Institute Graduate Curriculum Committee
<u>Minutes</u>
Thursday, September 10, 2015

Present: Breedveld (CHBE), Chow (CoC-CSE), Cozzens (Vice Provost-GS&FD), Flowers (ARCH), Gable (GCC Student Representative), Jagoda (AE), Neitzel (ME), Omiecinski (CoC-CS), Pikowsky (Registrar), Ries (ECON), Schmidt-Krey (BIOL), Sluss (CoB), Smith (AE)

Visitors: Laros (REG), Hodges (REG), Terrell (LMC), Bamburowski (Graduate Studies), Isbell (CoC), White (CoC), Ghomi (MATH)

Note: All action items in these minutes require approval by the Academic Senate. In some instances, items may require further approval by the Board of Regents or the University System of Georgia. If the Regents' approval is required, the change is not official until notification is received from the Board to that effect. Academic units should take no action on these items until USG and/or BOR approval is secured. In addition, units should take no action on any of the items below until these minutes have been approved by the Academic Senate or the Executive Board.

Note: All votes are unanimous unless specifically noted otherwise.

There are 20 voting members of the Committee. To meet a quorum, 11 voting members must be present. If there is no quorum, the actions of the Committee will be considered as "recommendations" to be voted on, via email, by the full Committee.

<u>Academic Matters</u>

1. A motion was made to *approve* a request from the School of Literature, Media, and Communication to deactivate a list of courses. The motion was seconded and approved.

    ### Deactivate Courses – Approved

    LCC Designated Courses To Deactivate:
    LCC 6213: Educational Applications of New Media
    LCC 6215: Issues in Media Studies
    LCC 6310: The Computer as an Expressive Medium
    LCC 6311: Visual Culture and Design
    LCC 6312: Design, Technology, and Representation
    LCC 6313: Principles of Interactive Design
    LCC 6314: Design of Networked Media

LCC 6315: Product Production
LCC 6316: Historical Approaches to Digital Media
LCC 6317: Interactive Fiction
LCC 6318: Experimental Media
LCC 6319: Intellectual Property Policy and Law
LCC 6320: Globalization and New Media
LCC 6321: Architecture of Responsive Spaces
LCC 6325: Game Design and Analysis
LCC 6330: Expressive Virtual Space
LCC 6340: Mixed Reality Experience Design
LCC 6350: Spatial Construction of Meaning
LCC 6399: Discovery and Invention
LCC 6650: Project Studio
LCC 6743: STS Core Seminar
LCC 6748: Social Justice and Design
LCC 6749: Feminist Theory STS
LCC 6753: HCI Professional Preparation & Practice
LCC 6770: Mixed Reality Design
LCC 6800: Master's Project
LCC 6998: HCI Master's Project
LCC 7000: Master's Theses
LCC 7999: Preparation for PhD Qualifying Exam
LCC 8000: Pro-Seminar in Media Theory
LCC 8001: Pro-Seminar in Digital Media Studies
LCC 8801: Special Topics
LCC 8803: Special Topics in Digital Media
LCC 8813: Advanced Issues in Interactive Narrative
LCC 8823: Special Topics in Game Design and Analysis
LCC 8831: Special Topics in Technologies of Representation
LCC 8999: Preparation for PhD Dissertation
LCC 9000: PhD Dissertation

2. A motion was made to *approve* a request from the School of Mathematics for a new course. The motion was seconded and approved.

   New Course – Approved
   MATH 6001: Introduction to Graduate Studies in Mathematics   2-0-2
   (Note: The committee did suggest an edit to the syllabus to remove the wording "no class" from the schedule to clarify student expectations)

3. The College of Computing requested a prerequisite modification, which was acknowledged by the committee without concern.

Prerequisite Modification – Acknowledged without concern
CS 6505: Computability & Algorithms
Current: CS 3500 with minimum grade of 'D'
Proposed: CS 3510 with minimum grade of 'D'

4. The College of Computing made a presentation on a future proposal to get feedback from the committee. The committee *approved* submission of the prospectus to the Board of Regents.

   Pre-proposal: New degree – Doctor of Philosophy with a major in Machine Learning

New Degree Prospectus - Approved

OBJECTIVE

To educate and train the next generation of researchers, computationalists, scientists, and engineers in the area of *Machine Learning (ML)*.

Machine Learning is an academic field aimed at the study of the foundational principles, algorithms, and applications of analyzing data as well as extracting inferences and predictions from a wide variety of data sources. It is a discipline building on pattern recognition, computational learning theory, and artificial intelligence. Having deep roots in other fields of computing, engineering, mathematics and physical sciences, machine learning explores the study and construction of algorithms aimed at learning from and make predictions on data. Machine Learning algorithms operate by building a model from example inputs in order to make data-driven predictions or decisions, rather than following strictly static program instructions. Machine Learning advances interdisciplinary research that crosses many disciplines that use data to discover scientific principles and infer patterns underlying the dynamics, structure, and function of artificial and living systems. Machine Learning impacts a wide variety of application domains ranging from health care (at varying levels from health records to genomic data) to autonomous systems (including self-driving cars and manufacturing robots) to any form of data analytics, mining and exploration in biology, economics, finances, social networks, to scaling up to deploy and use Internet of Things, to building Artificial Intelligence (AI) systems.

Considering the growing importance of generating inferences and predictions from data using Machine Learning and its expected socioeconomic impact, we propose the formation of a *PhD program in Machine Learning* at the Georgia Institute of Technology. This cross-disciplinary PhD program will allow for in-depth Post-Graduate study, lasting 5-6 years (on average), with PhD candidates working directly under the guidance and supervision of faculty with expertise in Computer Science, Engineering and Mathematics. Students will also take advanced courses across many of the disciplines involved in Machine Learning while performing independent research resulting in peer-reviewed

publications and intellectual property. Finally, upon graduation, these PhDs will go on to lead independent efforts in academia, research and/or industry.

The balance of this prospectus will outline the vision of this new PhD program highlighting the (1) justification, (2) demand, and (3) uniqueness of this program.

5. David Bamburowski, Director of Graduate Studies, presented several updated memorandums of understanding between GT Lorraine and several international institutions for the Committee's information. The documents were acknowledged without concern.

Discussion of Cooperation Agreements - Acknowledged without Concern

GT Lorraine and Universite Internationale de Rabat (Morocco)
The memorandum of understanding was due to be renewed.

GT Lorraine and École Nationale Supérieure D'Electricite de Mecanique de l'Universite de Lorraine (France)The memorandum of understanding was due to be renewed.

GT Lorraine and Institut National des Sceinces Appliquées (France)
The memorandum of understanding was due to be renewed.

GT Lorraine and Université de Lille 1 (France)
The memorandum of understanding was due to be renewed.

GT Lorraine and Ecole Nationale Superieure de L'Electronique et de ses Applications (France)
The memorandum of understanding was due to be renewed.

GT Lorraine and Telecom SudParis (France)
The memorandum of understanding was due to be renewed.

6. Administrative Items
   a. Start-up matters continued from last meeting
      i. Subcommittees were finalized and approved.
         1. Dr. Neitzel will serve on both the RCR Subcommittee and the Study Abroad Committee.
         2. The members of the Petitions subcommittee are:
            a. Baabak Ashuri
            b. David Sluss
            c. Hayriye Ayhan
            d. Christine Ries
            e. May Wang

b. A motion was made to approve the Responsible Conduct of Research Subcommittee Minutes of April 30, 2015. The motion was seconded and approved.

7. Administrative Item: A motion was made to *approve* a request from the Registrar's Office to deactivate a list of courses. The motion was seconded and approved.

<p style="text-align:center; color:red; font-weight:bold">Deactivate Courses – Approved</p>

ENTR Designated Courses To Deactivate:
ENTR 6001
ENTR 6002
ENTR 6011
ENTR 6012
ENTR 6021
ENTR 6022
ENTR 6031
ENTR 6032
ENTR 6041
ENTR 6042
ENTR 6051
ENTR 6052
ENTR 6053
ENTR 6061
ENTR 6062
ENTR 6063
ENTR 7000

8. Administrative Item: Committee members discussed with Dr. Cozzens the recent concerns about plagiarism in theses. There are software products on the market that can be used to determine if a document contains material that has been previously published. A question was raised about whether this might also be helpful in regard to the assessment of course assignments. The feeling of the Committee, for now, is that these should be kept as separate discussions. How we validate thesis content and content of course assignment submissions (homework, project reports, essays, etc.) should be handled in separate conversations and in separate actions.

The Committee feels that plagiarism in these is an important issue, particularly in light of recent events, and would strongly support Dr. Cozzens in seeking an Institute-wide license to ensure that all academic units have this tool available to pro-actively screen theses. It would be very helpful to be able to identify these kinds of issues earlier in the process of having a thesis submitted for final approval.

Adjourned,
Reta Pikowsky
Registrar