Institute Undergraduate Curriculum Committee
Academic Matters and Appeals (Full Committee)
Tuesday, April 15, 2014

Present: Berry (PUBP), Economou (ARCH), Goodisman (BIOL), Hollengreen (ARCH), Klein (ECE), Mayor (ME), Pikowsky (Registrar), Potts (Vice Provost), Riedl (CoC-IC), Riley (ECE), Sankar (AE), Scott (CEE), Senf (LMC), Singleton (PSYC), Smith (ME), Wilkinson (CHEM & BIOCHEM), Yaszek (LMC)

Visitors: Laros (Registrar), Merkousko (Registrar), Hodges (Registrar), Hartley (EAS), Winders (HTS), Pedicino (INTA), Evanuik (OIE), Conte (CoC-SCS), Raczynski (CS), Leahy (CS), Williams (ECE), Grover (ChBE-Executive Committee Liaison), Aidun (ME), Bowman (INTA), Mastroangelo (COB), Slaughter (COB), Clarke (COB), Utschig (CETL), Blum (COB), Ferri (ME)

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.

Academic Matters

1. A motion was made to acknowledge without concern an informational item from the Office of International Education, International Plan. The motion was seconded and approved.

Georgia Tech’s catalog contains a list of courses approved by the International Plan Committee (IPC) to satisfy International Plan (IP) globally-focused course requirements. IP students are asked to take one course from each of three categories: International Relations, Country/Region, and Global Economics, to satisfy these requirements. Periodically, the committee approves new courses for the list or removes courses from the list. We are asked to inform the UCC when changes occur.

At the February 28, 2014 IPC meeting, the IPC approved the following two ECON courses to satisfy the Global Economics requirement and should be added to the IP’s catalog list:
ECON 4411 – Economic Development
ECON 4415 – Conflicts & Security in Developing Countries
Both of these courses also satisfy Social Sciences electives and the Global Perspectives overlay.

Course syllabi were provided with this request. This is an informational item only and requires no action by the Committee, unless deemed otherwise necessary.

2. A motion was made to approve a request from the School of Earth and Atmospheric Sciences for a degree modification. The motion was seconded and approved.

**Degree Modification: Bachelor of Science in Earth and Atmospheric Sciences – APPROVED**

Rationale for changing the approved program:

Core Electives: Add more options to the core electives. The Core Electives were originally created to ensure a student takes courses in areas outside their specific focus. As our department has grown, we have expanded into Planetary and Ocean Sciences more substantially.

So, we want to add more course options reflecting these new areas for our students to explore.

- Adding – 4305 Physical and Chemical Oceanography
- Adding - 4370 Physics of Planets

We are also restructuring one of the core courses, 3620, Geochemistry, to be a separate lecture and lab so that students can choose to take just one.

The new course is also being renamed to Environmental Geochemistry.

- Updating EAS 3620 to EAS 4220/4221

Core Electives: We want to restructure the Core elective requirement to say they need to choose two of the course options in A, plus at least one lab listed in B.

- EAS 3610, 4655, 4740, 4370, 4305, 4220
- EAS 4656, EAS 4221

Core Electives: We are removing EAS 4641 from the Core Electives and now using 4656.

Capstone Courses: We want to have all EAS majors take two specific capstone courses. We currently have a selection of capstone courses where a student can choose 2 of three options.
Two of these courses are more computer based (EAS 4610 Earth System Modeling and EAS 4480 Environmental Data Analysis) and the other is very hands-on (EAS 4420 Environmental Field Methods).

Change to the requirement to being EAS 4610 and EAS 4420.

This was the recommendation from an internal faculty review and provides more breadth in the program. See packet on ICC web site for full curriculum information.

3. A motion was made to approve a request from the School of Literature, Media, and Communication to change course numbers for courses that have not yet been taught. The motion was seconded and approved.

**Change Course Numbers – Approved**

- LMC 3401 to 3431
- LMC 3402 to 3432

**Rationale:**

On the March 11th minutes, two new LMC courses were created.

- LMC 3401: Technical Communication Approaches
- LMC 3402: Technical Communication Strategies

This numbering pattern cannot be used since the LMC 3402 number has previously been used as LMC 3402: Graphic and Visual Design. This was an oversight in processing this request. This does not represent a problem for student records because the courses have not been taught as yet.

Note: LMC will use the 343X number series for communication courses.

4. A motion was made to approve a request from the School of History Technology and Society for the deactivation of courses and to make two of the remaining courses repeatable for credit. The motion was seconded and approved.

**Deactivation of Courses – Approved**

- HTS 4002, 4003, 4004, 4005: Seminar in US History
- HTS 4012, 4013, 4014, 4015: Seminar in Sociology
- HTS 4032, 4033, 4034, 4035: Seminar in European History
- HTS 4062, 4063, 4064, 4065: Seminar in Asian History
- HTS 4082, 4083, 4084, 4085: Seminar in History of Technology

Each HTS seminar currently has 5 numbers (e.g., Seminar in US History has HTS 4001, 4002, 4003, 4004, 4005). The IUCC previously suggested keeping just one
repeatable course number for each seminar – in the case of the Seminar in US History, we would keep HTS 4001. The single numbered seminars will be repeatable with rotating topics, creating a more streamlined HTS course catalog.

In addition, two of the seminars that will be retained – HTS 4061 and HTS 4086 – currently are not repeatable. So, HTS requests that these two seminars be changed to be repeatable.

Note: The Committee asked the Registrar if it would be possible to repurpose some of these numbers of deactivated courses. The Registrar’s Office will review them to determine if that is possible.

Courses Changed to Repeatable for Credit – Approved

HTS 4061 and HTS 4086

5. A motion was made to approve a request from the School of History, Technology and Society for a degree modification. The motion was seconded and approved.

Degree Modification, Bachelor of Science in History, Technology, and Society – Approved

Note: This proposal was partially approved. The first and third requests below were approved. The second request below was tabled because some of the courses in question have not yet made their way through the IUCC General Education Subcommittee. Once all the courses are approved, the proposal to add them as options in this program will be reconsidered.

Requested changes to the approved program and rationale:

First, HTS requests approval to modify the HTS degree to eliminate the requirement to take HTS 1001. This course currently serves as an introduction to the major, with a focus on the resources offered by the School of HTS. The functions of HTS 1001 are largely captured by HTS 2101 (Research Methods), which is required for HTS majors and taken early in the major. This change will reduce the HTS Core Requirements to 32 hours, and we will increase the Free Electives for the major to 21 hours.

Second, HTS requests approval to modify the HTS degree to reflect new courses added to the HTS curriculum that will help fulfill major requirements, specifically the “Non-U.S.” and the “Science, Technology, and Medicine” requirements.

Third, HTS requests approval to modify the HTS degree to allow HTS4086 (Seminar in Health, Medicine, and Society) and HTS 4091 (Seminar in Global Studies) to count toward the seminar requirement.
There will be no change in total hours for this program.

See the packet on the ICC website for details on the curriculum.

6. A motion was made to approve a request from the College of Computing and School of Literature, Media, and Communication for a degree modification. The motion was seconded and approved.

Degree Modification, Bachelor of Science in Computational Media – Approved

This proposed change seeks to achieve the following:

- Updating the CM degree requirements to reflect the sunsetting of CS 3240 in the Intelligence Picks. Approved by the IUCC on July 23, 2013.
- Updating the CM degree requirements to reflect adding both CS 4650 and 4649 to the Approaches to Intelligence Pick approved by the IUCC March 18, 2014.
- Updating the Game Studies thread with both CS Media and CS People threads to require CS 3600 (Intelligence already requires CS 3600.) This is an administrative oversight that should have been changed with the beginning of the threaded CM program.
- Changes 1 & 2 above have already been approved by the IUCC for the Intelligence thread in the BSCS degree so we need to approve the same changes for the BSCM degree since they share the Intelligence thread.
- Changes to #3 are an administrative change. CS 3600 should have been required by all Game Studies threads since LCC 4731 and LCC 4732 require CS 3600 as a prerequisite in the “Game Studies” pick.
- For #3, 3 hours will be removed from the “CM or Media” area so they will change from 18 hours to 15 hours because CS 3600 will be required. This will affect both the Game Studies & People thread and Game Studies & Media thread combinations.

Specific degree requirements for each of the threads are outlined within the proposal packet. Please refer to the ICC website for details.

7. A motion was made to approve a request from the School of Mechanical Engineering for a degree modification. The motion was seconded and approved.

Degree Modification, Bachelor of Science in Mechanical Engineering – Approved

The 2012-2013 BSME degree program is described online at http://www.catalog.gatech.edu/colleges/coe/me/ugrad/bsme/geninfo.php

There are two degree options: Cooperative Plan and International Plan; both options have the same degree requirements as the basic degree.
What is being requested?

- Three modifications to the BSME degree program are requested. Each is described below, along with the rationale for the change.
  - Vertically Integrated Program (VIP) Hours: The School requests the following limitation on using VIP courses to satisfy Free Elective hours in the BSME curriculum. The change is motivated by a desire by the ME faculty to limit the extent to which project-based courses can be used to satisfy the degree requirements for the BSME degree.

Current BSME requirement regarding Free Electives:

15 hours total, with at least 9 hours at the 2000-level or above, except for 4 hours that can be satisfied using BIOL 1510, BIOL 1520, or CHEM 1212K. A maximum of 6 hours of UG Research or Special Problems (2699, 4699, 4903 from any department) can be counted as Free Electives.

Proposed change:

15 hours total, with at least 9 hours at the 2000-level or above, except for 4 hours that can be satisfied using BIOL 1510, BIOL 1520, or CHEM 1212K. Students can use a maximum of 6 credits of VIP courses (ECE 2811, 381X, 481X) or a maximum of 6 credits of undergraduate research and special problems courses (2699, 4699, 4903 from any department), with the total from both course groups not to exceed 9 credits towards the degree requirements for the BSME degree.

Adoption of Math 3670 Probability and Statistics with Applications for the BSME degree requirement in place of the Math/CEE/ISYE 3770 Statistics:

Recently, the School of Mathematics de-coupled their statistics class, Math 3770, from CEE/ISYE 3770. Their new class is Math 3670 Probability and Statistics with Applications. This new class continues to meet the needs of the BSME degree, and has as a further advantage of having an unambiguous “math” designation. This is helpful for accreditation purposes, where the School has used the 3 hours of instruction in statistics as part of the 32 hours of basic math and science required by ABET. This change necessitates the following changes to the pre-requisite structure of two ME courses:

ME 3057 Experimental Methods Laboratory

Prerequisites: COE 3001 Mechanics of Deformable Bodies; ME 3340 Fluid Mechanics. Pre-requisites with Concurrency: ME 3017 System Dynamics; ME 3345 Heat Transfer; Math/CEE/ISYE 3770 Statistics or Math 3670 Probability and Statistics with Applications.
ME 4056 *Mechanical Engineering Systems Laboratory.*

Prerequisites: ME 3017 *System Dynamics*; ME 3057 *Experimental Methods Laboratory*; ME 3345 *Heat Transfer*; Math/CEE/ISYE 3770 *Statistics* or Math 3670 *Probability and Statistics with Applications.*

**ME students will be allowed to substitute CEE/ISYE 3770 for Math 3670 until Spring Semester, 2015.**

**Key Differences:**

The changes requested above are meant to strengthen the ME undergraduate curriculum by clarifying which courses can be used as Free Electives and modifying the pre-requisites to several classes.

**Summary:**

This change results in a new definition of “free electives” in ME. It further limits what those courses may be. The second thing that it does is replaces MATH 3770 with MATH 3670.

**BSME degree requirements, 2014-2015 Curriculum Year**

*Additions in red, deletions indicated by strikethrough*

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<thead>
<tr>
<th>FIRST YEAR - FALL</th>
<th>Pre-Requisites</th>
<th>COURSE HRS</th>
<th>Notes</th>
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<td>ENGL 1101 English Composition I</td>
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| TOTAL SEMESTER HOURS | 16 |

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<tr>
<td>MATH 1502 Calculus II</td>
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<td>ENGL 1102 English Composition II</td>
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<td>PHYS 2211 Introductory Physics I</td>
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<td>CS 1371 Computing for Engineers</td>
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<td>ME 3345</td>
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<td>ME 3210</td>
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<td>MATH 2401</td>
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<td>MATH 3670 Probability and Statistics with Applications</td>
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<td><strong>FOURTH YEAR - SPRING</strong></td>
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<td>ME 4182 Capstone Design</td>
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<td><strong>TOTAL SEMESTER HOURS</strong></td>
<td><strong>TOTAL PROGRAM HOURS INCLUDING WELLNESS (2 HOURS)</strong></td>
<td>18</td>
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**Notes:**

[1] Students must attain a grade of C-or-better in MATH 1501, MATH 1502, MATH 2401, MATH 2403, PHYS 2211, and COE 2001 before they can move on to another course for which those courses are a pre-requisite.

[2] CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.

[3] HIST 2111 or 2112 or POL 1101 or PUBP 3000 or INTA 1200; counts as Social Science

[3a] Wellness elective can be satisfied with APPH 1040, APPH 1050, or HPS 1040.
[4] Cannot be dropped after registration without documented medical reason

[5] Required for students who began Fall 2011 and later

[6] Approved Global Perspectives course (www.catalog.gatech.edu/students/ugrad/core gp.php) must be included in the Social Science and Humanities elective hours.

[7] Between the Ethics Elective, Global Perspectives Elective, Social Science Electives, and Humanities Electives, students must ensure 12 hours of SS and 12 hours of HUM. A listing of classes that qualify as Social Science or Humanities may be found at: www.catalog.gatech.edu/students/ugrad/core/core.php.

[8] Free Electives and ME Electives may not duplicate any other material used to satisfy the BSME degree requirements

[9] Any GT course with the restrictions that: At least 9 hours must be at the 2000-level or above. Four of these 9 hours may be satisfied with one of the following: BIOL 1510, BIOL 1520, or CHEM 1212K.

[10] Up to 6 hours of Free Elective may be satisfied using 2699/4699/4903 from any department. Students can use a maximum of 6 credits of VIP courses (ECE 2811, 381X, 481X) or a maximum of 6 credits of undergraduate research and special problems courses (2699, 4699, 4903 from any department) not to exceed 9 credits from both course groups towards the degree requirements for the BSME degree.

[11] Can be satisfied by ECON 2100, 2101, 2105, or 2106 (counts as Social Science)

[12] Students can receive credit for only one of ECON 2100, ECON 2101, ECON 2105, and ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.

[13] Can be any course designated by Georgia Tech as having an ethics attribute. Complete list is maintained at: http://www.catalog.gatech.edu/students/ugrad/core/ethics.php

[14] Can be satisfied by either ME 3180 or ME 4315; students can take both and count the second class as a Free Elective or an ME Elective.

[15] Students may take both ME 3180 and ME 4315; in this case, one class will satisfy the Design Elective and the other will satisfy the ME Elective

[16] An ME elective is any ME course at the 3000-level or above, excluding ME 3141, 3720, 3743, 3744, 4699, 4741, 4742, 4753, and 4903.

[17] ME 4182 may be satisfied with GT 4823 Multidisciplinary Capstone Design.
Additional Information:

- Courses marked by * designate “Pre-requisite with Concurrency,” i.e., these courses may be taken at the same time or prior to the course in question.
- All classes must be taken for Letter Grade
- ENGL 1101 and 1102 must be completed before earning 45 credit hours.
- Overall GPA must be greater than 2.00 at graduation
- The ME GPA is computed from all courses in the “Mechanical Engineering Core,” the “Engineering Design and Professional Practice Stem,” the Design Elective, and ME Elective. Students must have an ME GPA of at least 2.00 at the time of graduation. When computing the ME GPA: (i) Transfer courses and foreign exchange courses are not included, (ii) No course can be taken pass/fail, (iii) If a course is repeated, only the last grade is included in the calculation.
- Among the courses used to compute the ME GPA, all courses must be completed with a C-or-better, with the exception of at most 9 credit hours, which can be satisfied with a grade of D.

8. A motion was made to acknowledge without concern a request from the School of Mechanical Engineering for prerequisite modifications. The motion was seconded and approved.

**Prerequisite Modifications – Approved (Acknowledged without Concern)**

- Pre-requisite change for ME 4182 *Capstone Design*: Two changes are requested, one to ensure that students taking senior design have the necessary background in system modeling and one due to the elimination of the manufacturing class, ME 4210, which was a pre-requisite with concurrency for ME 4182. Through ME 4210, several classes were implicit pre-reqs to ME 4182, including COE 3001 *Mechanics of Deformable Bodies*, ME 3345 *Heat Transfer*, and Math/CEE/ISYE 3770 Statistics.

**Current prerequisites for ME 4182:**
ME 2110 *Creative Decisions and Design*; ME 3180 *Mechanical Design and Analysis* or ME 4315 *Energy Systems Analysis and Design*. Pre-requisite with concurrency: ME 4210 *Manufacturing Processes and Engineering*.

**Proposed prerequisites for ME 4182:**
ME 2110 *Creative Decisions and Design*; COE 3001 *Mechanics of Deformable Bodies*; ME 3017 *System Dynamics*; ME 3210 *Design, Materials, and Manufacture*; ME 3345 *Heat Transfer*; Math/CEE/ISYE 3770 Statistics or Math 3670 *Probability and Statistics with Applications*; ME 3180 *Mechanical Design and Analysis* or ME 4315 *Energy Systems Analysis and Design*. Pre-
requisite with concurrency: **ME 4210 Manufacturing Processes and Engineering** none.

- **Pre-requisite change to ME 4011 Internal Combustion Engines:** I 4011 is a very popular technical elective offered each Fall and Spring semester and taken by many ME majors. The current pre-requisite to ME 3322 *Thermodynamics*. In order to prepare these students better for some of the course content, it was decided to add knowledge of fluid mechanics and heat transfer to the pre-requisites. Since heat transfer concepts are used towards the end of ME 4011, and since ME 3322 *Thermodynamics* and ME 3340 *Fluid Mechanics* are pre-requisites to ME 3345 *Heat Transfer*, it was decided to make ME 3345 a pre-requisite with concurrency to ME 4011. (ME 3345 is a required class in the BSME curriculum, so all ME majors are required to take it; typically, it is taken 2nd-semester junior year, which would allow students ample time to take ME 4011 as an elective in their senior year.)

**Current pre-requisites to ME 4011:**

ME 3322 *Thermodynamics*

**Proposed pre-requisites to ME 4011:**

ME 3322 *Thermodynamics*, Pre-requisite with concurrency, ME 3345 *Heat Transfer*.

The School of Mechanical Engineering voted recently to change the statistics requirement for the BSME degree from Math/CEE/ISYE 3770 to Math 3670, Probability and Statistics with Applications. This necessitates that the pre-requisites to two ME classes be changed.

- **ME 3057 Experimental Methods Laboratory**


ME 4056 *Mechanical Engineering Systems Laboratory*. 
Prerequisites: ME 3017 *System Dynamics*; ME 3057 *Experimental Methods Laboratory*; ME 3345 *Heat Transfer*; Math/CEE/ISYE 3770 *Statistics* or Math 3670 *Probability and Statistics with Applications*.

9. A motion was made to approve a request from the School of International Affairs for new courses with attributes. The motion was seconded and approved.

**New Courses with Attributes – Approved**

These courses were previously taught as Special Topics.
Seeking Social Science and Global Perspectives attributes:

INTA 2120: Intro to International Security 3-0-3
INTA 2221: Politics of the European Union 3-0-3
   Note: It was suggested that “European Union” be fully spelled out.
INTA 2260: Government, Politics and Society of the Middle East 3-0-3
INTA 3042: Energy and International Security 3-0-3
INTA 3044: Global Politics of Technology 3-0-3
INTA 3050: The Meaning of Global Citizenship 3-0-3
INTA 3223: Transatlantic Relations 3-0-3
INTA 3243: US-Latin American Relations 3-0-3

Note: The Committee suggested that the enrollments in these courses be reviewed after two years or so to evaluate the offering patterns and the actual number of students being served by these courses.

10. A motion was made to approve a request from the School of International Affairs for new courses with attributes. The motion was seconded and approved.

New Courses with Attributes – Approved

These courses were not previously taught as Special Topics.

Seeking Social Science and Global Perspectives attributes:

INTA 2042: Intro to Global WMD Issues 3-0-3
INTA 2050: Introduction to Global Development 3-0-3
INTA 2241: Government, Politics and Society of Latin America 3-0-3

Note: The vote on this set of courses was not unanimous. There was concern about approving as permanent offerings courses which have not been taught before; there was also concern expressed about duplication of material in INTA 2042 and INTA 2120. There were two opposed and one abstaining on this vote.

11. A motion was made to approve a request from the School of International Affairs to join the BS/MS program. The motion was seconded and approved.

Degree Modification, New Track or Option, 5yr BS-MS in International Affairs Bachelor of Science in International Affairs – Approved

Rational and Justification

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.

Responses to Initial Concerns

-How much would this cost INTA?: Nothing. It requires no special or additional courses, staff, or faculty. It merely shifts our applicant pool upwards in terms of student quality. Nor does it affect INTA’s revenues because all MSIA tuition goes to the Provost’s office, not INTA.

-Does it make the MS part look cheap and hurried?: No. Several of our APSIA competitors already offer similar programs, including Columbia, Johns Hopkins- SAIS, Georgetown, UC San Diego, and USC. We are behind the curve on this. Also over a dozen units at Georgia Tech offer a 5-year BS/MS, including:

- Aerospace Engineering
- Civil Engineering
- Chemical & Biomolecular Engineering
- Electrical Engineering
- Computer Engineering
- Computational Media & Digital Media
- Environmental Engineering
- Public Policy
- Earth and Atmospheric Sciences
- Materials Science Engineering
- Mechanical Engineering
- Nuclear and Radiological Engineering
- Science, Technology, and Culture & Digital Media

-Why not offer it to Tech engineers? Designing a rapid MSIA program for non-majors presents challenges far beyond, and more complicated than, those for INTA undergrads, even if they have completed an INTA minor. There are also many more potential “unknown unknowns” involved in creating a program for

---

1 http://www.catalog.gatech.edu/students/ugrad/degrees/fiveyear.php
non-majors. Finally, there is currently less faculty support for a non-major program. Therefore the 5-yr program proposed here will provide much valuable knowledge and experience which might be used to design a non-major program in the future.

-Would this burden us with a flood of students? The UG and G assistant directors currently anticipate five students per year, which constitutes 10% of the MSIA student body. If too many apply, then we can also adjust the entry criteria so as to restrict entry to only the most capable students. Finally, if the MSIA gets flooded by highly qualified students, then we should welcome that.

-When do we want this program up and running?: As soon as possible. If we act quickly and adroitly, then we can start accepting applications in Spring 2015 for the Fall 2015 entering class. All courses and most of the infrastructure are already in place. We simple need to get it approved up through School, College, and Institute levels.

-Who would administer this program: as a joint BS/MS program, advising would fall under the directors and assistant directors of the undergraduate and graduate programs where appropriate. Admissions will be handled by the Graduate Committee. Administration will be handled by the assistant director of the graduate program.

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.
The curriculum changes for the BSINTA degree would be as follows:

Major Requirements

<table>
<thead>
<tr>
<th>Semester 1</th>
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12. A motion was made to approve a request from the College of Computing for a new course. The motion was seconded and approved.

New Course – Approved

CS 2345: Advanced Practical 0-0 Programming 3-3-4

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

New Courses – Approved

CS 3311: Project Design 1-0-1
CS 3312: Design Implementation 2-0-2

Note: The NCPs were changed to reflect that all grade modes are possible. This was recommended, as it normally is, so that the offering unit will have the option of any of the grade modes should the need arise.
14. A motion was made to approve a request from the College of Computing for a degree Modification. The motion was seconded and approved.

**Degree Modification, Bachelor of Science in Computer Science – Approved**

**Rationale and details for changing the approved program:**

- Requesting to add CS 3311, CS 3312, LMC 3432, and LMC 3431 to the degree and deleting CS 4911 and LCC/LMC 3403.
- The junior design and implementation courses were created to put the communication skills into a computing context. This two class sequence will be completed over 2 semesters to increase contextualization and relevance and provide students a better experience. This will not result in any change in total hours; students will still do a total of 3 hours CS design project and 3 hours LMC. Students will select projects just like in 4911 and work on developing the customer requirements and high-level design. The difference is that the presentations and writing requirements of 4911 are integrated into the LMC class. This is beneficial for students since they are not writing on fictional projects as in the current 3403 but are writing about their real work they are completing in their projects. The same instructors that normally teach 4911 and 3403 will be teaching 3311/3312 and 3432/3431.

**Key Differences:**

The number of hours will remain the same. CS 3311 and 3312 will replace CS 4911 and LMC 3432 and 3431 will replace LCC 3403.

**Sample Curriculum of changes that are being requested for all 28 concentrations:**

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<th>NOTES</th>
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<td>Any HUM</td>
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<tr>
<td>Core D - Science, Math, &amp; Technology</td>
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<tr>
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</table>
Pass-fail only allowed for Free Electives (max six hours), CS 1100, and CS 1171 (if required)

NOTES

\[a\] = Two of three lab sciences MUST be a sequence.
\[c\] = C-minimum required

15. A motion was made to approve a request from the College of Computing for a degree modification. The motion was seconded and approved.

**Degree Modification, Bachelor of Science in Computer Science (Systems & Architecture thread) – Approved**

**Rationale for changing the approved program:**

We are requesting moving CS 3220 from a “thread pick” to the core courses for the Systems & Architecture thread of the Computer Science Bachelor’s degree.

Because of this change, the “thread pick” goes away and the other course that was in the “thread pick” moves to another thread pick. Specifically, we are making these changes:

- CS1301 Introduction to Computing and Programming, 3
- CS1331 Introduction to Object-Oriented Programming, 3
- CS1332 Data structures and Algorithms, 3
- CS2050 or CS2051 Introduction to Discrete Math for CS, 3
- CS2110 Computing Organization and Programming, 4
- CS2200 Computer Systems and Networks, 4
- CS2340 Objects and Design, 3
- CS3210 Design of Operating Systems, 3
  - **CS3220 Computer Structures: HW/SW Codesign of a Processor, 3** [move to core]
  - CS3510 or CS 3511 Design and analysis of algorithms, 3

**Pick 1 of Systems & Architecture:**

- **CS3220 Computer Structures: HW/SW Codesign of a Processor, 3**
- CS4210 Advanced Operating Systems, 3

**Pick 1 of Advanced Systems & Architecture:**

- **CS4210 Advanced Operating Systems, 3** [move to pick]
- CS4220 Programming Embedded Systems
- CS4290 Advanced Computer Organization, 3
Pick 1 of Systems Software Tools

- CS3300 Introduction to Software Engineering, 3
- CS4240 Compilers, Interpreters, and Program Analyzers, 3

We are making this chance because we now have enough faculty in the area covered by CS 3220 to teach the course every semester and summer.

A committee of faculty in the College of Computing recommended this change. When updating the “Platforms” thread and renaming it “Systems & Architecture,” the faculty committee wished to have CS 3220 in the core of the thread. This was not possible because, at that time we did not have enough faculty to offer it every semester and summers.

Key Differences in program: No change

The degree requirements for all the threads are described in the proposal packet and are available on the ICC website.

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

New Courses – Approved

MGT 4181: Business Forecasting 3-0-3
MGT 4050 Business Analytics 3-0-3
MGT 4341: Management of Healthcare Operations 3-0-3
  Note: It was suggested that the abbreviation be changed to “Healthcare Ops.”
MGT 4367: Revenue Analytics 3-0-3
MGT 3614: Law for Entrepreneurs 3-0-3

Note: The vote on these courses was not unanimous. There was concern about content overlap between MGT 4050 and MGT 4367. There was one opposing vote.

17. A motion was made to approve a request from the Scheller College of Business for the deactivation of a course. The motion was seconded and approved.

Course Deactivation – Approved

MGT 4661: Database Management

Note: There was a question about the title of this course because there is a current one that looks the same. Banner was checked and this is the correct title for MGT 4661.
18. A motion was made to approve a request from the Scheller College of Business for a new certificate. The motion was seconded and approved.

**New Certificate, Business Analytics – Approved**

Today, businesses, consumers, and societies leave behind massive amounts of data as a by-product of their activities. Leading-edge companies in every industry are using business analytics to analyze data and replacing intuition and guesswork in their decision-making with analytical insights.

According to INFORMS (the professional organization that offers certification in analytics), business analytics is “the scientific process of transforming data into insight for making better decisions”.

The objective of the business analytics certificate is to prepare students to structure, transform and analyze data to gain insights that will improve business intelligence and managerial decision-making. The certificate provides training in statistics, data structuring, management and visualization and in applications of analytics techniques to different business areas.

Georgia Tech is distinguished by its commitment to improving the human condition through advanced science and technology. The Business Analytics Certificate is consistent with the mission of Georgia Tech in that it will prepare students to use technology and technical skills in evaluating data that improves the quality of decision making in organizations and society.

**Curriculum:**

Required Course:
MGT 4050 (Business Analytics)

Electives: Three (3) or more should be chosen from the following:
MGT 3310 (Marketing Research)
MGT 3745 (Business Programming)
MGT 4057 (Business Process Analysis & Design)
MGT 4058 (Database Management)
MGT 4332 (Database & CRM Strategy)
MGT 4028 (Financial Reporting & Analysis of Technology Firms)
MGT4181 (Business Forecasting)
MGT 4367 (Revenue Analytics)
MGT 4803 Special Topics (Privacy, Technology, Policy, and Law)
CS 4460 (Information Visualization)
All courses require a letter grade of C or better for certificate eligibility.

The coursework in the Business Analytics certificate will prepare students to use statistics, quantitative analysis and information-modeling techniques to help shape and make business decisions.

The undergraduate student who completes the coursework in the Business Analytics certificate can approach business problems in marketing, operations, finance, management of information technology, and accounting from a data analytics perspective. Students can also develop and execute business analytics projects within business organizations.

The need for analytics education is clear. Deloitte (2013) found that 96% of organizations surveyed believe analytics will become even more important to their organizations in the next three years, but 42% believe their employees do not have the correct skills for the task. McKinsey Global has predicted that the United States will face a shortage of 1.5 million analytics-trained managers by 2018, while Gartner (2013) foresees an increase of 4.4 million analytics jobs by 2015 of which 1/3 will be unfilled due to lack of trained applicants.

While it is impossible to forecast with accuracy the number of students interested in the certificate, there are clearly job opportunities in the business analytics field. Expectations are that, given the opportunities in this space, the certificate will be relatively popular. Comparison numbers for other certificates in the Scheller College suggest that approximately 15-20 certificates per annum would be a reasonable expectation.

No extraordinary expenses are required. No additional space or special facilities will be required. No other USG institutions are offering similar programs.

19. A motion was made to approve a request from the Scheller College of Business for a minor modification. The motion was seconded and approved.

**Minor Modification, Minor in Leadership Studies - Approved**

Rationale for changing the approved program:

We are proposing changing the name of one of the tracks in this minor from Management Track to Business Track. The primary reason for this request is to align more closely with the changes within the Scheller College towards business and away from management. As this track (and almost all of the coursework that is part of this track) is administered through the Scheller College of Business, it provides a clear rationale for identity and branding alignment with the college. This change is also congruent with peer institutions that have moved away from the management terminology and towards business. Finally, the capstone course
that is part of this minor is geared towards projects where students solve business challenges for organizations and develop solutions for these challenges, such as improving business processes; developing marketing and outreach plans; conducting market research and analysis etc. All projects also have the potential to make a very strong social and/or environmental impact, thereby harnessing the potential of business in making a positive impact in their communities and on society.

- Replace Special Topics course MGT 4803 Management in the Healthcare Sector with new permanent course number (MGT 3662). Remove Special Topics course MGT 4803 Fairness & Leadership: Building Trust. This course is no longer being taught. Remove MGT/ME 4741 Integrative Mgt. Development-Project Prep. This course is restricted to Denning T&M program students only. Add MGT 3101 and 4117 to increase course selection for students pursuing the Leadership Studies minor.
- Catalog Correction: Please add MGT 4072, MGT 4102 and MGT 4116 which were previously approved June 2012. They should have been added to the 2013-2014 Catalog. The attached minor form includes these corrections.

20. A motion was made to approve an administrative item related to approval of MATH 3670 as one of the electives to meet the Probability/Statistics Elective requirement for the Bachelor of Science in Electrical Engineering and the Bachelor of Science in Computer Engineering. The motion was seconded and approved.

21. A motion was made to approve a proposal from the Scheller College of Business for an interdisciplinary certificate. The motion was seconded and approved.

Note: The voting on this proposal was not unanimous. There were 18 in favor, 1 opposed, and 1 abstaining vote.

New Certificate, Certificate of Social Growth, Academic Enrichment, and Vocational Exploration – Approved

Certificate of Social Growth, Academic Enrichment, and Vocational Exploration offered by the Interdisciplinary Inclusive Postsecondary Academy (IPA) at Georgia Tech

INTRODUCTION

This proposal is to offer a 4-year certificate program for students with intellectual and developmental disability (I/DD). Students with intellectual and development disability (see Appendix I for definition of I/DD) need postsecondary education (PE) beyond high school similar to any other student. For the past 20 years, more than 200 large and small college campuses in US and Canada have established PE programs. These programs have similar focus areas
including self-determination, social skills development, college course access, independent living, and employment. The PE students go through a 2-year or 4-year special curriculum Certificate program. They audit regular courses with help from mentors, and take specially designed courses. The PE program on each campus is usually small enrolling between 20-60 students, with 8-12 new admittances each year.

RATIONALE

Higher education leads to a variety of personal and financial benefits, and is an integral part of establishing a successful career path and enhancing earnings over a lifetime (Carnevale, et al., 2011). However, up until recently, low expectations coupled with minimal opportunities have prevented people with I/DD from receiving the benefits associated with higher education. Only 23% of high school students with I/DD go on to attend a two-year or four-year college (Grigal, et al., 2011). In 2011, 81% of people with I/DD were being served in facility-based and non-work settings (Butterworth, et al, 2013). These individuals were not afforded the opportunity to access further education as adults and have little hope of ever obtaining a real job or making minimum wage. Despite years of investment in special education, the poor outcome choices afforded to people with I/DD have prevented any substantial change in their transition and adult life outcomes. In 2011, the employment rates for transition aged individuals (ages 16-21) were 18% or less than half the employment rate for people without disabilities (Butterworth et al., 2013). This gap becomes worse as people with I/DD age; only 32% of adults in the 20 to 30 years old age group have employment compared to 74% of people in the same age group without disabilities (Sulewski, et al, 2013).

A recent survey of 11,599 adults with I/DD in 16 states found that only 14.7% were competitively employed (Human Services Research Institute, 2012). These abysmal outcomes are changing due to positive changes made in the reauthorization of the Higher Education Act. The Higher Education Opportunities Act of 2008 contains several new provisions aimed at increasing access to higher education for youth and adults with intellectual disabilities. In 2010, Congress authorized the creation of new model demonstration programs via the Office of Postsecondary Education to facilitate and help formation of transition and PE programs for students with intellectual disability. The goal of the PE program is to create, expand, or enhance high-quality, inclusive higher education experiences to support positive outcomes for individuals with I/DD. Data collected from these programs demonstrate that given the opportunity, people with I/DD can and will benefit from higher education.

There are more than 200 PE programs in US and Canada at various colleges and universities (see Appendix II and http://www.thinkcollege.net/). Evidence shows that postsecondary education significantly improves life-long productivity of most individuals with I/DD. These programs can only be provided on secure college campuses (see Appendix III for Q&A). As of now, in State of Georgia only

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2 The following two paragraphs are from Transition and Postsecondary Education Programs for Students with Intellectual Disability: A Pathway to Employment by Meg Grigal & Debra Hart, Think College National Coordinating Center, Institute for Community Inclusion, University of Massachusetts Boston.

Undergraduate Curriculum Committee
Minutes, April 15, 2014
Kennesaw State University (KSU) has such a program, where for example state of Maryland has 13 postsecondary programs. Currently there are about 1200 students graduating from high schools in Georgia that qualify for postsecondary education, where current opening space is 7-12. Support for expanding this program to more universities in Georgia has received wide acceptance (Governor's goal “is to replicate the program at KSU [...at other universities]” ... Feb 21, 2013). Many believe that every public university should have a PE program for I/DD students.

THE INCLUSIVE ACADEMY IN GEORGIA TECH STRATEGIC PLAN

The Georgia Tech Strategic Plan was initiated in 2009 by President G.P. “Bud” Peterson to look to the next twenty-five years. As part of this strategic plan “Georgia Tech will define the technological research university of the 21st century”. The specific areas of globalization, service learning, interdisciplinary research, health sciences and innovation are addressed specifically. Every component of the strategic plan calls for diversity, solving significant societal problems, innovative thinking, outreach and service.

The Inclusive Academy, as a technology-oriented outreach program to help solve one of society’s significant challenges, is in-line with Georgia Tech strategic plan. Relatively large percentage of population requires specialized postsecondary education that can be provided only on university campuses. Because these programs can only house a small group of students compared to the overall population of students on campus, it is imperative that every university and college campus provide this specialized education to maximize the number of students with special needs that receive this education. Today only a small percentage of the I/DD students receive postsecondary education. Yet, the certificate program benefits extend beyond the enrolled students, affecting the traditional student body and other stakeholders who interact with the certificate program students. By implementing this program, Georgia Tech as a major technology-oriented university can be at the forefront of this movement. Consider the following statements in each component of the strategic plan and relevance to the service provided by the Inclusive Postsecondary Education Academy.

Research - We will explore new ways to express the human heart, mind, and soul by emphasizing the creative intersection of art, science, and technology.

Education - Building on our strengths, we will seek new opportunities and challenges. Working together, we will understand and solve problems of global significance, scale, and scope.

Innovation - We will develop leaders who will help solve the world’s most challenging issues. We will develop and support new areas of research and education that have the potential to transform technology and society.
Global Reach - In keeping with our role of good global citizenship, we will provide critical international leadership. We will attract students and researchers from across the globe and extend our learning opportunities to every place that a technology-focused education is valued. We will serve local, state, national, and international communities with dedication and distinction.

THE INCLUSIVE POSTSECONDARY ACADEMY AT GEORGIA TECH

The interdisciplinary Inclusive Postsecondary Academy (IPA) at Georgia Tech offers a 4-year certificate program where the enrolled students take core courses offered by the IPA program, audit 8 or more courses from various Schools at Georgia Tech, and participate in extracurricular activities at Georgia Tech.

Curriculum

The core courses offered by the IPA program consist of academic fundamentals, life skills and career development. These courses are tailored to meet the domains of the Supports Intensity Scale, a widely used and valid instrument for individualized planning that transfers the focus from what an individual lacks to what the individual needs. Courses in this group are required for every student in the Academy. These courses are designed and offered by the IPA faculty.

Fundamentals

- Math (Basic operations with calculator and with MS excel)
- Reading (functional reading including forms, instructions, e-mail, online searches, social media)
- Writing (functional writing, completing forms, e-mails, social media)
- Science (basic knowledge of velocity, acceleration, mass, weight and force, energy, gravity, ... universe)
- Vocational Preparation (job shadow, internships, job search, portfolio creation)

Life Skills

- Independent Living Skills (time management, study skills, ...)
- Advocacy
- Interpersonal communication
- Money Management and Personal Finance
• Health and Safety
• Lifelong learning

Career Development
• Career exploration

In addition, the students are required to audit regular classes at Georgia Tech by attending every class and participating in these courses, with accommodation, as any other student. The Academy faculty grades homework and exams; the final course grade will be based on performance, effort and progress in the course.

The students are required to audit 8 courses selected from the General Education category options and GT 1000 Seminar for Academic Enrichment. Of the 8 audit courses, 4 are from a pre-selected set of courses and 4 from any other course offered at Georgia Tech. The study plan will have the following four elements:

Curriculum

Required (and elective as noted) IPA courses

Fundamentals (9 courses)

—— Math I & II —— Reading I —— Writing I ——
—— Writing II & III
—— Science/Technology I & II —— Science/Technology III (elective)

Life Skills (10 courses)

—— Social skills I & II
—— Economic skills I & II
—— Self-care/Household skills I & II
—— Communication and Self advocacy
—— Project-based learning
—— Capstone: Life after college
—— TA class (elective)

Career (5 courses)

—— Career I - overview
—— Career IIA On-campus Internship I
_____ Career IIB On-campus Internship II
_____ Career IIIA Off-campus Internship I
_____ Career IIIB Off-campus internship II

**Required audit Gen-Ed courses (5 courses)**

_____ GT 1000
_____ APPH 1040

And, any 3 courses selected from the following list

_____ ENG 1102  ____ CS 1801  ____ MGT 4193
_____ ME 1770  ____ LMC 2500  ____ LMC 3843
_____ HTS 2813  ____ MGT 4191  ____ PUBP 4140
_____ MGT 4611  ____ MGT 4192  ____ MGT 4194

**Elective audit courses (4 or more courses)**

_____ any 4 academic courses with the permission of the IPA faculty advisor and instructor (courses in category 2 or as listed in appendix IV)

**Elective IPA offered courses (2 or more courses)**

_____ TA Class
_____ Science/Technology III
_____ Special topics

Other elective courses can be selected from courses offered at Georgia Tech with the permission of the course instructor – sample courses obtained from a survey completed by undergraduate students are listed in Appendix IV.

Typical 4-year IPA program of study for the Certificate of Social Growth, Academic Enrichment, and Vocational Exploration:
The program of study for each student will require the approval of the IPA faculty advisor and the course instructor. The selected courses will be based on Person Centered Planning, an evidence based best practice approach to planning and working toward a positive future and quality of life.

Students have to maintain a minimum standard set by their IPA faculty advisor or otherwise will be placed on probation. Students on probation have one year to raise their performance above the said minimum standard.

A brief outline of the content of the IPA offered courses is provided in Appendix V. However, the IPA personnel in calendar year 2014-15 will develop the detailed content in the listed courses.
**Personnel and Organization**

It is anticipated that the program at full enrollment will have 48 students. The Academy will have dedicated personnel who manage the program, teach the core IPA courses, and advise the students.

The personnel consist of a director (“IPA director”) and dedicated staff who are categorized as non-tenure track faculty, faculty of practice or academic professionals (“IPA faculty”).

The IPA director reports to a governing faculty committee (GFC) made up of at least two tenured faculty members at Georgia Tech. The Academy will have internal, external and student advisory boards.

The **IPA director** will have a PhD or equivalent in a related field with expertise in all aspects of the program. This position will be in the category of faculty of practice or academic professional at Georgia Tech. The director will have budgetary responsibilities as well as some teaching and mentorship of the students. In this position, the director reports to the GFC. This position will be filled by August 2014.

The goal of the program is to have one **IPA faculty** for every ten students, therefore in full enrollment, there would be five IPA faculty who would be dedicated to teaching the core IPA courses as well as all aspects of advisory and mentorship of the Academy students. The IPA faculty report to the IPA director; those with PhD and required qualifications would be categorized as faculty of practice or academic professionals at Georgia Tech. Others will be Instructors or academic program coordinators. Each IPA faculty will teach 2 to 3 courses per semester.

At full enrollment, the program will have two full-time faculty as **Transition coordinator** and **Career developer**. The Career/Transition faculties are responsible for teaching the career courses and working with the students, career services, private companies and government agencies to place the students in competitive career-oriented positions. These two individuals will also have the responsibility to follow-up with the program alumni and to provide guidance and services to them as needed.

For every two Academy students, the program will recruit a **Student mentor** who would go to the classes audited by the Academy students, help integrate the students in the campus community as any other Georgia Tech student, and provide tutoring to the students when needed.
The program will have a full-time **administrative assistant** who would assist with all administrative functions.

At full enrollment, the IPA faculties have to teach on average 12 IPA courses each semester in the category of Fundamentals, Life Skills and Electives. The Transition coordinator and the Career developer will teach the Career courses.

**Program Evaluation**

For academic quality, administrative and budgetary oversight, the program will have annual evaluation. The program will follow the Think College Program Standards (see Appendix VI) incorporating practices that support Universal Design for Learning as outlined in the Higher Education Opportunity Act of 2008. The Academy will engage in continuous improvement by building evaluation and assessment into the program utilizing the PERC, Postsecondary Program Evaluation Tool.


**Budget**

As a certificate program, the Academy will be financially self-sufficient when fully enrolled. The students in this program do not take courses for credit and do not receive a degree, but they pay the regular Georgia Tech fees, IPA fee to fund the program, and room and board. In order for the program to be financially self-sufficient, the IPA fee is one of the highest among the postsecondary programs. However, there will be every effort to secure financial aid and scholarship for those applicants who cannot afford the fee. Pell grants will be available for eligible students once Certified Transition Program status is approved by the U.S. Department of Education.

**Admission criteria includes**
- identified as I/DD student
- be able to navigate the campus in a safe manner
- be able to take instructions and follow rules and regulations as explained
- living in the United States, Canada or Puerto Rico
- graduating high school (U.S. and Puerto Rico), graduating from grade 12 (Canada) or graduating from home school education in the U.S., Puerto Rico or Canada with special education diploma.
- plan to enroll full-time, without interruption, for the entire 2015-16 AY
- plan to complete the whole certificate
Why Georgia Tech?

- Georgia Tech is uniquely positioned in State of Georgia to accommodate technology-oriented students and to provide the technology needed for individuals with special needs to be more independent productive citizens
- Georgia Tech has one of the safest campuses in the State of Georgia
- The Academy will have synergy with several other organizations at Georgia Tech
- Georgia Tech embraces universal design that enhances learning for all students
- Georgia Tech is at the forefront of diversity, inclusion and outreach
- Right thing to do

22. Tris Utschig of CETL reviewed the recent discussion and decision on a course evaluation solution.

The need to search for a new vendor emerged because our current vendor, Digital Measures, halted development for their Course Response product in early 2013. Georgia Tech has been using Course Response since 2011, and our contract with Digital Measures expires May 31, 2014. Although Digital Measures still offers the product for continuing customers, a number of features previously requested will not be available. At the same time, products from other companies are now significantly more advanced than the Digital Measures product.

A recommendation was made to vet any new products with regard to broad accessibility, including by students and faculty with disabilities.

The full report is available on the ICC website.

Adjourned,

Reta Pikowsky
Registrar