ACADEMIC SENATE

Tuesday, April 22, 2014
3:00-5:00 PM

Student Center Theater

Institute Graduate Curriculum Committee
Action Items and Minutes for Approval
Committee Chair & Vice Chair

Dr. Jeff Jagoda, AE, Chair
Dr. Benjy Flowers, ARCH, Vice-Chair
Dr. Victor Breedveld, ChBE, Representing the Committee
Action Items from the March 6, 2014 Minutes

- Office of International Initiatives
  - Approve the Cotutelle agreements for select students working with institutions in France
    - The “cotutelle agreement” is a formal program of the French Ministry of Higher Education that aims at strengthening research collaborations between US (or other) universities and French universities through co-advising of doctoral theses.
    - Several GT faculty have expressed strong interest in the program, so we are seeking input from IGCC.
    - The cotutelle agreement is essentially a dual doctoral program, whereby qualified students can earn a Ph.D. from Georgia Tech and a Doctorate from the French partner university, with a single thesis based on co-advising of the doctoral research.
Office of International Initiatives

- Approve the Cotutelle agreements for select students working with institutions in France
  - All requirements for the Ph.D. are met, with complete control of the quality of the Ph.D. remaining with GT.
  - The issue at stake is whether it is appropriate to “share” the doctoral thesis for the award of degrees from two separate institutions.
  - The principle of shared work already exists with coursework of dual MS degrees, or with the BS/MS degree, but it has not been established for dual Ph.D. degrees.
Action Items from the March 6, 2014 Minutes

• Office of International Initiatives
  • Approve the Cotutelle agreements for select students working with institutions in France
  
  • Key Points
    • A formal program of the French Ministry of Higher Education to strengthen research collaborations with US (or other) universities
    • A dual doctoral program, whereby qualified students can earn both a Ph.D. from GT and a doctorate from the French university with a single co-advised thesis
    • Faculty-driven; small number expected
    • The thesis committee includes members from both institutions
    • The agreement specifies the duration of stay of the doctoral student at the French university. (9-12 months is typical)
    • All Ph.D. requirements for GT are met
    • Only between GT and select French universities
Action Items from the March 6, 2014 Minutes

- Office of International Initiatives
  - Approve the Cotutelle agreements for select students working with institutions in France
  - **Key Points**
    - Promotes faculty driven research collaborations
    - Encourages international experience for GT students and faculty
    - Promotes long term lab-to-lab collaboration
    - Puts GT on par with other US universities who participate in the cotutelle program (e.g., Duke)
    - Enables the co-advising to be counted in the French system
    - Questions to IGCC
    - Principle of shared thesis at the doctoral level
    - Principle of a pre-approved template agreement with each specific agreement approved by Dean, VPII, and VPGEFA *for flexibility and to avoid proliferation of dual Ph.D.*
Action Items from the March 6, 2014 Minutes

- School of Computational Science and Engineering
  - New courses
    - CSE 6010: Computational Prob Solv 2-3-3
    - CSE 6040: Computing for Data Analy 3-0-3
    - CSE 6141: Massive Graph Analysis 3-0-3
    - CSE 6243: Adv Top Machine Learning 3-0-3

- Scheller College of Business
  - Posthumous MBA degree
Action Items from the April 10, 2014 Minutes

- **School of Earth and Atmospheric Sciences**
  - New course
    - EAS 6305: Physical and Chemical Oceanography 3-0-3

- **College of Computing**
  - New courses
    - CS 7492: Simulation of Biology 3-0-3
    - CS 7499: 3D Reconstruction 3-0-3
    - CS 7632: Game AI 3-0-3
  - Award of a posthumous doctoral degree

- **School of Psychology**
  - New course
    - PSYC 6043: Engineering Psychology Research Seminar 1-0-1
Action Items from the April 10, 2014 Minutes

- School of Mechanical Engineering
  - New course
    - ME 6720: Biotransport 3-0-3

- School of Electrical and Computer Engineering
  - New courses
    - ECE 6122: Advanced programming Techniques 2-3-3
    - ECE 6461: Carbon and Molecular Nanoelectronics 3-0-3
    - ECE 6515: Nanophotonics 3-0-3
    - ECE 6562: Autonomous Control of Robotics Systems 3-0-3
    - ECE 6563: Networked Control and Multiagent Systems 3-0-3
    - ECE 6616: Cognitive Radio Networks3-0-3
  - Degree modification, Ph.D. with a major in Electrical and Computer Engineering
    - The School of Electrical and Computer Engineering (ECE) is requesting the elimination of the ECE 8010 Research Seminar (1-0-1) requirement for Ph.D. students.
Action Items from the April 10, 2014 Minutes

- Degree modification, Ph.D. with a major in Electrical and Computer Engineering
  - The seminar has existed since the early 1980s and has historically been used as a way for faculty members to present their research activities to graduate students and potentially find new students for their research groups.
  - Since the School’s website has information on the School’s technical interest groups, detailed faculty profiles, and pages for faculty labs and research centers, a required seminar has become unnecessary.
  - Additionally, an increasing percentage of students taking ECE 8010 have already found a research advisor.
  - The School is not requesting a change in the number of credit hours required for the degree.
School of International Affairs

Degree modification – new track or option, 5-year BS/MS in International Affairs

A 5-year combined BS/MS program in INTA would address a number of challenges faced by INTA. For example it would…

…better serve our students by providing a MS degree to highly-qualified INTA undergrads in half the time of our standard program (and therefore at half the cost). It would enable students who otherwise might not get a Master’s degree to compete better on the job market. It would also get those who would pursue a MS degree into the job market a year earlier, reducing their opportunity costs.

…improve the quality and increase the quantity of the MSIA candidate pool. Note also that, with increased student quality comes better job placement, more loyal alumni, and a better network for career/internship placement and policy-linkages.

…meet increasingly vocal demand for 5-yr MS programs from INTA undergrads. The UG Director and Assistant Director report that interest in a 5yr BS/MS degree program is rising amongst INTA undergrads and could possibly extend to applicants to our UG program.
School of International Affairs

Degree modification – new track or option, 5-year BS/MS in International Affairs

INTA 5yr BS/MS Degree Eligibility Requirements:

- Students with a GPA of 3.5 or higher in IAC courses are eligible to apply for the program after completion of 30 semester credit hours at Georgia Tech, but before the completion of 75 semester credit hours, including transfer and advanced placement credits.

- Students who have more than 75 credit hours will be considered for the program on a case-by-case basis. Depending on demand, the required minimum GPA may be higher.

- Admissions decisions will be based on GPA and judgments of the Graduate Committee and faculty who have served as advisors or instructors.

- Continuation in the program will require the student to maintain a GPA of 3.5 or higher in IAC courses.

- The program will not penalize students who opt out after the bachelor’s degree.
Action Items: April 10, 2014 Minutes

- Scheller College of Business, College of Engineering, School of Chemical and Biomolecular Engineering, School of Industrial and Systems Engineering, and the Department of Professional Education
  - Prospectus for a new Professional Master’s in Manufacturing Leadership (PMML) forwarded for BOR consideration
    - The Professional Master’s in Manufacturing Leadership (PMML) will be a terminal degree for industry professionals possessing an undergraduate degree in science or engineering, 3-5 years of working experience, and seeking advancement to leadership positions in manufacturing.
    - As opposed to a Master of Science degree, which typically has a research focus and serves as a gateway to a PhD program, the PMML program will provide applied, practical training through projects, teamwork, and industry-relevant case studies.
Action Items: April 10, 2014 Minutes

- Scheller College of Business, College of Engineering, School of Chemical and Biomolecular Engineering, School of Industrial and Systems Engineering, and the Department of Professional Education
- Prospectus for a new Professional Master’s in Manufacturing Leadership (PMML) forwarded for BOR consideration
  - Manufacturing is critical to economic development, innovation, and prosperity in the State of Georgia, the nation, and the global economy. In Georgia, manufacturing accounts for 92% of exports [1] and is considered to be one the State’s six strategic industries [2]. In the United States manufacturing supports an estimated one in six private-sector jobs, accounts for 47% of all exports, boasts the highest multiplier effect of any economic sector - every $1.00 spent in manufacturing adds another $1.48 to the economy, and is the leading driver of technological innovation [3, 4]. On a global scale, manufacturing value added continues to rise in both advanced and developing economies, climbing from $5.7 trillion to $7.5 trillion from 2000 to 2010 [5].
Action Items: April 10, 2014 Minutes

- Scheller College of Business, College of Engineering, School of Chemical and Biomolecular Engineering, School of Industrial and Systems Engineering, and the Department of Professional Education

- Prospectus for a new Professional Master’s in Manufacturing Leadership (PMML) forwarded for BOR consideration

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<thead>
<tr>
<th>Knowledge Pillar</th>
<th>Number of Courses</th>
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<tbody>
<tr>
<td>I. Leadership</td>
<td>2</td>
</tr>
<tr>
<td>I. Manufacturing Business Analysis and Development</td>
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<tr>
<td>I. Manufacturing Best Practices</td>
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<tr>
<td>I. Technical Concentration in Manufacturing Processes</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
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Minutes for Approval

• March 6, 2014
• April 10, 2014

• MOTION: to approve Action Items and Minutes from the March and April 2014 meetings.