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Georgia Institute of Technology
Graduate Curriculum Committee
Academic Matters, Administrative Matters, Petitions (Full Committee)
<u>Minutes</u>
September 3, 2009

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Present: Singhal (COM), Storici (BIOL), Potts (GRAD STUDIES), French (COA), Babensee (BME), Murray (LCC), Corso (PSYCH), Ferri (ECE), Goldsman (ISyE), Peponis (COA), Smith (AE), Pikowsky (REG), Rosen (ME)

Visitors: Redding (REG), Dagenhart (COA), Weinberg (COA), Allen (COA), Lim (ECE), Freeman (COA), Paraska (PROVOST), Howson (REG), Sharp (COA), Blaylock (ME/NRE/MP), Rahnema (NRE/MP)

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.

<u>Administrative Matters</u>

- Julia Babensee was elected Chair and Marilyn Smith was elected Vice Chair. Reta Pikowsky will continue to serve as Secretary.
- The meeting time of 3:00 PM on Thursday was approved. The Registrar's Office will prepare a meeting calendar with location information and distribute to the Committee as soon as possible.
- Susan Paraska from the Provost's Office presented information on the GT SACS Accreditation web site where the academic program review materials are stored for access and review. A subcommittee is being formed to address program reviews. Susan will send web site link information and login instructions.
- The Registrar's Office requested a discussion of rules and regulations related to Master of Science degrees. The result of the discussion was the appointment of a subcommittee to examine the questions in more detail and determine if proposals to change the regulations are needed. The subcommittee consists of Lisa Redding, Shawn Howson, Ann Laros, Reta Pikowsky, Gail Potts, and Dave Goldsman. The subcommittee will meet as soon as possible to begin their discussion.

<u>Academic Matters</u>

1. A motion was made to table a request from the College of Management for new courses and to deactivate a course. The motion was seconded and approved.

    New Courses – TABLED:
    MGT 6400: Price Optimization and Revenue Management 3-0-3
    MGT 6401: Supply Chain Modeling 3-0-3

Deactivate – TABLED:
MGT 6362: Supply Chain Modeling & Revenue Management

2. A motion was made to approve a request from the College of Architecture for new courses. The motion was seconded and approved.

   New Courses:
   COA 6120: Retrofitting Suburbia 3-0-3
   COA 6011: Urban Design Laboratory 1-15-6
   COA 7011: Urban Design Studio I   1-15-6
   COA 7012: Urban Design Studio II 1-15-6
   COA 6151: History of Urban Form 3-0-3
       Note: Cannot be used for graduate credit if COA/ARCH 4151 has also been completed.
   COA 8871: Special Topics Urban Design 1-0-1
   COA 8872: Special Topics Urban Design 2-0-2
   COA 8873: Special Topics Urban Design 3-0-3
   COA 8874: Special Topics Urban Design 4-0-4
   COA 8875: Special Topics Urban Design 5-0-5
   COA 8876: Special Topics Urban Design 6-0-6
       (Note: Credit hours for the above Special Topics courses equal last digit in course number)

3. A motion was made to approve a request from the College of Architecture for new courses and a new degree. The motion was seconded and approved.

   New Courses:
   MUSI 8001: Research Methods   3-0-3
       (Note: Audit grade mode was added since original proposal.)
   MUSI 8002: Teaching Practicum 3-0-3
       (Note: Credit was changed to 2-3-3.)
   MUSI 7998: Prep-Doct Qual Paper (1 to 21 range)
   MUSI 7999: Prep-Doct Qual Exams (1 to 21 range)
   MUSI 9000: Doctoral Thesis (1 to 21 range)

   New Degree:

   Doctor of Philosophy with a major in Music Technology

   Curriculum: Requirements of the Ph.D. with a major in Music Technology will include completion of core courses, a minor, elective coursework, a qualifying paper, comprehensive exams and a dissertation.

Required Coursework for the Ph.D. in Music Technology

	Course	Course Number	Prerequisites and Notes	Credit Hours
Music Tech Core (36 credits)	Music Perception and Cognition	MUSI 6001 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Interactive Music	MUSI 6002 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Music Technology History and Repertoire	MUSI 6003 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Technology Ensemble	MUSI 6004 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Computational Music Analysis	MUSI 6201 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Digital Signal Processing for Music	MUSI 6202 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Project Studio in Music Technology	MUSI 6203 Existing	MS or Ph.D. standing or permission of instructor	3 hours
	Music Technology Research Lab	MUSI 7100 Existing	MS or Ph.D. standing or permission of instructor	12 hours
	Research Methods in Music Technology	MUSI 8001 (NEW)	Ph.D. standing or permission of instructor	3 hours
	Apprentice Teaching	MUSI 8002 (NEW)	Ph.D. standing or permission of instructor	6 hours
Minor Field of Study To include the study of: a) relevant history and precedent in the field; b) relevant theory; c) current debate; and d) methods of analysis and inquiry.				9 credit hours (minimum)
Elective Courses To include any MUSI course number 6000 or higher. Courses from other units may be substituted with approval of the student's advisor.				15 credit hours (or as needed)
Total Course Requirements				66 credit hours (minimum)

Minor Field of Study

Minors, which are selected by students in consultation with their advisor, are designed to enable the student to apply knowledge from other fields toward work in Music Technology. The student is responsible for the full range of knowledge, at the level of professional competence, for the Minor field selected. Minors often focus on traditional fields of study associated with other professions, such as human-computer interaction, digital signal processing, and digital media. Minors typically constitute 9 hours of coursework.

Sample Program of Study

<u>First Year</u>

- MUSI 6003 – Music Technology History and Repertoire *(Required Core)*
- MUSI 6002 – Interactive Music *(Required Core)*
- MUSI 6202 – Digital Signal Processing for Music *(Required Core)*
- MUSI 6001 – Music Perception and Cognition *(Required Core)*
- MUSI 6101 – Computational Music Analysis *(Required Core)*
- MUSI 7100 – Music Technology Research Lab *(Required Core)*
- CS 6750 – Introduction to Human Computer Interaction *(Minor)*
- CS 6010 – Principles of Design *(Elective External)*

<u>Second Year</u>

- MUSI 6004 – Technology Ensemble *(Required Core)*
- MUSI 6104 – Project Studio in Music Technology *(Required Core)*
- MUSI 7100 – Music Technology Research Lab *(Required Core)*
- CS 6460 – Foundations of Educational Technology *(Minor)*
- CS 6470 - Online Communities *(Minor)*
- MUSI 6103 – Music Recording and Mixing *(Elective)*
- LCC 6313 – Principles of Interactive Design *(Elective External)*
- LCC 6318 – Experimental Media *(Elective External)*
- Comprehensive common exam

<u>Third Year</u>

- MUSI 8001 – Research Methods in Music Technology
- MUSI 8002 — Apprentice Teaching *(Required Core)*
- MUSI 7100 – Music Technology Research Lab *(Required Core)*
- CS 7641 – Machine Learning *(Elective External)*
- Qualifying paper
- Comprehensive Subject exam
- Dissertation proposal
- Dissertation research

<u>Fourth Year</u>

- Dissertation research
- Committee review of dissertation
- Defense of dissertation
- Award of Ph.D. degree

Students accepted into the Ph.D. program in Music Technology are expected to hold a Masters degree in Music Technology or from an allied field, such as computing, music, engineering, or media arts and sciences. In exceptional cases, students may advance from Georgia Tech's M.S. in Music Technology to Ph.D. standing after a single year of coursework. All applicants must demonstrate mastery of core masters-level material covered in Music Technology. This includes proficiency in:

- o Music theory, performance, composition, and/or analysis
- o Music Information Retrieval
- o Digital Signal Processing and Synthesis
- o Interactive Music Systems Design
- o Music Cognition

Proficiency will be assessed through review of a portfolio of the applicant's work and an interview process.

Students may waive the requirement to enroll in specific courses by appealing to the College's Music Technology Graduate Program Committee. Such appeals will typically be granted only if the student has already taken the same course at Georgia Tech or has taken a substantially equivalent course at another institution, and if the student has earned a B or higher in that course.

4. A motion was made to table a request from the School of Electrical and Computer Engineering for new dual degrees. The motion was seconded and approved.

As part of the Committee's decision to **table** this request, the following recommendations and suggestions were made to enhance the discussion when the proposal is brought back for a second review.

- o The Committee recommends that there be two proposals. The MS and the PhD degrees should be addressed separately in two different proposals. Combining them into one proposal was confusing.
- o The proposal does not address what value this program adds to the student experience.
- o The proposal does not address that value this program brings to the Institute.
- o A sample study plan is needed for both degrees at both institutions to indicate how the curriculum might look on both sides for a student. There was also concern expressed about duplication of courses – students taking the same course from both institutions.
- o There was concern expressed about the language barriers for students at both institutions and what the plan was for ensuring language proficiencies. This needs to be addressed in a revised proposal.
- o There was also a question about how the PhD students will be funded. This aspect of the proposal needs to be clarified.

o The Committee raised a question as to why this would not be a better proposal if it called for a joint degree *versus* a dual degree. A revised proposal should address this question.

New External Degrees - TABLED: Georgia Institute of Technology-Korea Advanced Institute of Science and Technology (KAIST) Dual Degree Programs (MSECE & DR-ECE)

Under the proposed dual degree programs, students must satisfy the graduation requirements set by both institutes to earn degrees from both institutes. Thus, all of the appropriate rigor and breadth required to earn a degree from GT and KAIST will remain the same. Students will be awarded academic credit from the approved courses taken at both institutes.

The student learning outcomes and assessment of academic performance of participating students will be as is in place for the individual ECE programs by the faculty and academic professional staff of the undergraduate and graduate offices of both institutions. The students will choose the classes from the approved degree program lists in order to earned academic credit toward each degree. Upon satisfying the graduation requirements set by both institutes, each student will be awarded the respective degrees. If a student decides to withdraw from the dual degree program and return to the home institute, he/she will still have an opportunity to graduate from the home institute.

Master of Science in Electrical Engineering
Dual M.S. degree program students: GT (KAIST) students will spend the first year at GT (KAIST) and the second year at KAIST (GT).

Doctor of Philosophy with a major in Electrical Engineering
Dual Ph.D. degree program students: GT (KAIST) students will spend at least one year at KAIST (GT) to complete the class/course requirements. Students, together with their program advisors, will decide on how long the students should stay at each institution to conduct and complete research.

5. A motion was made to approve a request from the College of Engineering for a degree modification for two degrees for a GT-Clark Atlanta University accelerated program. The motion was seconded and approved.

Degree Modifications:
Master of Science in Nuclear Engineering
Master of Science in Medical Physics

This accelerated program is for the Department of Physics students and the Nuclear and Radiological Engineering Program at Georgia Tech.

The faculty of the GT Nuclear and Radiological Engineering/Medical Physics Program (NRE/MP) propose to create an accelerated program for undergraduate students enrolled in the Physics degree program at Clark Atlanta University (CAU). This proposal stems from support that began in 2006 by the U.S. Department of Energy's Office of Nuclear Energy Science and Technology of a partnership between the Georgia Tech NRE/MP program and Clark Atlanta's Department of Physics. The primary goal of this partnership was to encourage and increase the participation of underrepresented minority students in nuclear engineering. Through the GT-CAU partnership and the existing Atlanta Regional Consortium for Higher Education (ARCHE) program, CAU students can take undergraduate classes in nuclear and radiological engineering at Georgia Tech. The proposed accelerated program is intended to attract the best students of the CAU physics program to attend Georgia Tech to pursue a Master of Science in Nuclear Engineering or a Master of Science in Medical Physics.

The key to this program is the identification of well-qualified students by the CAU program contact in the Department of Physics within the first three semesters of study at CAU. Once identified the program contacts at CAU and GT will encourage those students to take GT's NRE 3301 "Radiation Physics" course in the spring of their second year through the ARCHE program. Once the CAU student has completed 60-75 credit hours of study at CAU, taken NRE 3301, and obtained combined 3.5 GPA or greater in CAU and GT courses and a grade of "B" or better in the NRE 3301 course, they can then apply for enrollment in the Georgia Tech MSNE or MSMP graduate program through the standard graduate admissions process.

Eligible applicants will be conditionally admitted into the MSNE or MSMP graduate program at Georgia Tech. As part of their conditional admittance these students will be required to take NRE 3208 "Nuclear Reactor Physics I" and NRE 4208 "Nuclear Reactor Physics II" plus six additional credit hours of NRE or MP electives (senior or graduate courses) though the ARCHE program. All of the NRE or MP courses would count toward electives in the undergraduate Physics degree at CAU. These students will also be required to maintain an overall combined 3.3 GPA or greater in CAU and GT courses to maintain acceptance in the graduate school of their choice.

Once the student has completed the requirements and graduated with a Bachelor of Science in Physics degree from CAU, the student will then be admitted to the Georgia Tech NRE or MP graduate program. For this accelerated program, it is proposed to allow the students in the program to double count the six additional credit hours of NRE or MP elective (senior or graduate courses). These six credit hours would be used to satisfy the requirements for the students the BS Physics degree from CAU and will be counted toward the degree requirements of the MSNE or MSMP degree.

<u>Student Petitions</u>

1. The Petitions Subcommittee acted on petitions in the following categories since June 15, 2009. All were approved.

   6 Readmit 1st drop
   4 Selective withdrawals
   8 Six-year waivers
   1 Request to have Special Status courses count toward degree
   2 Course substitutions
   2 Return Fall 2009 after withdrawing from the Summer 2009 term
   1 Receive credit for PHD seminar
   1 Term withdrawal
   1 Request overload to take three hour audit course
   1 Use 12 transfer hours towards M.S. degree

2. The Committee voted to deny a petition for a grade mode change in a Summer 2009 class.

3. The Committee voted to approve a request for a waiver of the 2-terms of full-time enrollment and a waiver of the 7-year rule.

4. The Committee voted to approve a request for selective withdrawals from two Summer 2009 courses.

5. The Committee voted to deny a request to double-count 21 hours for two MS degrees.

Adjourned,

Reta Pikowsky
Registrar