- 7110 Physics of the Solid Earth
- 7120 Crustal Geophysics
- **Mathematics and Statistics**
- ~~6102~~**6112**-6119 Special Topics in Applied Mathematics
- 6201 Numerical Methods for Partial Differential Equations
- 6210 Numerical Solution of Differential Equations (required course for ~~Computational Science~~ **Scientific Computing**)
- 6212 Numerical Methods for Initial Value Problems
- 6588 Selected Topics in Statistics and Probability - Generalized Additive Models with Applications in Scientific Visualization
- **Physics and Physical Oceanography**
- 6000 Condensed Matter Physics I
- 6200 Nonlinear Dynamics
- 6308 Ocean Dynamics I
- 6309 Ocean Dynamics II
- 6310 Physical Oceanography
- 6316 Ocean Measurements and Data Analysis
- 6317 Ocean Acoustics

- 6318 Numerical Modelling
- 6320 Turbulence
- 6321 Coastal Oceanography
- 6323 Stability Theory
- 6400 Statistical Mechanics
- 6402 Theory of Phase Transitions
- 6800 Group Theory
- 6850 Quantum Mechanics I
- **Engineering and Applied Science**
- 9015 Ocean Engineering Hydrodynamics
- 9052 Ice Properties and Mechanics
- 9501 Finite Element Analysis
- 9713 Stochastic Hydrology
- 9815 Electromagnetic Propagation
- 9821 Digital Signal Processing
- 9826 Advanced Control Systems
- 9861 High-Performance Computer Architecture
- 9865 Advanced Digital Systems
- 9869 Advanced Concurrent Programming
- 9871 Information Theory and Coding

iv) Psychology - Calendar Revisions and New Course

It was moved by Dr. Behm, and seconded by Dr. Mercier, that the proposed changes to the Doctor of Psychology program which clarifies the 'Administration', section 31.1; provides specific detail about which courses students have to complete, section 31.2.; removes section 31.3; and introduces two new courses 6623 and 7022, section 31.4, be approved.
The motion

CARRIED

Proposed Calendar Changes

31.1 Administration

1. The Director, who must be a registered Psychologist and hold a full-time faculty position in the Department of Psychology at Memorial University, is appointed by the Head of the Psychology Department following a consultative process that includes the faculty most directly associated with the Psy.D. program.
2. The Psy.D. Administrative Committee consists of the Director and representatives from academic units involved in the program, Eastern

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Health, the Association of Newfoundland Psychologists and the PsyD student body. The Psychology Department Head, on the recommendation of the Director, appoints Committee members. The student representative is elected by the PsyD students.

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31.2 Admission Criteria

1. Students with Master's level degrees who wish to be considered for the program must have completed the undergraduate degree in Psychology and the undergraduate course requirements described below.

2. Applicants are required to have an undergraduate Honours degree in psychology that includes an Honour's thesis as well as courses in each of the following areas

- a. abnormal psychology
- b. developmental psychology
- c. neuroscience
- d. cognition
- e. learning theory
- f. social psychology
- g. history and systems
- h. statistics
- i. research design

3. Admission to the program is competitive. Applicants will be ranked according to academic aptitude, personal and interpersonal competence, clinical and professional potential, and availability of a supervisor. The application shall include academic transcripts, results of the Graduate Record Examination (verbal, quantitative and analytical subtests), three letters of recommendation and a statement of interests and objectives. One letter of recommendation must specifically address the suitability of the applicant for clinical work. Applicants who are short-listed will be interviewed, either in person or via telephone. Work experience, research experience, extra-curricular activities, and clinically relevant public service will be taken into consideration.

31.3 Program of Study

Students are required to successfully complete at least 66 credit hours in regulation graduate courses. These include:

- 9 credit hours in statistics and research design courses (6000, 6001, 6602)
- 30 credit hours in core courses (6611, 6612, 6620, 6623, 6613, 6630, 6631, 6632, 6633, 6650)
- 27 credit hours in practicum courses (7010, 7020, 7021, 7030, 7031, 7032, 7033, 7034, 7035)

Students must also complete a year-long internship, pass a comprehensive exam and successfully complete a research thesis.

31.4 Courses

- 6000 Advanced Statistics
- 6001 Research Design
- 6602 Research Design in Clinical Psychology
- 6610 Principles of Effective Relationships
- 6611 Ethics of Professional Practice
- 6612 Adult Psychopathology
- 6613 Child Psychopathology
- 6614 Selected Topics in Psychopathology
- 6620 Principles of Adult Assessment and Diagnosis
- 6621 Principles of Child Assessment and Diagnosis
- 6622 Selected Topics in Assessment and Diagnosis
- 6623 Child Psychopathology, Assessment and Diagnosis
- 6630 Principles of Intervention with Adults
- 6631 Principles of Intervention with Children
- 6632 Community Interventions
- 6633 Clinical Psychopharmacology
- 6634 Selected Topics in Intervention
- 6640 Consultation Processes
- 6650 Supervision
- 6660-6669 Special Topics in Clinical Psychology
- 7010 Practicum in Ethics and Relationship Skills
- 7020 Practicum in Adult Assessment and Diagnosis
- ~~7021 Practicum in Clinical Assessment and Diagnosis~~
- 7022 Practicum in Child Assessment and Diagnosis
- 7030 Practicum in Assessment and Intervention I
- 7031 Practicum in Assessment and Intervention II
- 7032 Practicum in Community Intervention and Interprofessional Practice
- 7033 Practicum in Advanced Assessment and Intervention I
- 7034 Practicum in Advanced Assessment and Intervention II
- 7035 Practicum in Rural Intervention and Interprofessional Practice
- 7050 Practicum in Supervision I
- 7051 Practicum in Supervision II

Course Description 6623:

Child Psychopathology, Assessment, and Diagnosis reviews theory and research in developmental Psychopathology. The course focuses on conceptualizing and assessing children's disorders from a developmental perspective. The role of family, culture, and community in shaping the expression of children's disorders is integrated with a consideration of biological and psychological factors. A multi-method approach to assessment is reviewed with respect to specific childhood disorders. Ethical issues related to the assessment of children are discussed.

7022

This course provides an opportunity for students to complete a psychoeducational assessment of a child. Students will administer a

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selected battery of psychometric tests and interviews, interpret the results, provide verbal feedback and write a report of their findings and recommendations. Where possible they will also participate in a case conference or school meeting. The practicum requires that students spend 16 hours per week for 6 weeks working under supervision in the Psychology Clinic and attend a weekly seminar.

v) Master of Maritime Management Program – Calendar Revisions

It was moved by Dr. Behm, and seconded by Ms. Walsh, that the proposed revisions to section 18.2.1., which modifies the admission requirements to reference exceptional cases for applicants applying for admission, and adjusts the English Proficiency requirement for applicants to the MMM program, be approved. The motion

CARRIED

Proposed Calendar Revisions

18.2.1 Admission Requirements

1. Admission to the program is on a competitive basis. To be considered for admission to the program an applicant will normally possess a second class or better undergraduate degree from a university of recognized standing and will normally have:
 - a. a Memorial University of Newfoundland Bachelor of Maritime Studies or Bachelor of Technology, or a comparable undergraduate degree with appropriate maritime sector and business management course work; and
 - b. an appropriate technical knowledge and relevant marine sector employment experience.
2. The deadlines for submission of applications for candidates wishing to enter studies are as follows:
 - Fall (September) semester: May 15
 - Winter (January) semester: September 15
 - Spring (May) semester: January 15Applications received after listed deadlines will be considered as time and resources permit.
1. In exceptional cases, applicants who have not completed an undergraduate degree, but who meet all other requirements, may be considered for admission. Preference will be given to those who have at least 10 years of relevant professional and managerial experience, and have successfully completed several years of post-secondary studies. Applicants who do not meet normal admission requirements shall be required to complete, with a high level of achievement, certain undergraduate courses before being considered for admission.

2. Applicants who did not complete a baccalaureate or post-graduate degree at a recognized university where English is the primary language of instruction must normally complete either the:
- Test of English as a Foreign Language (TOEFL) and achieve a paper-based score of 580 (or higher), computer-based score of 237 (or higher), or Internet based score of 92-93 (or higher); or
 - International English Language Testing System (IELTS) and achieve a score of 7 (or higher).

Information regarding the TOEFL is available from the Educational Testing Service at www.ets.org. IELTS information is available at www.ielts.org. It is noted that other equivalent tests acceptable to the School of Graduate Studies will also be considered.

- vi) Master of Technology Management – Calendar Revisions

It was moved by Dr. Behm, and seconded by Ms. Walsh, that the proposed revisions to section 29.2.1., which modifies the admission requirements to reference exceptional cases for applicants applying for admission, and adjusts the English Proficiency requirement for applicants to the MMM program, be approved. The motion

CARRIED

Proposed Calendar Revisions

29.2.1 Admission Requirements

Admission to the program is on a competitive basis.

2. The deadlines for submission of applications are as follows:
- Fall (September) semester: May 15
 - Winter (January) semester: September 15

Applications received after listed deadlines will be considered as time and resources permit.

To be considered for admission to the Engineering and Applied Science Technology Option an applicant will normally possess a second class or better undergraduate degree from a university of recognized standing and will normally have:

- a Memorial University of Newfoundland Bachelor of Technology, Bachelor of Maritime Studies, or a comparable undergraduate degree with appropriate technology sector and business management course work; and
- a minimum of two (2) years relevant employment experience.

To be considered for admission to the Aquaculture Technology Option an applicant will normally possess a second class or better undergraduate degree from a university of recognized standing and will normally have:

- a post-graduate aquaculture credential or an aquaculture focus in their undergraduate degree; or significant professional experience in the aquaculture industry; and
- a minimum of two (2) years relevant employment experience.

In exceptional cases, applicants who have not completed an undergraduate degree, but who meet all other requirements, may be considered for admission. Preference will be given to those who have significant and relevant professional experience, and have successfully completed several years of post-secondary studies. Applicants who do not meet normal admission requirements shall be required to complete, with a high level of achievement, certain undergraduate courses before being considered for admission.

Applicants who did not complete a baccalaureate or post-graduate degree at a recognized university where English is the primary language of instruction must normally complete either the:

- Test of English as a Foreign Language (TOEFL) and achieve a paper-based score of 580 (or higher), computer-based score of 237 (or higher), or Internet based score of 92-93 (or higher); or
- International English Language Testing System (IELTS) and achieve a score of 7 (or higher).

Information regarding the TOEFL is available from the Educational Testing Service at www.ets.org. IELTS information is available at www.ielts.org. It is noted that other equivalent tests acceptable to the School of Graduate Studies will also be considered.

Upon acceptance into the program, students will be admitted to one of the two Options: the Engineering and Applied Science Technology Option or the Aquaculture Technology Option.

vii) Nursing - Calendar Revisions

It was moved by Dr. Behm, and seconded by Dr. Moralejo, that the proposed revisions to the Master of Nursing program, section 20, which recommends removal of the thesis option; revises the Practicum option and Nursing Practitioner option; revises existing courses, and recommends approval of new courses, be approved. The motion

CARRIED

20 Regulations Governing the Degree of Master of Nursing

- **Professor and Dean**
- ~~J. McFetridge Durdle~~ **A. Gaudine**

- **Professor and Associate Dean (Graduate Programs ~~and Research~~)**
- ~~S. Solberg~~ **D. Moralejo**

20.1 Program

1. The responsibility for the administration of all graduate programs shall reside with the Dean of Graduate Studies.
2. Applicants for the program shall be required to apply for admission to the Dean of the School of Graduate Studies and shall be expected to follow the regulations, policies and practices required of the School. Deadline for receipt of applications should be no later than February 15. If space is available, students who apply after the deadline date may be accepted.
3. The School of Nursing offers a Master of Nursing (M.N.) program with ~~three~~ **two** options: (~~thesis, non-thesis~~ **practicum** and nurse practitioner) as well as a Post ~~Master's~~ **Master's** Nurse Practitioner Graduate Diploma.

20.2 Qualifications for Admission

1. Applicants to the Master of Nursing program in any of the ~~three~~ **two** options listed above must have a baccalaureate Degree in nursing, or an equivalent from an institution recognized by the University and a knowledge of nursing satisfactory to the School of Nursing.
2. Admission to the program is limited and competitive. To be considered for admission, the applicant must have maintained at least a grade B standing in the baccalaureate program.
3. Applicants are also required to have a minimum of one year's experience in nursing practice, and to have completed an undergraduate nursing research course, and a statistics course normally within the last 5 years such as Statistics 2500 or Education 2900 or their equivalents.
4. Applicants must hold a practising licence from the Association of Registered Nurses of Newfoundland and Labrador or must be currently registered as a practising nurse in another Canadian jurisdiction. Applicants from other countries who do not meet the above criteria will be assessed on an individual basis. However, they must submit proof of registration as a practising nurse (or an equivalency) from their country or jurisdiction.
- ~~5.~~ In addition to the above requirements, candidates seeking admission to the MN-Nurse Practitioner Degree option must have two years of clinical experience preferably in their chosen specialty area. ~~As well, candidates must have a letter from a health care agency and a clinical preceptor guaranteeing the candidate a preceptored clinical placement for the final semester of their program.~~
- ~~6.~~ In addition to requirements 1 and 4, candidates seeking admission to the Post ~~Master's~~ **Master's** Nurse Practitioner Graduate Diploma program must have completed a ~~Master's~~ **Master's** Degree in Nursing or an equivalent degree with a nursing focus and have two years of clinical nursing experience preferably in their chosen specialty area. ~~As well, candidates must have a letter from a health care agency and clinical preceptor~~

~~guaranteeing the candidate a preceptored clinical placement for the final semester of their program.~~

7. Only in exceptional circumstances and only on the recommendation of the School of Nursing shall the Dean of Graduate Studies consider applicants who do not meet admission requirements listed above.

20.3 Registration

See School of Graduate Studies [General Regulations, Registration.](#)

20.4 Programs of Study

There are ~~three~~ **two** routes offered that lead to a Master of Nursing Degree: 1. ~~Thesis~~ **Practicum** option; ~~and 2. Non-thesis option, and 3. Nurse Practitioner option.~~ Normally the program will require two years to complete when taken on a full-time basis.

In addition to the M.N. Degree program, the School of Nursing also offers a Post ~~Masters~~ **Master's** Nurse Practitioner Graduate Diploma.

~~19.4.1 Thesis Option~~

- ~~1. Candidates must complete an approved program of study consisting of a minimum of 19 credit hours in graduate program courses and a thesis.~~
 - ~~o **Required courses:**~~
 - ~~o 6010 Research in Nursing I: Quantitative Methods~~
 - ~~o 6011 Philosophical and Theoretical Foundations of Nursing~~
 - ~~o 6100 Research in Nursing II: Qualitative Methods~~
 - ~~o Either 6200 Nursing Individuals and Families through Life Transitions, and N6210 Nursing Therapeutics for Individuals and Families OR 6220 Concepts for Population-based Nursing, and 6230 Interventions for Population-based Nursing~~
 - ~~o One nursing elective~~
- ~~2. Candidates shall submit a thesis on an approved subject in which systematic research has been conducted under the direction of a Supervisor recommended by the Dean of the School of Nursing and approved by the Dean of Graduate Studies.~~
- ~~3. The program of each candidate shall be approved by the Dean of Graduate Studies on the recommendation of the Dean of the School of Nursing.~~

20.4.2 ~~Non-Thesis~~ **1 Practicum** Option

1. Candidates must complete an approved program of study consisting of a minimum of ~~28~~ **21** credit hours in graduate program courses and 6 credit hours in a consolidated practicum.

Required courses:

- o **N6250 Foundations for Advanced Nursing Practice**
- o 6010 Research in Nursing ~~I~~: Quantitative Methods
- o 6011 Philosophical and Theoretical Foundations of Nursing
- o 6100 Research in Nursing ~~H~~: Qualitative Methods
- o ~~6040 Nursing Informatics~~

- ~~Either 6200 Nursing Individuals and Families through Life Transitions and 6210 Nursing Therapeutics for Individuals and Families~~
- ~~OR 6220 Concepts for Population based Nursing, and 6230 Interventions for Population based Nursing~~
- **N6240 Nursing Individuals and Families Through Life Transitions (equivalent to N6200 and N6210)**
- **N6221 Population-based Nursing (equivalent to N6220 and N6230)**

Three One of the following courses:

- 6020 Program Development in Nursing
- 6031 Education in Nursing
- ~~6050 Leadership in Nursing~~
- ~~6060 Policy and Politics in Nursing and Health Care~~
- ~~Other approved electives~~

~~One of the following consolidated practicums~~ **The following consolidated practicum courses:**

- ~~6610, 6611 Practicum in Advanced Clinical Practice~~
- ~~6620, 6621 Practicum in Nursing Administration~~
- ~~6630, 6631 Practicum in Nursing Research/Research Utilization~~
- ~~6640, 6641 Practicum in Health Policy~~
- ~~6650, 6651 Practicum in Nursing Education~~
- **N6660 MN Practicum I**
- **N6661 MN Practicum II**
- ~~The consolidated practicum will normally consist of 300 hours of field experience.~~

2. The program of each candidate shall be approved by the Dean of Graduate Studies on the recommendation of the Dean of the School of Nursing.

20.4.3 ~~2~~ Nurse Practitioner Option

1. Candidates must complete an approved program of studies consisting of a minimum of 36 credit hours in graduate program courses and an integrated clinical practice experience, comprising 12 credit hours.

Required courses:

- **N6251 Writing Skills for Nurse Practitioners (1 credit hour).**
Note: Students who have transferred from the practicum option and have credit for N6250 Foundations for Nursing Practice will have this course waived.
- 6010 Research in Nursing ~~H~~: Quantitative Methods (~~4~~**3** credit hours)
- 6011 Philosophical and Theoretical Foundations of Nursing (3 credit hours)
- 6100 Research in Nursing ~~H~~: Qualitative Methods (3 credit hours)
- 6020 Program Development in Nursing (3 credit hours)
- ~~6200 Nursing Individuals and Families through Life Transitions (3 credit hours)~~
- ~~6210 Nursing Therapeutics for Individuals and Families (3 credit hours)~~

- ~~6230 Interventions for Population-based Nursing (3 credit hours)~~
- **N6240 Nursing Individuals and Families Through Life Transitions (equivalent to N6200 and N6210)**
- **N6221 Population-Based Nursing (equivalent to N6220 and N6230)**
- 6701 Advanced Practice Issues and Role Development (2 credit hours)
- 6703 Advanced Health Assessment and Clinical Practicum I (4 credit hours)
- 6704 Applied Pathophysiology and Clinical Practicum II (4 credit hours)
- 6705 Pharmacotherapy and Therapeutics (3 credit hours)
- Either one of: 6800 Adult Advanced Clinical Decision Making (4 credit hours), 6802 Family/All Ages Clinical Decision Making (4 credit hours) or, one of: 6803 to 6809 Nursing Specialty Option Courses (4 credit hours)
- 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 400 hours of preceptored specialty clinical practice and biweekly seminars) (12 credit hours)

2. The program of each candidate shall be approved by the Dean of Graduate Studies on the recommendation of the Dean of the School of Nursing.

20.4.4.3 ~~Post Master's~~ **Master's** Nurse Practitioner Graduate Diploma

1. Candidates with a Master's Degree in Nursing or an equivalent Degree with a nursing focus must complete an approved program of study consisting of a minimum of 21 credit hours in graduate program courses and integrated clinical practice experience, comprising 12 credit hours.

Required courses:

- 6701 Advanced Practice Issues and Role Development (2 credit hours)
 - 6703 Advanced Health Assessment and Clinical Practicum I (4 credit hours)
 - 6704 Applied Pathophysiology and Clinical Practicum II (4 credit hours)
 - 6705 Pharmacotherapy and Therapeutics (3 credit hours)
 - Either one of: 6800 Adult Advanced Clinical Decision Making (4 credit hours), 6802 Family/All Ages Clinical Decision Making (4 credit hours) or, one of: 6803 to 6809 Nursing Specialty Option Courses (4 credit hours)
 - 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 400 hours of preceptored specialty clinical practice and biweekly seminars) (12 credit hours)
2. Programs for some candidates may exceed the above minimum requirements.

3. The program for each candidate shall be approved by the Dean of Graduate Studies on the recommendation of the Dean of the School of Nursing.

~~20.5~~ **4** Evaluation

1. In order to continue in graduate studies and in order to qualify for a Master's Degree, a candidate shall obtain an A or B grade in each program course **and in both practicum courses.**
- ~~2. If the candidate is in the Non-thesis **Practicum** Option, the candidate must obtain a Pass grade for the **consolidated** practicum component of the program.~~
3. When the Dean of the School of Nursing has determined on the basis of consultation with the candidate, **and** the Associate Dean, Graduate Programs **and Research**, and the thesis or practicum Supervisor, that a candidate has fallen below a satisfactory level, the Dean of the School of Nursing may recommend to the Dean of Graduate Studies that such a candidate be required to withdraw from the program.
4. To remain in good standing candidates are required to maintain professional behaviour consistent with the current *Code of Ethics* of the Canadian Nurses Association and, when applicable, the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. Candidates who fail to meet this requirement will be required to withdraw from the School of Nursing upon recommendation of the Graduate Studies Committee.

~~20.6~~ Thesis

~~See School of Graduate Studies [General Regulations, Theses and Reports](#).~~

~~20.7~~ **5** Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the School of Nursing will allow:

- 6010 Research in Nursing ~~I~~: Quantitative Methods (~~4~~ **3** credit hours)
- 6011 Philosophical and Theoretical Foundations of Nursing (3 credit hours)
- 6020 Program Development in Nursing (3 credits hours) (Pre or co-requisite: 6011)
- 6031 Education in Nursing (3 credit hours) (~~Not required by students who have completed 6030. Credit may not be obtained for both 6030 and 6031~~)
- ~~6040 Nursing Informatics (3 credit hours)~~
- ~~6050 Leadership in Nursing (3 credit hours)~~
- ~~6060 Policy and Politics in Nursing and Health Care (3 credit hours)~~
- 6100 Research in Nursing ~~II~~: Qualitative Methods (3 credit hours) (**Pre or co-requisite: 6011**)
- ~~6200 Nursing Individuals and Families through Life Transitions (3 credit hours) Pre or co-requisite: 6011 (Not required by students who have completed 6400)~~
- ~~6210 Nursing Therapeutics for Individuals and Families (3 credit hours) Pre or co-requisite: 6200 (Not required by students who have completed 6400)~~

- 6220 Concepts for Population-based Nursing (3 credit hours) Prerequisites: 6011 (Not required by students who have completed 6410)
- ~~6230 Interventions for Population-based Nursing (3 credit hours) Pre or co-requisite: 6200 6220 (Not required by students who have completed 6410)~~
- **N6221 Population-Based Nursing (3 credit hours) (equivalent to N6220 and N6230)**
- **N6240 Nursing Individuals and Families Through Life Transitions (3 credit hours) (Pre or co-requisite: 6011)(equivalent to N6200 and N6210)**
- **N6250 Foundations for Advanced Nursing Practice (3 credit hours) (This course is a pre-requisite for all other courses for students in the practicum option though may be taken as a co-requisite in the first term of the program)**
- **N6251 Writing Skills for Nurse Practitioners (1 credit hour) This course is a pre-requisite for all other courses for students in the MN-NP option though may be taken as a co-requisite in the first term of the program)**
- ~~6310-6350 Special Topics in Nursing (electives)~~
- 6501-10 Individual Readings and Research in Special Areas
- ~~6610-6611 Practicum in Advanced Clinical Practice (6 credit hours) (Prerequisites: All required and elective courses including 6020 and 6050)~~
- ~~6620-6621 Practicum in Nursing Administration (6 credit hours) (Prerequisites: All required and elective courses including 6050 and 6060)~~
- ~~6630-6631 Practicum in Nursing Research/Research Utilization (6 credit hours) (Prerequisites: All required and elective courses including 6060)~~
- ~~6640-6641 Practicum in Health Policy (6 credit hours) (Prerequisites: All required and elective courses including 6050 and 6060)~~
- ~~6650-6651 Practicum in Nursing Education (6 credit hours) (Prerequisites: All required and elective courses including 6020 and 6031)~~
- **N6660 MN Practicum I (3 credit hours) (Prerequisites: All required courses including N6020 or N6031)**
- **N6661 MN Practicum II (3 credit hours) (Prerequisites: All required courses including N6660 MN Practicum I)**
- 6701 Advanced Practice Issues and Role Development (2 credit hours)
- 6703 Advanced Health Assessment and Clinical Practicum I (4 credit hours)
- 6704 Applied Pathophysiology and Clinical Practicum II (4 credit hours)
- 6705 Pharmacotherapy and Therapeutics (3 credit hours)
- 6800 Adult Advanced Clinical Decision Making (4 credit hours)
- 6802 Family/All Ages Clinical Decision Making (4 credit hours)
- One of: 6803 to 6809 Nursing Specialty Option Courses (4 credit hours)
- 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 400 hours of preceptored specialty clinical practice and biweekly seminars) (12 credit hours)

viii) Interdisciplinary Ph.D. Program – Calendar Revisions

It was moved by Dr. Behm, and seconded by Dr. Mercier, that the proposed revisions to section 30.20, which clarifies the composition of the Supervisory Committee; removes the requirement for a thesis proposal in term five because the proposal is part of the application to the program; and other minor corrections for clarity, be approved. The motion

CARRIED

30.20 Interdisciplinary

- Professor and Director
- J. Dyer

Deleted: Interim

The Degree of Doctor of Philosophy (Interdisciplinary) is offered by part-time and full-time study.

The **General Regulations** of the School of Graduate Studies and the regulations outlined below will apply.

30.20.1 Administration

1. The program shall be administered by a Director, together with the School of Graduate Studies Interdisciplinary Ph.D. Committee (ID Ph.D. Committee). Duties of this committee include recommendation of applications for acceptance into the program.
2. The program of study of each student will be guided for the duration of the program by a **Supervisory Committee** of either three (3) or five (5) faculty members, appointed by the Dean of Graduate Studies on the recommendation of the ID Ph.D. Committee at the time of admission.

In addition, the Director shall be an ex officio member of each Interdisciplinary Ph.D. Supervisory Committee.

Duties of this Committee shall involve supervising the overall program of study, including the recommendation of appropriate courses, the setting and scheduling of comprehensive examinations, advising on the development of a research proposal and thesis-writing, and recommendation of thesis examiners.

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The Supervisory Committee is also responsible for recommending fellowship support to the ID Ph.D. Committee and to the Dean of Graduate Studies at the time of admission and throughout the student's program.

3. Normally, the "academic home" for the student is in the Department or faculty/school of the Chair of the Supervisory Committee.

Deleted: primary Supervisor

30.20.2 Deadlines for Applications

1. The deadline for Fall admission is March 1 for commencement in September, October 1 for commencement in January, and February 1 for commencement in May. Students seeking admission to the program should start preparing their admission file well in advance of the application deadline.

Admissions shall be considered by the ID Ph.D. Committee and recommendations shall be made to the Dean of Graduate Studies.

30.20.3 Admission

1. Prospective students should normally hold a Master's Degree and have an excellent academic record. Applications for admission must include:
 - a. Two letters of reference
 - a. A detailed research proposal
 - b. Letters expressing a commitment to the research project and to supervisory duties from three Memorial University faculty members, one of whom is prepared to assume the role of Chair of the Supervisory Committee and at least one whose unit of primary responsibility is a Ph.D. granting unit.
 - c. Letters of endorsement from the administrative heads of each of the units involved in the proposed program.
 - d. A statement from the University Librarian indicating the adequacy of Library resources to satisfy the demands of the research program.

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30.20.4 Program of Study

1. Courses
 - a. Students will normally be required to take 12-18 credit hours of courses to be determined by the Supervisory Committee. These must include at least one course from each participating discipline. Directed reading courses may be included to support the development of the thesis work.
 - b. Where appropriate, extra language and/or methodology courses may be prescribed. See **Evaluation, Evaluation of Graduate Students**, 4. concerning language(s) requirement.
2. Comprehensive examination

The scope and format of the comprehensive examination shall be determined by the Supervisory Committee in consultation with the student and in accordance with the needs of his/her particular program of study. Students will be required to take a comprehensive examination no later than the end of the seventh semester of study and after the completion of all required course work. Comprehensive examinations shall follow procedures in accordance with General Regulation, **Comprehensive Examinations, Ph.D. Comprehensive Examination**, with the exception of 2.
3. Thesis
 - a. Students must complete a thesis, examined and defended in accordance with General Regulation, of the School of Graduate Studies. The thesis shall give evidence of the candidate's ability to develop independent and original research.

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Deleted: <#>A thesis proposal, including a working title, statement of purpose and research scope, outline of theoretical and methodological approach, working plan and preliminary bibliography must be submitted to the Supervisory Committee no later than the end of the fifth semester of study. If approved by the Committee, the proposal shall be recommended to the ID Ph.D. Committee for final approval. ¶

Deleted: **Theses and Reports**

ix) School of Graduate Studies, General Regulation – Calendar Revision

It was moved by Dr. Behm, and seconded by Dr. Mercier, that the revisions to General Regulation 3.6.3. governing 'Route for Questioning Grades', which will make it more explicit that this regulation applies not only to grades awarded in courses, but also to grades awarded for comprehensive examinations and the examination of theses and reports, be approved. The motion

CARRIED

3.6 Appeal of Decisions

3.6.3 Route for Questioning Grades of courses and examinations

1. Appeals cannot be made on the basis of the grades awarded in individual courses, Comprehensive Examinations or examinations of theses and reports. Dissatisfaction with grades is not sufficient grounds for an appeal.
2. Notwithstanding the above, and recognizing that the awarding of grades is an academic matter within the purview of experts in a discipline or subject area,
 - a student who wishes to question the award of grades in individual courses is encouraged to consult with the following in the order given: the course instructor; the Head of the appropriate academic unit; and the Dean of the appropriate Faculty/School, Associate Vice-President (Academic) of the Grenfell Campus or Vice-President of the Marine Institute;
 - a student who wishes to question the grade of a Comprehensive examination, or the examination of a thesis or report, is encouraged to consult with the Dean of the School of Graduate Studies.

x) Student Code of Conduct

It was moved by Dr. Behm and seconded by Dr. Volk, that the proposed Student of Conduct entry, as recommended by the Deputy Provost, be included under the General Information section of the School of Graduate Studies entry, with one suggestion, revise the spelling of 'behavior', to read 'behaviour'. The motion

CARRIED

The entry to be included following preamble for section 1 is as follows:

Memorial University of Newfoundland expects that students will conduct themselves in compliance with University Regulations and Policies,

Departmental Policies, and Federal, Provincial and Municipal laws, as well as codes of ethics that govern students who are members of regulated professions. The Student Code of Conduct outlines the behaviours which the University considers to be non-academic misconduct offences, and the range of remedies and/or penalties which may be imposed. Academic misconduct is outlined in University Regulations, *Academic Misconduct* in the University Calendar.

For more information about the Student Code of Conduct, see mun.ca/student/conduct/conduct.php

7. ANY OTHER BUSINESS
8. NOTICE OF MOTION
9. ADJOURNMENTS

The meeting adjourned 4:12 p.m.

Noreen Golfman, Chair

David Behm, Secretary