

**Georgia Institute of Technology  
Graduate Curriculum Committee**

**Minutes  
June 2, 2011**

**Present:** Clarke (COM), Pikowsky (Registrar), Storici (BIO), Ferri (ECE), Rosen (ME), Silva (ECON), Neitzel (ME), Corso (PSYC)

**Visitors:** Laros (Registrar), Howson (Registrar), Simon (Registrar), Paraska (VPFAD), Lohmann (VPFAD), White (CoC), Lobachev (BIO), Stiftel (CRP), Bost (BMED), Hesketh (ME), Ludovice (CHBE), Frazier (ECE)

**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.

1. The Committee heard a presentation by Dr. Frank Bost, from the School of Biomedical Engineering, concerning a new degree to be proposed at a future meeting. The Committee noted that the proposal sounded very interesting and would encourage its further development.

**Master of Science in Biomedical Innovation and Development**

Degree Overview:

- 10 Courses: 30 credit hrs
- Masters Project: 6 hrs
- Time: 3 continuous semesters (12 months)
- Class size – 16 - 40 students
- Instructors: BME, Management, Industry and Clinicians
- Tuition & Fees: Tuition differential  
(Note: There seemed to be some confusion during the meeting whether it was 30cr of coursework + 6cr of Project vs. 27cr. of coursework + 9cr of Project.)

Summary

- Bringing together --- Development engineering for medical device industry, US and international regulatory requirements and clinical experiences.
- Program unique in BME graduate education.
- Multi-disciplinary student population.
- Additional GT national recognition in educational innovation, industry and economic development.

2. The Committee heard a presentation by Dr. Paul Neitzel, from the School of Mechanical Engineering, concerning a new joint Master of Science thesis option degree to be proposed at a future meeting. The Committee agreed that the proposal should be further developed.

Proposed partner institutions:

- Karlsruher Institut für Technologie (KIT – formerly Universität Karlsruhe)
- Technische Universität München (TUM)
- Universität Stuttgart
- Possible future partner: Technische Universität Braunschweig

Motivation/Rationale:

- Increase numbers of international students at Georgia Tech from first-rate European universities
- Research-based M.S.

Benefits:

- Increased faculty research collaborations with European partners
- Potential for faculty exchange with partner universities
- High likelihood of retaining top European students at Georgia Tech to work toward the Ph.D

3. A motion was made to approve a request by the School of City and Regional Planning for new courses. The motion was seconded and approved.

**New Courses:**

CP 8012 PhD Foundations Seminar	1-0-1
CP 8022 PhD Seminar in Research and Pedagogy	1-0-1

4. A motion was made to deny a request by the School of Biology for a degree modification and new courses. The motion was seconded and approved.

Degree Modification:

Doctor of Philosophy with a Major in Biology

New Courses:

BIOL 7998: Doctoral Written Qualifying Exam  
BIOL 7999: Doctoral Oral Qualifying Exam

During an in-depth discussion, Committee members noted that this proposal represents a departure from the way other programs have handled the doctoral written and oral qualifying exams. The School of Biology proposed the degree modification to allow students to use credit for the new courses toward the degree as an incentive for the students to complete the exams. Committee members noted that other programs have means of tracking students and ensuring that they take the qualifying exams in a timely manner. Allowing credit toward the degree for something that is already a required qualifying process did not make sense to the Committee. Other programs have similar courses, but offer them for audit credit. It was suggested in the end that the School of Biology confer with the Registrar's Office about another approach to solving this problem.

5. The College of Computing requested review of a prerequisite modification for one class. No objections or concerns were recorded.

**Prerequisite change (informational item):**

CSE 6301 – Algorithms for Bioinformatics and Computational Biology

Add the following prerequisites:

(CS 3510 or equivalent and MATH 3215 or equivalent) or consent of instructor

6. A motion was made to approve a request by the School of Electrical and Computer Engineering for new courses. The motion was seconded and approved.

**New Courses:**

ECE 7999: Preparation for Doctoral Qualifying Examination 1 to 21 – 0 – 1 to-21

ECE 8999: Preparation for Doctoral Research 1 to 21 – 0 – 1 to-21

7. A motion was made to approve a request by the Schools of Mechanical Engineering, Chemical and Biomolecular Engineering, and Electrical and Computer Engineering for a new certificate and new courses. The motion was seconded and approved.

**New Certificate:**

Micro Electro Mechanical Systems (MEMS)

- Courses in **core program** are the following cross-listed courses (6 semester credit hours):
- ChBE/ME/ECE 6229 Introduction to MEMS
- ChBE/ME/ECE 6460 MEMS Devices (offered in Spring Semester)

Selected courses (chose two from list for 6 semester credit hours):

- ChBE 6710 Microfluidics
- ECE 6200 Biomedical Applications of Microelectromechanical Systems
- ECE 6422 MEMS Interface IC Design for MEMS and Sensors
- ME 6449 Transducers and Signals
- ME 6124 Finite Element Analysis
- ME 8833 Thin Film Properties

Total Semester Credit Hours of Certificate: 12 hours

**New Courses:**

ME 6460: Microelectromechanical Devices 3-0-3

CHBE 6460: Microelectromechanical Devices 3-0-3

CHBE 6229: Introduction to MEMS 2-3-3

ECE 6229: Introduction to MEMS 2-3-3

The following courses are equivalent and crosslisted: ME 6460/ECE 6460/CHBE 6460

The following courses are equivalent and crosslisted: ME 6229/ECE 6229/CHBE 6229

Adjourned,

Reta Pikowsky

Registrar