

Institute Undergraduate Curriculum Committee
Academic Matters and Appeals (Full Committee)
Revised Minutes
Tuesday, January 14, 2014

Present: Hollengreen (ARCH), Pikowsky (REG), Senf (LMC), Smith (ME), Goodisman (BIOL), Loss (MATH), Yaszek (LMC), Klein (ECE) MacIntyre (CoC), Scott (CEE), Berry (PUBP), Wilkinson (CHEM), Singleton (PSYC), Economou (ARCH), Riedl (CoC-IC), Riley (ECE), Sankar (AE), Potts (VP)

Visitors: Laros (REG), Merkousko (REG), Hodges (REG), McDonald (HTS), Winders (HTS), Zhou (ISyE), Dobranski (CAS), Blum (CoB), Hartley (EAS), Clark (Music), Aidun (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.

Academic Matters

1. A presentation was made by Dr. Blum, College of Business, and Dr. Aidun, School of Mechanical Engineering, concerning an Inclusive Post-Secondary Education Certificate Program that is being currently explored. The official plan is to propose the certificate at a later meeting.

Committee members had a number of questions about this program, but indicated that they would be interested in seeing a formal proposal in the future.

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 need postsecondary education (PE) beyond high school to develop the skills and knowledge that will enable them to enter the workforce and find gainful and rewarding employment. For the past 20 years, several 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.

The inclusive postsecondary Academy (IPA) at that will be proposed for Georgia Tech is 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 extra-curricular activities at Georgia Tech.

The core PE program consists of academic fundamentals, living skills and career development that 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 Academy faculty.

The rationale for offering such a program at Georgia Tech is rooted in state-wide need for such training, since to date there is only one program in Georgia; the logic of tapping into Georgia Tech's recognized strengths to provide specific technological training to underserved populations; and the outreach opportunity to "give back" to the people of Georgia.

Academy Fundamentals

- Math (Basic operations with calculator and with MS excel)
- Reading (functional reading including forms, instructions, e-mail, on-line 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)

Living Skills

- Independent Living Skills (time management, study skills, ...)
- Advocacy
- Interpersonal communication
- Money Management and Personal Finance
- Health and Safety
- Life-long 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 4 courses selected from the General Education category options, a GT 1000 Seminar for Academic Enrichment, and at least 4 elective courses. An example of the required courses could include:

APPH 1040 (formerly HPS 1040) 2-credit - Foundations of Health is a lecture based course offering a broad overview of health and fitness concepts.

APPH 3300 Health Promotion 3-credit - Through small group discussions and lectures, this class examines contemporary health issues facing college students and the theory and skills required to conduct health promotion activities.

ENGL 1101 – English Composition I 3-credit – Develops analytical reading and writing skills.

POL 1101 – Government of the US 3-credit – The purpose, structure and functions of national and state governments.

GT 1000 – Seminar for Academic Enrichment – Through small classes with other freshmen, this class socializes students to university life and develops insights into major, time management and other skills for success.

The elective courses will be selected from courses offered at Georgia Tech. The program of study for each student will require the approval of the Academy 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 GPA of 2.0 or otherwise will be placed on probation. Students on probation have one year to audit the course again and raise their GPA.

2. A motion was made to approve a request from the School of Music for a New Program Prospectus to be submitted to USG. The motion was seconded and approved.

New Program Prospectus: Approved
Bachelor of Science in Music Technology

Objective

To educate and train the next generation of designers, developers, leaders, and entrepreneurs in Music Technology

Vision of the Program

The Bachelor of Science in Music Technology at Georgia Tech combines rigorous professional training in music with intensive interdisciplinary study in computer science, electrical engineering, mechanical engineering, or industrial design. The program integrates a broad range of musical styles, performance practices, and creative projects with the design, development, and implementation of advanced music technologies. Students gain substantive theoretical and practical skills in performance, computer music, world music, sound synthesis, music production, software development, digital signal processing, acoustics, psychoacoustics, and music perception and cognition. Additional specialties can include music information retrieval, human-computer interaction, robotic musicianship, composition, interactivity, multimedia, audio systems, and sound design.

Summary

The Bachelor of Science in Music Technology will be an interdisciplinary degree program with the bulk of studies in the School of Music. Students will be required to develop one of four concentrations or minor options: concentrations, including a shared capstone course, in the Schools of Electrical and Computer Engineering (ECE) or Mechanical Engineering (ME) within the College of Engineering; a minor and a shared capstone course in Computer Science within the College of Computing; or a minor and shared capstone course in the School of Industrial Design within the College of Architecture. The purpose of the program is to rigorously educate and train students in music technology, while allowing them to gain deep understandings and practical skills within a related field of choice – ECE, ME, CS, or ID. In this way, the program's graduates will help meet the rapidly growing demand for music technologists both in Georgia and the nation.

3. A motion was made to acknowledge without concern a request from the School of Physics for a prerequisite modification. The motion was seconded and approved.

Prerequisite Modifications: Acknowledged

PHYS 2211 - Introductory Physics I

Current: MATH 1502 (concurrency allowed)

Proposed: MATH 1501 (concurrency not allowed)

Currently PHYS 2211 requires MATH 1502 (concurrency allowed). School of Physics believes that mathematical skills covered in MATH 1502 are not essential for PHYS 2211 and proposes to change current prerequisite for this course to MATH 1501 (concurrency not allowed). Material covered in MATH 1501 is both essential and sufficient for PHYS 2211.

4. A motion was made to approve a request from the School of Earth and Atmospheric Sciences for new courses. The motion was seconded and approved.

New Courses: Approved

EAS 4220: Environmental Geochemistry 3-0-3

EAS 4221: Environmental Geochemistry Lab 0-3-1

EAS 4305: Physics & Chemistry of the Oceans 3-0-3

Note: A degree modification was submitted by EAS, but was withdrawn. This proposal will be resubmitted at a later date.

5. A motion was made to approve request from the School of Chemistry and Biochemistry a new course, and minor modifications. The motion was seconded and approved.

New Course: Approved

CHEM 4113: Inorganic Chemistry - Energy Conversion 3-0-3

(**Note:** The Committee requested that learning objectives and learning outcomes be added to the CHEM 4113 syllabus and that the revised syllabus be submitted to the Registrar's Office.)

Minor Modification: Approved

Minor in Chemistry

Add CHEM 4113 (3 credits) as a course elective.

The Chemistry minor will comprise at least 15 credit hours of *approved* CHEM classes, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

- Courses at the 1000 level may NOT be counted toward the minor.
- A maximum of 3 credit hours of Special Topics courses may be included in the minimum 15 credit hours of a minor program.
- A maximum of 3 credit hours of CHEM 4699 (Undergraduate Research) may be used toward the minor.
- All courses counting toward the minor must be completed with an average GPA of at least 2.0. A minimum of six of these credit hours must be taken in residence at Georgia Tech.
- All courses counting toward the minor must be completed on a letter-grade basis.
- Courses required by name and number and/or used to satisfy Core Areas A through E in a student's major degree program may not be used in satisfying the course requirements for a minor. Courses used in a minor also may be used to fulfill free electives, or technical electives.

The 15 credit hours applied to the chemistry minor must be comprised of any combination of the following courses listed below and still meet requirements 1-6 above:

CHEM 2211 Quantitative Analysis (3 credits)
CHEM 2311 Organic Chemistry I (3 credits)
CHEM 2312 Organic Chemistry II (3 credits)
CHEM 2380 Synthesis Lab I (2 credits)
CHEM 3111 Advanced Inorganic Chemistry (3 credits)
CHEM 3211 Analytical Chemistry (5 credits)
CHEM 3281 Instrumental Analysis (4 credits)
CHEM 3380 Synthesis Lab II (3 credits)
CHEM 3411 Physical Chemistry I (3 credits)
CHEM 3412 Physical Chemistry II (3 credits)
CHEM 3481 Physical Chemistry Lab (2 credits)
CHEM 3511 Survey of Biochemistry (3 credits)
CHEM 3700 Alternative Energy (3 credits)
CHEM 4311 Advanced Organic Chemistry (3 credits)
CHEM 4341 Applied Spectroscopy (3 credits)
CHEM 4113 Inorganic Chemistry - Energy Conversion
CHEM 4452 Chemistry of the Solid State (3 credits)
CHEM 4699 Undergraduate Research
CHEM 4740 Atmospheric Chemistry (3 credits)

CHEM 4775 Polymer Science and Eng. I (3 credits)
CHEM 4776 Polymer Science and Engi. II (3 credits)
CHEM 4803 Special Topics (with approval of Director, Undergraduate Studies)
CHEM 6XXX Chemistry Elective (with approval of Director, Undergraduate Studies)
CHEM 8XXX Graduate courses (with approval of Director, Undergraduate Studies)

Minor Modification: Approved

Minor in Energy Systems

Add CHEM 4113 (3 credits) as a course elective.

Depth Courses for Energy Minor (Chemistry and Biochemistry)

Chemistry and Biochemistry

CHEM 3511 Survey of Biochemistry

CHEM 4113 Inorganic Chemistry - Energy Conversion

CHEM 4XXX/6284 Environmental Analytical Chemistry

CHEM 4XXX/6483 Chemistry of Electronic Materials

6. A motion was made to approve a request from the School of Industrial and Systems Engineering for a minor modification. The motion was seconded and approved.

Minor Modification: **Approved**

Minor in Energy Systems

(ISYE requests to join the Energy Systems minor)

Minor in Energy Systems at Georgia Tech

The Energy Systems Minor is a 15-hour multidisciplinary program to study energy systems. Requirements include depth courses relevant to energy and student's major. The minor also includes courses to add breadth of knowledge important to energy systems. A "capstone" or project course provides an opportunity for students from multiple disciplines to work together in multidisciplinary teams on a significant project in the energy area. The minor is open to all Georgia Tech undergraduate students whose majors have approved the minor; currently PUBP, ECON, EAS, CHEM, ME, AE and ECE.

Prerequisite Courses for all students

The prerequisites needed for one or more of the courses required for the minor are below.

- Mathematics through Calculus III (MATH 1501, 1502, and 2401)
- Physics (PHYS 2211 and 2212)
- Chemistry (CHEM 1310)
- Economics (ECON 2100 or 2101 or 2105 and 2106)

BSIE requires all, except that CHEM 1310 is a Lab Science elective. Many students take CHEM 1310. Students are strongly encouraged to complete the prerequisite courses first.

Depth courses for ISyE students

The minor requires 6 hours of depth courses. A list of courses to meet depth requirement for BSIE is provided. Since this is a multidisciplinary minor, up to six hours of courses in the student's major may count toward meeting the minor requirements.

Course	Title	Prereq
AE/ME 4701	Wind Eng	
ECE 3072	Modern Electric Energy Systems	ECE 2040 or ECE 3710
ISYE 4803	Energy and Environment	Physics 2212, ISyE 2028
ME 4011	Internal combustion engines	ME 3322 (Thermal I)
ME 4325	Fuel Cells	ME 3322 (Thermal I)
ME 4823	Mechatronic sys in Hybrid-electric power trains	ECE 3710
ME 4171	Environmental Design and Mfg	Senior standing
ME 4172	Sustainable Energy Systems design	Senior standing
ME 4803	Thermal Systems Engineering	
NRE 4610	Intro to Plasma Physics and Fusion Eng	Senior in Sci or Eng

Breadth courses for ISyE students

The minor requires 6 hours of breadth courses (two courses). Students should strive to complete the necessary prerequisites and the depth courses prior to enrolling in the breadth courses. However, depth courses may be taken concurrently with the courses taken to meet the breadth requirement.

Course	Title	Prereq
CHEM 3700	Alternative Energy	Chem 1310
EAS 4410	Climate and Global change	None (fall)
EAS 3110	Energy, the Environment and Society	None (spring)
ECON 3300	Economics of Energy Systems	Econ 2100 or... (fall)
PUBP 3315	Environmental Policy and Politics	POL 1101 or INTA 1200
PUBP 3350	Energy Policy	None (spring)
PUBP 3600	Sustainability, technology and Policy	
PUBP 4420	Science, Technology and Regulation	
PHIL 4176	Environmental Ethics	None (spring)

Capstone Course

Ordinarily, students must complete all minor requirements before they can register for the Project in GT 4813 Project in Energy Systems. Some flexibility in the pre-requisite chain may be allowed during the first two years of the minor.

Since courses required by name and number cannot be used in a minor, the capstone course in the minor cannot serve as a replacement for the current capstone courses which exist in all engineering programs and in some other programs.

7. A motion was made to approve a request from the History, Technology, and Society for new courses and a new minor. The motion was seconded and approved.

New Courses with attributes: **Approved**

(Recommended by GEN Ed Subcommittee)

HTS 2015: History of Sports in America 3-0-3

(Note: The Catalog title was changed to read “History of....”)

HTS 3022: Gender and Sports 3-0-3

HTS 3073: Sociology of Sports 3-0-3

(Note: The introductory statements on both syllabi need to be changed to reflect the different approaches of these two courses.)

HTS 3089: Science, Technology and Sports 3-0-3

(Note: Regarding the syllabus, a statement needs to be added to explain how the optional exams work. The dates on the syllabus need to be fixed to reflect the current time period. This course was also approved for Social Science.)

New Courses: **Approved**

HTS 3087: Foundations of Sports Studies 3-0-3

New Courses: **DENIED**

HTS 3060: Olympics in Asia 3-0-3

(Note: It was recommended that HTS think about this course as an “olympics topic” related to one than one country or region.)

HTS 3074: Culture and Sports 3-0-3

Note: HTS 3060 and 3074 can be resubmitted for numbers after they have been taught as special topics courses.

New Minor: **Approved**

Minor in Sports, Society and Technology

Select 5 courses for a total of 15 hours; at least 9 hours must be at the 3000 level or above.

- HTS 2015 History of Sports in America
- HTS 3022 Gender and Sports
- HTS 3073 Sociology of Sports
- HTS 3087 Foundations of Sports Studies
- HTS 3089 Science, Technology and Sports
- APPH 2500 Introduction to Sport Science
- INTA 3242 Soccer and Global Politics
- **ECON 4813: Economics of Sports
- ***MGT 4803: Legal Issues in Sports Management
- ARCH 4803 Stadium Design and Technology

*Three hours taken outside of SST courses may be counted toward the minor, with the approval of the SST minor advisor. Courses required by name and number and/or used to satisfy Core Areas A through E in a student’s major degree program may not be used in satisfying the course requirements for a minor. All courses must be taken on a letter-

grade basis and must be completed with an overall grade-point average of 2.0. No more than three hours of Special Topics (elective) courses may be counted toward the minor.

** Required prerequisite for ECON 4813 is ECON 2106 Principles of Micro Economics

***Required prerequisite for MGT 4803 is MGT 2106 - Legal Aspects of Business, with a grade of C or higher

In addition to the courses listed here, there are other courses offered less regularly—for example, Special Topics and Undergraduate Research classes---that may count toward the minor. The SST adviser should be consulted for guidance. Also see <http://www.catalog.gatech.edu/academics/minorguide.php> for rules governing minors.

Consistent with Institute guidelines on undergraduate minors, courses used in a SST minor “may be used to fulfill electives (free electives, technical electives, etc.) required by the student's major degree program.”

Recommendations from the General Education Subcommittee:

1. A motion was made to approve the following recommendations from the General Education Subcommittee. The motion was seconded and approved.

APPROVED

Social Sciences attributes:

- HTS 2015: History of Sports in America (part of new minor in Sports, Society and Technology minor but will also be taken by students who want to fulfill Gen Ed requirements)
- HTS 3022: Gender and Sports
- HTS 3073: Sociology of Sports
- HTS 3089: Science, Technology, and Sports

Note: After the Academic Senate approves this action, the courses will be submitted to the appropriate BOR Academic Advisory Committee and then to the General Education Council. Approval is not final until the vote is taken at the General Education Council meeting.

2. A motion was made to approve a request from the General Education Subcommittee for specific requirements to be set for the syllabi of courses requesting Core attributes. The motion was seconded and approved.

APPROVED

All course syllabi that are under consideration for a Core attribute will have to contain information about the Institute learning outcome for that area and how the course will address it. Additional course learning outcomes will likely be included, but each syllabus will have to address the Core area learning outcome to

be under consideration. The syllabi will also have to address how assessment of the learning outcomes will occur. Specifically, the syllabi will have to include:

- Name, contact information, office hours
- Course title and number (exactly as appears in the Catalog/OSCAR)
- Course prerequisites
- Core area attributes fulfilled by the class
- Learning outcomes (at least 3, at least one of which specifically overlaps with the approved Learning Outcome for that area)
- Required texts
- List of graded assignments (weight of each assignment) and grading scale
- Attendance policy
- ADAPTA contact information
- Honor code statement (tailored to match assignments)
- Week-by-week schedule (course topics by week, assigned readings for each week)

3. The Committee was informed that the General Education Subcommittee will not submit 4000-level courses to them for consideration.

Given the feedback from the General Education Council of the USG, 4000-level courses are not appropriate for inclusion in the Core Curriculum and the IUCC General Education Subcommittee will not support such requests.

4. The Committee was informed about the issues surrounding 3000-level courses in the Core Curriculum.

Given the feedback from the General Education Council of the USG, 3000-level courses may be recommended to the IUCC to carry Core Curriculum attributes, but those requests must be scrutinized carefully and the Subcommittee will be judicious about what is moved forward to the IUCC.

Updates from the General Education Subcommittee:

The following updates were submitted for the Committee's information.

1. Special Topics courses have been removed from the lists in the Catalog. There have been some concerns expressed about this action. The Subcommittee continues to feel that this was the correct action, but it will continue to explore related issues with the academic units and come back to the IUCC if there are other recommendations about how or whether Special Topics courses should be in the mix.
2. The Subcommittee is reviewing courses that are on the lists in the Catalog and when they were last taught. The Subcommittee may recommend removal of some of those courses from the list in the Catalog if they are dormant (not having been taught recently).
3. The Subcommittee may recommend that 4000-level classes that were grandfathered in to the Core lists in the Catalog be removed. There has been no recommendation as yet, but the Subcommittee wanted to have this possible action on the IUCC's radar.

4. The Subcommittee is reviewing a new course assessment tool developed by the Assessment Office that will be demonstrated for the IUCC when it is further along in its development.
5. Approvals from the last meeting of the General Education Council:
 - LMC 2800 and 2850 - Approved
 - RUSS 1250 - Approved
 - PERS 1001 and 1002 - Approved for Area C conditional on us clarifying the wording in the catalog that this is handled consistently with all other language 1001-2 sequences.
 - HTS 2080 - Approved. Could we please clarify why HTS 3087 is so similar and whether it is going away?
 - HTS 3055 - Approved.
 - ARCH 3135 - Approved for Area E but not for Global Overlay.
 - INTA 3242 - Approved. HTS 2040 - Previously approved for Area E; approved for global.

Adjourned,
Reta Pikowsky