To: Members of the 2013-2014 Graduate Council

From: Nasser Zawia, Dean
Keith Killingbeck, Associate Dean

Date: 11 December 2013

RE: Agenda for Meeting Number 477 of the Graduate Council to be held on Monday 16 December 2013 at 2:00 p.m. in the circular Conference Room of the Alumni Center.

I. Call to order

II. Approval of Minutes of Meeting Number 476, 25 November 2013

III. Approval of graduate degrees for Fall 2013.

From the University Manual.................

3.30.13 The Dean shall transmit to the Faculty Senate actions of the Graduate Faculty requiring its approval; administer and enforce regulations pertaining to the conduct of graduate work and the granting of graduate degrees and certify to the Graduate Council the names of students who have satisfied requirements for degrees;

IV. Announcements

A. Recent additions to the Graduate Faculty

TODD GUILFOOS ENV & NAT RESOURCE ECONOMICS 11/19/2013
PETER ARIANI ELECTRICAL, COMP, & BIOMED ENG 11/21/2013
ANNIE DeGROOT CELL AND MOLECULAR BIOLOGY 12/2/2013
SAMANTHA BROWN PHYSICAL THERAPY 12/10/2013

B. Suggestions for our 2014 commencement speaker, Dr. Kent Morrison – are there any?

C. Report on the recent meeting of the Council of Graduate Schools

D. Update – EGRA winners (the list of recipients is attached)

E. Draft recommendation from the Joint Committee on Online and Distance Education and the Curricular Affairs Committee regarding policies related to online courses (please see attachment to this agenda). Comments are sought from the Council.

V. Committees

A. Curriculum Committee

I. 400-level courses

Changes

1) College of the Environment and Life Sciences
Landscape Architecture

LAR 444: Landscape Architecture Studio III: Sustainable Design – change in catalog description and prerequisites to read: Sustainable design principles and practices. Theoretical and real-world problem solving for individual sites and local communities. Explore sustainability practices, green infrastructure, and public participation. Intended for LAR majors or with permission of instructor. (Lec. 2, Studio 4). Pre: LAR 344 and 346 or by permission of instructor.

LAR 445: Landscape Architecture Studio IV – change in catalog description and prerequisites to read: Study of comprehensive landscape architectural projects. Coordination of research and preparation of alternative design solutions and work with public agencies and communities. (Lec. 2, Studio 4.). Service learning. Intended for LAR majors or with permission of instructor. Pre: LAR 443 and 444 or by permission of instructor.

II. 500/600-level courses

New Courses

1) College of the Environment and Life Sciences

EVS 540X Exploring the Dimensions of Corporate Responsibility
This course explores how businesses address environmental and social issues, and addresses their environmental impact and practices through a multilateral assessment of a business’s economic, environmental and social activities. Pre: Graduate standing.

Additional Curricular Matters

1) College of Arts and Sciences
   Department of Chemistry

Chemistry: Proposed Revision of MS (Thesis Option) Graduation Requirements

M.S Degree (Thesis Option)  (New items highlighted.)

1) Complete CHM 500, 505, 506 and 507.
2) Complete additional elective coursework. Graduate-level courses taken in other departments require pre-approval by the Graduate Curriculum Committee.
3) Earn one seminar credit, CHM 642.
4) Complete an original research project. No more than 12 credits of CHM 599 can be listed on the Program of Study.
5) Complete a total of 30 credit hours of work and write and orally defend a thesis.
2) College of Arts and Sciences
Department of Computer Science

Proposed revision to the Master's Degree and Ph.D. programs in Computer Science

Proposed revision to the Master's Degree and Ph.D. programs in Computer Science

Computer Science
M.S., Ph.D. 401.874.2701

Faculty: Professor Peckham, chair; Associate Professor Baudet, director of graduate studies. Professors Fay-Wolfe and Lamagna; Associate Professors DiPippo, Hamel, and Hervé; Adjunct Assistant Professors Dickerman, Encarnação, Henry, Ravenscroft, and Stephenson; Professors Emeriti Carrano and Kowalski.

Specializations
Analysis of algorithms, artificial intelligence, bioinformatics, computer algebra, computer graphics, computers in education, cryptography, cybersecurity, databases, data mining, digital forensics, distributed computing, implementation and semantics of programming languages, logic-based programming, parallel computing, real-time systems, simulation, sensor networks.

Core areas
For the purpose of describing graduate degree requirements, core computer science courses are grouped into the following core areas:
Mathematical Foundations: CSC 541, 542, 544, 550
Programming Languages: CSC 402, 501, 502
Architecture and Systems: CSC 511, 512, 519

Master of Science
Admission requirements: Bachelors degree in computer science or a closely related field. Applicants with a bachelors degree in an unrelated field will be considered provided they have completed course work covering the material in CSC 211, 212, 301, 305, 340 and MTH 141, 142, plus one MTH or STA course for which calculus is a prerequisite. Students may be admitted who have completed only a part of the above course work but they will be required to complete the deficiencies before taking more advanced classes.

The GRE General test is required. A subject test in computer science or a related field is not required but may be considered by the admission committee.

Program requirements: The M.S. curriculum in computer science has three tracks: thesis, nonthesis, and applied nonthesis.
A Program of Study can include at most 16 credits at the 400-level. Students are also reminded of the Graduate School requirement that no more than half of the credits in the Program of Study, exclusive of research and independent or directed study, can be at the 400-level. Students who have undergraduate credits for a particular 400-level course (or equivalent) cannot repeat the course for graduate credit.

Program requirements for thesis option: 1) at least one course from each of the following core areas: mathematical foundations, programming languages, and architecture and systems; 2) at least five other courses chosen with the approval of the major professor (at least two of these must be approved CSC courses or equivalents); 3) eight credits of thesis.

Program requirements for nonthesis option: 1) at least two courses from mathematical foundations, one course from programming languages, and two courses from architecture and systems; 2) at least three more approved CSC courses or equivalents; 3) at least two more courses chosen with the approval of the advisor; 4) at least one of the courses listed above should include writing a substantial paper based on significant independent research; 5) passing a written comprehensive examination.

Program requirements for applied nonthesis option: 1) at least two courses from mathematical foundations, one course from programming languages, and two courses from architecture and systems; 2) at least two more approved CSC courses or equivalents; 3) at least one course should include writing a substantial paper based on significant independent research; 4) an approved concentration in another discipline consisting of a minimum of four graduate courses in the area of concentration; 5) passing a written comprehensive examination.

Approved applied nonthesis option concentrations exist for Computers and Business Management, Computers and Operations Research, and Computers and Statistics. Other concentrations are possible. Students should meet with their faculty advisors to discuss requirements. The department encourages other application areas in the physical, biological, mathematical, and social sciences. Students in the applied track will have an advisor in computer science and an advisor in their application area. Together, these advisors will approve the student's program of study.

Doctor of Philosophy
Admission requirements: Bachelors degree in computer science or a closely related field. Applicants with a bachelors degree in an unrelated field will be considered provided they have completed course work covering the material in CSC 211, 212, 301, 305, 340 and MTH 141, 142, plus one MTH or STA course for which calculus is a prerequisite. Students may be admitted who have completed only a part of the above course work but they will be required to complete the deficiencies before taking more advanced classes.

The GRE general test is required. A subject test in computer science or a related field is not required, but may be considered by the admission committee.

Program requirements: The student must complete 54 credits of course work beyond the bachelors degree in addition to 18 credits for the doctoral dissertation. A program of study can include, at most, 12 credits at the 400-
level. Students who have undergraduate credits for a particular 400-level course (or equivalent) cannot repeat the
course for graduate credit. A student entering the program with an M.S. degree in computer science or a related area
may be granted up to 30 credits toward the Ph.D. in computer science.
Students must complete two courses from mathematical foundations, one course from programming languages, two
courses from architecture and systems, plus three more approved CSC courses or equivalents. Other courses must
be selected in order to meet the 54-credit minimum and will be selected in consultation with the student's advisor or
major professor.
Students must take a comprehensive examination, which is composed of a written examination and an oral
examination. The written examination, which will be held at least once a year, covers the three core areas listed
above. Success in the written examination is conditional upon obtaining passing grades in all areas, and is a
prerequisite for taking the oral examination. Typically, a student would be expected to take the comprehensive
examination within two years after joining the program. The objective of the oral examination is for the student to
present an intended research program and demonstrate satisfactory knowledge and understanding of the scientific
literature of the corresponding research domain. A candidate whose comprehensive exam performance is deemed as
failing by the Computer Science Graduate Committee may, with the recommendation of the committee and the
approval of the Graduate School, be permitted one re-examination, to be taken no sooner than four months and no
later than one year after the initial examination.

Rationale for the proposed changes
The last revision of our graduate programs goes back to more than 10 years. The intent of this latest
revision of our graduate programs' requirements is to offer more flexibility to our graduate students.
The main change is in the grouping of the courses that are part of the distribution requirements. Our
graduate students are required to take courses currently distributed in 7 groups. The largest one, the
applications group, is the "catch-all" group. The remaining 6 groups are being reorganized into 3 areas,
which include all of our core courses. With one exception, we have excluded from these 3 core areas all
400-level courses.
Another, simple, change will be to allow our Master's Degree graduate students to take up to 16 credits at
the 400-level (rather than a current maximum of three 4-credit courses). Arguably, this could lower the
quality of our graduate programs. The exclusion of 400-level courses from our core areas, however, will
compensate for the addition of one 400-level course.
Yet another, minor, change will affect the admission requirement replacing MTH215 and MTH243,
currently required, by any calculus-based MTH or STA course.
The remaining changes are mostly editorial to adjust for the changes in the distribution requirements from
the original 7 groups to the proposed 3 core areas.

3) Interdisciplinary Neuroscience Program

Neuroscience – Proposed Requirements
M.S., Ph.D.
401.874.4233, uri.edu/gsdmis/inp
The Interdisciplinary Neuroscience Program involves faculty from the departments of Biological Sciences; Biomedical
and Pharmaceutical Sciences; Chemistry; Cell and Molecular Biology; Communicative Disorders; Electrical, Biomedical,
and Computer Engineering; Mechanical, Industrial, and Systems Engineering; Psychology; and Physical Therapy. It is
administered by the Graduate School and an executive committee appointed by the dean of each participating college.

Executive Committee: Professor Zawia, chair, Professors Gabriele Kass-Simon, Lisa Weyandt, Associate Professors
Besio, Mahler and Seeram, Adjunct Professor Mosley Austin.
Faculty: Professors Dufresne, Faghi, Faust, Hufnagel, Kass-Simon, Kay, Kumaresan, Ohley, Sun, Webb, Weyandt,
Willis, and Zawia; Associate Professors Agostinucci, Besio, DeBoef, Goren, He, Kim, Kovoor, Mahler, Martin, Seeram,
and Sun; Assistant Professors Leveilee and Worthen; Adjunct Professors Anagnostopoulos, DiCecco, and Mosley Austin.

Specializations
Dementia and aging; central nervous system disorders; vertebrate and invertebrate cellular, molecular, and behavioral
neurobiology imaging; and neural engineering.

Master of Science
Admission requirements: GRE general test, a bachelor’s degree in the sciences (or related disciplines), two letters of
recommendation, a statement of purpose, and transcripts of all previous degrees are required. Applicants are encouraged
to specify in their statement of purpose one or more faculty members with whom they are interested in working, and to
explain why. Students with deficiencies in undergraduate courses relevant to their Program of Study may be required to
take additional courses without program credit.
In general, students will be admitted if they meet the minimum GRE requirements (a combined verbal and quantitative
score of 300 in the new system and 1,100 in the old system), a minimum GPA of 3.00, good letters of recommendation,
and an acceptable statement of purpose. In exceptional circumstances, the student who falls short may still be considered for admission with further evaluation.

**Program requirements:** The program requires a minimum of 30 credits: 18-20 in required coursework, 6-9 in thesis research, and 1-6 in electives. Required courses include: NEU 502, 503, 504, PSY 532, as well as at least one credit of NEU 581/582. Two semesters (4-6 credits) of NEU 591 are required, one in the student’s primary area of research, and one in a related discipline. Total research credits in NEU 591 and NEU 599 used towards the degree must not exceed 12 credits. Two semesters of journal club (NEU 587 or equivalent), a thesis proposal and successful defense of thesis are required.

**Doctor of Philosophy**

**Admission requirements:** Same as for master’s degree.

**Program requirements:** Successful completion of a qualifying examination or an earned M.S. with thesis in an appropriate discipline, a comprehensive examination, and dissertation defense. As the qualifying exam is meant to be equivalent to the M.S. degree, the examination must be taken no later than the first semester following the completion of eighteen credits of coursework. This examination is intended to assess a student’s potential to perform satisfactorily at the doctoral level. A minimum of 72 credits is required, 18 to 28 of which may be earned through dissertation research (NEU 699). Up to 30 credits will be accepted for students who have already earned an M.S. degree. Registration in NEU 581 and 582 is required for one year, and successful completion of NEU 502, 503, and 504 are required. PSY 532 (or equivalent) and one additional statistics or computational analysis course (e.g. STA 500, 502, 541, or 545) are required. Two semesters of NEU 591 are required, one in the student’s primary area of research, and one in a related discipline. Doctoral students must enroll in journal club (NEU 587 or equivalent) each semester until completing comprehensive exams. In the final semester, a formal presentation of dissertation research is required in 581/582.

**Postbaccalaureate Certificate in Neuroscience**

A student who does not seek a neuroscience degree, but instead wants official recognition that he/she has specific training and instruction in neuroscience, can receive a Certificate in the Neurosciences.

**Admission requirements:** A bachelor’s degree in any field with a 3.00 GPA or higher. Students already enrolled in a master’s or doctoral degree at URI are eligible to apply. Students not in a graduate degree program may also apply.

**Program requirements:** Students will be required to successfully complete 12 credits of neuroscience coursework including NEU 503.

**VI. Topics for Discussion**

A. Ted Myatt and Mary Riedford from the Research Integrity Office of the URI Division of Research and Economic Development will join us to discuss options for training of graduate students in the areas of research compliance, academic integrity, and related issues.

B. Julia Lovett will introduce two issues that have arisen regarding the embargo of electronic theses/dissertations. Briefly, the questions to be wrestled with are 1) should the default point for theses/dissertations be an automatic two-year embargo on open-access publication, and 2) should major professors have veto power on the decisions of their students regarding open-access publication of theses/dissertations.

**VII. Old Business**

A. Update on the proposal from Pharmacy related to their request to share credits between the PharmD and Master’s Programs.

B. Continued discussion of policies related to master’s thesis defenses including the requirements surrounding the signatures required on the defense set-up form and the deadline by which thesis proposals need to be submitted to the Graduate School.

**VIII. New Business**

**IX. Adjournment**