

# **Institute Graduate Curriculum Committee**

**Academic Faculty Senate  
Tuesday, October 18, 2016  
3:00-5:00 PM  
Student Center Theatre**

# Report, Action Items, Minutes

- Presented by:
  - *Dr. Victor Breedveld, ChBE, Chair*
- Annual Report
- Action Items
- Minutes for Approval

# 2015-2016 Annual Report Summary

**Members:** Baabak Ashuri (CoA-BC), Hayriye Ayhan (ISyE), Victor Breedveld (ChBE), Marco Ceccagnoli (CoB), Edmond Chow (CoC-CSE), Susan Cozzens (VP-Graduate Education & Faculty Dev.), Rob Dickson (Chem & BioChem), Benjamin Flowers (ARCH), Jeff Jagoda (AE), Sundaresan Jayaraman (MSE), Kristie Macrakis (HTS), Paul Neitzel (ME), Edward Omiecinski (CoC-CS), Reta Pikowsky (Registrar), Christine Ries (Econ), Ingeborg Schmidt-Krey (Biol), David Sluss (CoB), Marilyn Smith (AE), May Wang (BME), Thomas Gable (Graduate Student Rep), Tucker Balch (Fac. Exec. Board Liaison)

# 2015-2016 Annual Report Summary

**Meetings:** The Graduate Committee met **10** times during the 2015-2016 year.

**Leadership:** Dr. Victor Breedveld served as Chair of the Committee. Dr. Benjamin Flowers served as Vice-Chair of the Committee. Reta Pikowsky served as Secretary of the Committee.

**Charge:** The business of the Committee is related to curriculum proposals and student petitions. Occasionally work groups are formed to discuss specific matters of policy or procedure.

# 2015-2016 Annual Report Summary

## Items addressed:

### Academic Calendar Exception

- College of Design (formerly College of Architecture) exception to final instruction days and reading days to accommodate design studio courses

### Renewed Cooperative Agreements with GTL Partners

- GT Lorraine and Centrale Supélec (France)
- GT Lorraine and Institut National Polytechnique de Toulouse (France)
- GT Lorraine and Université Internationale de Rabat (Morocco)
- GT Lorraine and École Nationale Supérieure D'Electricite de Mecanique de l'Université de Lorraine (France)
- GT Lorraine and Institut National des Sciences Appliquées (France)
- GT Lorraine and Université de Lille 1 (France)
- GT Lorraine and Ecole Nationale Supérieure de L'Electronique et de ses Applications (France)
- GT Lorraine and Telecom SudParis (France)
- GT Lorraine and Sapienza – Università di Roma (Italy)
- GT Lorraine and Université de Technologie de Compiègne (France)

# 2015-2016 Annual Report Summary

## Items addressed:

### Changes in Colleges and Schools

- College of Architecture changing the name of the college to the **College of Design** to encompass and better describe the full range of academic offerings by the Schools within the college
- CEE updating “Construction Engineering” Specialization to “Construction and Infrastructure Systems Engineering” Specialization
- Schools of Biology and Applied Physiology merged and named the School of Biological Sciences

### Degrees

- Pre-proposals: MS in Analytics to offer online version
- New program prospecti: Doctor of Philosophy in Machine Learning and Master of Real Estate Development
- New degrees: Doctor of Philosophy in Ocean Science and Engineering and Professional Master’s in Occupational Safety and Health
- Renaming of degree: Master of Science in Information Security renamed to Master of Science in Cybersecurity

# 2015-2016 Annual Report Summary

Items addressed:

## Degree Modifications

- Master of Science in Computer Science
- Master of Science in Electrical and Computer Engineering
- Doctor of Philosophy with a major in Computer Science
- Doctor of Philosophy with a major in Human-Centered Computing
- Doctor of Philosophy with a major in Biomedical Engineering (GT/Emory and GT/Emory/Peking)
- Master of Science in Biomedical Engineering
- Doctor of Philosophy with a major in Materials Science and Engineering
- Professional Master's in Applied Systems and Engineering
- Master of Science in Information Security

## New Tracks or Degree Options

- ISyE offering BS/MS in BSIE/MSSCE
- Colleges of Engineering and Computing earn MBA with 39 credits beyond MS or PhD program.

# 2015-2016 Annual Report Summary

Items addressed:

## Certificate Modification

- Microelectromechanical Certificate

## New Subject Code

- BCP – Building Construction Professional

## New Courses

- **43** new courses
  - MATH 6001: Introduction to Graduate Studies in Mathematics 2-0-2
  - BIOL 7200: Programming for Bioinformatics 2-3-3
  - MGT 6203: Data Analytics in Business 3-0-3
  - MGT 6345: Marketing Practicum 1-6-3
  - ECE 7057: GT-Shenzhen Research Internship 3-0-3
  - CEE 6585: Materials Science of Concrete 3-0-3
  - CEE 8097: Introduction to Transportation Research 1-0-1
  - CS 7280: Network Science 3-0-3
  - EAS 6131: Ocean Modeling 3-0-3



# 2015-2016 Annual Report Summary

## Items addressed:

### New Courses

- 43 new courses, continued
  - EAS 6133: Marine Ecosystem Modeling 3-0-3
  - EAS 6155: Math Geophysical Fluid Dynamics 3-0-3
  - EAS 6672: Ocean Dynamics 3-0-3
  - CSE 6748: Applied Analytics Practicum 0-18-6
  - MGT 6748: Applied Analytics Practicum 0-18-6
  - ISYE 6748: Applied Analytics Practicum 0-18-6
  - BCP 6700: Current Issues in Occupational Safety and Health 3-0-3
  - BCP 6800: Culture and Leadership Influences on Safety and Health 3-0-3
  - BCP 6900: Economic Analysis, Risk Management Financing & Insurance for Safety Professionals 3-0-3
  - BCP 6950: Occupational Safety and Health Capstone 2-3-3
  - BCP 8803 (Title: Fundamentals of Occupational Safety and Health Program Management) 3-0-3
  - BCP 8813 (Title: Industrial Hygiene Principles and Health Hazards) 3-0-3
  - BCP 8823 (Title: Hazardous Materials Management) 3-0-3
  - BCP 8833 (Title: General Industry Occupational Safety and Health) 3-0-3
  - BCP 8843 (Title: Advanced Safety Principles) 3-0-3
  - BCP 8853 (Title: Applied Ergonomics) 3-0-3

# 2015-2016 Annual Report Summary

## Items addressed:

### New Courses

- 43 new courses, continued
  - CEE 6215: Coastal Structures 3-0-3
  - CEE 6538: Introduction to Non-Destructive Testing and Forensic Evaluation in Structures 2-3-3
  - CEE 6650: Discrete Choice Making 3-0-3
  - CEE 8099: Seminars in Structural Engineering Mechanics and Materials for PhD students 1-0-1
  - MSE 6411: Thermodynamics of Materials 3-0-3
  - MSE 6412: Structure of Materials 3-0-3
  - MSE 7757: Teaching Practicum 3-0-3
  - ASE 6131: Analysis and Synthesis: Human Systems Integration 3-0-3
  - PUBP 6725: Info Security Policies 3-0-3
  - PHIL 6710: Ethics of Biotechnology and Bioengineering Research 3-0-3
  - APPH 6710: Ethics of Biotechnology and Bioengineering Research 3-0-3
  - ECE 6254: Statistical Machine Learning 3-0-3
  - ECE 6337: Electricity Markets 3-0-3
  - ECE 6445: Power IC Design 3-0-3
  - CP 6006: Visualization for Planners 0-3-1
  - CP 6053: Planning Studio Urban Design 3-9-6
  - CP 3217: Climate Change and the City 3-0-3
  - CP 6243: Impact Assessment 3-0-3

# 2015-2016 Annual Report Summary

Items addressed:

## Course Pre-requisite Modifications

- CS 6505: Computability & Algorithms
- BMED 6508: BioID Masters Project I
- BMED 6509: BioID Masters Project II
- ME 6222: Manufacturing Processes and Systems
- ME 6225: Metrology and Measurement Systems
- ME 6401: Linear Control Systems
- ME 6403: Digital Control Systems
- ME 6441: Dynamics of Mechanical Systems
- ME 6442: Vibration of Mechanical Systems

## Course Co-requisite Modifications

- BMED 6501: Fundamentals of Biomedical Innovation and Development Processes
- BMED 6502: BioID Clinical Literacy and Experience
- BMED 6503: Medical Markets and Clinical Specialties
- BMED 6504: Financial Planning for Development Projects
- BMED 6505: Product Planning and Project Management
- BMED 6506: Professional Communications for Biomedical Innovation and Development

# 2015-2016 Annual Report Summary

Items addressed:

## Course Major Field Restrictions

- BMED 6501: Fundamentals of Biomedical Innovation and Development Processes
- BMED 6502: BioID Clinical Literacy and Experience
- BMED 6503: Medical Markets and Clinical Specialties
- BMED 6504: Financial Planning for Development Projects
- BMED 6505: Product Planning and Project Management
- BMED 6506: Professional Communications for Biomedical Innovation and Development
- BMED 6507: Medical Device Regulatory Requirements
- BMED 6508: BioID Masters Project I
- BMED 6509: BioID Masters Project II

\* Add restriction to all MBID program courses for currently enrolled MBID students only. The committee concluded that no action needed be taken as the Registrar advised a solution on the local level with the scheduler of classes, adding the Major Field Restriction at the section level instead of on the Catalog level.

## Course Deactivations

- *113 Courses were deactivated!*

# 2015-2016 Annual Report Summary

## Items addressed:

### Student Petitions and Appeals

- The Graduate Committee acted on **308** student petitions in academic year 2015-2016. Of these, 291 were handled administratively in areas where the Committee had delegated responsibility to the Petitions Subcommittee and the Registrar. There were zero written appeals that were acted on in 2015-2016.
- For reference, in academic year 2014-2015, the Committee acted on **253** petitions.

# Action Items from the May 26, 2016 Minutes

## **School of City and Regional Planning**

### New Courses

- CP 6006: Visualization for Planners 0-3-1
- CP 6053: Planning Studio Urban Design 3-9-6
- CP 3217: Climate Change and the City 3-0-3
- CP 6243: Impact Assessment 3-0-3

## **College of Sciences**

### School Reorganization

- Schools of Biology and Applied Physiology will be combined and replaced with the School of Biological Sciences.

# Action Items from the June 23, 2016 Minutes

## College of Computing Degree Modification

### *Master of Science in Information Security*

- New name: Master of Science in Cybersecurity
- New Specializations:
  - Changes in degree requirements to make it a multi-disciplinary program. Request for three schools at Georgia Tech to be allowed to offer the degree, each with a distinct specialization.
  - Proposal to elevate the current concentrations in technology and policy to specializations.

# Action Items from the June 23, 2016 Minutes

## College of Computing

### Degree Modification (*continued*)

#### *Master of Science in Information Security*

- Request for a new cyber-physical systems security specialization, focusing on the smart energy area.
- Because of these new specializations, the degree will become multi-school and will be offered by Computer Science (technology specialization), Electrical and Computer Engineering (energy systems security specialization) and Public Policy (cybersecurity policy specialization).



# Action Items from the August 25, 2016 Minutes

- There were no action items from this meeting.

# Action Items from the September 8, 2016 Minutes

## **Scheller College of Business**

### Course Equivalency Correction

#### *MGT 6509 Legal & Ethical Business*

- The original NCP for MGT 6509 listed MGT 6126 as the equivalent meaning students would not receive credit for MGT 6509 and MGT 6126 if they took both courses. The correct equivalency should be corrected to MGT 6128. The School of Business submitted an updated NCP to reflect the change requested.

# Action Items from the September 8, 2016 Minutes

## College of Computing

### Degree Modification

#### *Master of Science in Computer Science*

- The College of Computing is requesting to add CS 7280 (existing course) to the Computing Systems concentration.

## Office of Graduate Studies

### Increase Minimum TOEFL Score Requirement

- Increase the Institute minimum total score for admission from 79 to 90 for the TOEFL iBT, and from 550 to 577 for the TOEFL PBT.
- Add minimum section score requirements of 19 for each skill on the TOEFL iBT, and corresponding minimum on the TOEFL PBT listening, writing, and reading sections.

# Action Items from the September 8, 2016 Minutes

## Office of Graduate Studies

### Increase Minimum TOEFL Score Requirement (*continued*)

A number of data sets were analyzed to support the recommendation to increase the minimum TOEFL score requirement including:

- Percentile rank among test-takers of the current and proposed minimum scores
- TOEFL scores of current students
- Current degree programs whose minimum scores are below the proposed minimum
- Peer institutions with institute-wide minimum scores

# Action Items from the October 6, 2016 Minutes

## Scheller College of Business

### Degree Modification

#### *Master of Business Administration*

Request to formalize electives for the MBA degree so they may be added to the Catalog and to DegreeWorks.

- MGT 6030 International Accounting
- MGT 6070 International Finance
- MGT 6071 Multinational Financial Management
- MGT 6116 Gender, Race, and Ethnicity
- MGT 6185 International Business Environments
- MGT 6197 Global Strategic Management
- MGT 6335 International Marketing
- MGT 6352 International Practicum
- MGT 6360 Global Operations and Supply Chain

# Action Items from the October 6, 2016 Minutes

## Scheller College of Business, School of Computational Science and Engineering, School of Industrial and Systems Engineering Online Delivery of Existing Program

### *Master of Science in Analytics*

- Began offering an on-campus Master of Science in Analytics degree in 2014, with a proposed size of 45 new students each year.
- By the third year of the program (2016), program was receiving nearly 800 applications for those 45 slots.
- Approximately 600-700 of the applicants met the admission criteria; however, on-campus class space limited admissions to less than 10%.

# Action Items from the October 6, 2016 Minutes

Scheller College of Business, School of Computational Science and Engineering,  
School of Industrial and Systems Engineering

Online Delivery of Existing Program (*continued*)

## *Master of Science in Analytics*

- Received hundreds of inquiries about the availability of an online version of the M.S. in Analytics degree from working professionals and others who cannot come to Atlanta, but would like to pursue the degree.
- The online offering of the degree will require the same degree requirements as the on-campus version of the degree; however, in line with lower tuition, the online students will not have access to the same support services offered to on-campus MSANLT students.
- The online offering will only offer two tracks for the time being (Analytical Tools and Computational Data Analytics); the Business track is planned to be offered to online students in the future.

# Action Items from the October 6, 2016 Minutes

## Scheller College of Business, School of Computational Science and Engineering, School of Industrial and Systems Engineering Degree Modification

### *Master of Science in Analytics*

- When the Master of Science in Analytics degree was created, some new required courses were initially offered as 8803s.
- Four of those courses (including three that are cross-listed) have now been given permanent course numbers. This modification is meant to update the program to reflect those new course numbers:
  - MGT 8803 Big Data Analytics in Business changed to MGT 6203 Data Analytics in Business
  - CSE 8803 Applied Analytics Practicum changed to CSE 6748 Applied Analytics Practicum
  - ISYE 8803 Applied Analytics Practicum changed to ISYE 6748 Applied Analytics Practicum
  - MGT 8803 Applied Analytics Practicum changed to MGT 6748 Applied Analytics Practicum



# Action Items from the October 6, 2016 Minutes

## School of Computational Science and Engineering New Course

- CS 6250 Big Data Analytics for Healthcare 3-0-3

# Action Items and Minutes

- Move to approve all action items.
- Move to approve Minutes from:
  - May 26, 2016
  - June 23, 2016
  - August 25, 2016
  - September 8, 2016
  - October 6, 2016