**Institute Undergraduate Curriculum Committee**

**Minutes**

**Tuesday, April 20, 2021**

**Members:** Hammer (BIOS), Berry (HON PROG for Potts), (Ferri (ME), Haas (CE), O’Mahony (FEB Liaison), Oyelere (Chem & Biochem), Phillips (OAE), Pikowsky (REG), Saldana (ME), Short (MATH), Singh (HSOC), Sokol (ISYE), Steinberg (AE), Subramanian (CoB), Torres (STU REP), Parker (CoC)

**Visitors:** Hodges (REG), Rasheed (REG), Comfort (ModLang), Jennings (Student Life), Oliver (ECON), Ragan (COS), Buser (ECON), Stephens (Chem & Biochem), Duarte (PSYC), Auslander (LMC), Joseph (COC), Cully Garbers (OIE), Bond (COB), Johns Paulez (OIE), Senf (LMC), Whyte (COS), Mastrangelo (COB), McGrath (BIOS), White (COC), Cope (COS)

**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 some cases, approval by the Southern Association of Colleges and Schools-CoC may also be required; in others, notification by the Institute will suffice. 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 noted otherwise.

The Committee has set a minimum of 13 voting members to establish a quorum and conduct official business. Otherwise, business is still transacted and formally voted upon via email vote.

**Academic Matters**

1. A motion was made to *approve* a request from the School of Psychology for a pre-requisite modification. The motion was seconded and approved.

**Pre-requisite Modification – APPROVED, Acknowledged without Concern**

PSYC 2020

Current:

PSYC 1101 with grade D or higher and

(PSYC 2015 or MATH 3670 or CEE 3770 or ISYE 3770 or ISYE 2028 with grade D or higher)

Proposed:

PSYC 1101 with grade D or higher and

(PSYC 2015 or MATH 3670 or MATH 3215 or CEE 3770 or ISYE 3770 or ISYE 2028 with grade D or higher)

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1. A motion was made to *approve* a request from the Office of International Education for updates to course information. The motion was approved.

Course Information Update – APPROVED

DOPP 2001: Preparation for Work in a Global Economy

This is an internship course that can be used towards free electives with department approval. The change is to allow for variable hours of credit for the course, allow all grade modes, and allow repeatability. This is to assist students earlier in their academic careers at Tech gain experience since they cannot apply for paid internships.

Students will register for two sections of the course each term. One section will be set up as letter grade for one credit hour and will have an academic component to it. The other section of the course will be set up as pass/fail grade for them to register additional hours for the internship.

OIE and the Registrar’s Office will follow up on any additional details that need to be sorted out.

1. A motion was made to *approve* a request from the School of Literature, Media, and Communication for a new course. The motion was approved.

NEW COURSE – APPROVED

LMC 3062: Film Acting Workshop (3-0-0-3)

1. A motion was made to *approve* a request from the School of Biological Sciences for a new course. The motion was approved.

NEW COURSE – APPROVED

BIOS 4505: Programming in Biological and Life Sciences (3-0-0-3)

1. A motion was made to *approve* a request from the College of Sciences to modify pre-requisites. The motion was approved.

**Pre-requisite Update – APPROVED, Acknowledged without Concern**

NEUR 3010

Current:

NEUR 3001 with a grade of D or higher AND

(CS 1301 OR CS 1315 OR CS 1371) with a grade D or higher AND

PHYS 2212 with grade D or higher

Proposed:

NEUR 3001 with a grade of D or higher AND

CS 1301 OR CS 1315 OR CS 1371 with a grade D or higher AND

(BIOS 4401 OR BME 2400 OR ISYE3770/ECE 3077 OR PSYC 2020 OR MATH 3215 OR MATH 3225 OR MATH 3670)

**A motion was made to *approve* a request from the College of Sciences to modify pre-requisites. The motion was approved.**

**Pre-requisite Update – APPROVED, Acknowledged without Concern**

NEUR 4001

Current:

NEUR 3010 with a grade of D or higher AND

APPH 4400 with a grade of D or higher AND

PSYC 4020 with a grade of D or higher AND

Proposed:

NEUR 3010 with a grade of D or higher AND

(BIOS 4400 with a grade of D or higher) AND

(NEUR 3003 with a grade of D or higher)

**A motion was made to *approve* a request from the College of Sciences for new courses. The motion was approved.**

NEW COURSES – APPROVED

NEUR 4300: Neuroscience of Memory (3-0-0-3)
NEUR 4400: Neuroendocrinology (3-0-0-3)

**A motion was made to *approve* a request from the College of Sciences for a program modification. The motion was approved.**

PROGRAM MODIFICATION – APPROVED

Bachelor of Science in Neuroscience

We are seeking to add additional neuroscience electives. Two of these neuroscience electives reflect the addition of two new courses with the NEUR designator: NEUR 4300 Neuroscience of Memory and NEUR 4400 Neuroendocrinology. In addition, the NEUR Curriculum Committee has approved BIOS 2600 Genetics and BIOS 2601 **Integrative Genetics** as NEUR electives, and this proposal will add this course officially as neuroscience electives. Finally, this proposal seeks to make some administrative changes to remove outdated course numbers (e.g., PSYC 3011 and PSYC 3041, which are no longer offered) and add the course numbers that are current (e.g., PSYC 4011 and PSYC 4041).

We are seeking to add additional options to satisfy the statistics requirement. Upon reflection and interactions with students who have taken these Math courses, we believe the content covered in MATH 3215- Introduction to Probability and Statistics, MATH 3225 – Honors Probability and Statistics and MATH 3670 - Probability and Statistics with Applications is sufficient for success in the major

This addition of these courses will allow more flexibility and specialized curriculum depending on which breadth elective path the student chooses.

1. A motion was made to *approve* a request from the College of Computing for a new course. The motion was approved.

NEW COURSE – APPROVED

CS 4644: Deep Learning (3-0-0-3)

Note: The Committee reviewed the course syllabus and had several notes on the items which should be included in the syllabus or where the language is unclear. For example, the requirements for graduate students, since this is a cross-listed course at the ungraduated and graduate levels, should make it clearer as to what “higher expectations) means. The use of the term “higher expectations” for graduate students is so vague that assessment would be made difficult. The Graduate Curriculum Committee requires that the difference between undergraduate and graduate requirements in a cross-listed course be clear. If the course first exists as an undergraduate course, this may be more easily determined. If it exists first at the graduate level, it may be more difficult to make this distinction clear. This review led into discussion about the Committee’s responsibility on reviewing new course syllabi. Notes on the discussion are outlined under Discussion.

**A motion was made to *approve* a request from the College of Computing for minor modifications. The motion was approved.**

MINOR MODIFICATIONS – APPROVED

Minor in Computing and Devices

* Replace CS 4495 Computer Vision with CS 4476 Introduction to Computer Vision in the Devices in the Real World option.

Minor in Computing and Information Internetworks

* Remove CS 4460 Introduction to Information Visualization from the CS elective.

Minor in Computing and Intelligence

* Replace CS 4495 Computer Vision with CS 4476 Introduction to Computer Vision under Approaches to Intelligence.
* Add CS 4646 Machine Learning for Trading and CS 4644 Deep Learning under Approaches to Intelligence.

Minor in Computing and People

* Add CS 4745 Information & Communication Technologies & Global Development to the Human-Centered Technology pick.
1. A motion was made to *approve* a request from the School of Civil and Environmental Engineering to deactivate courses. The motion was approved.

DEACTIVATE COURSES – APPROVED

* CEE 4230
* CEE 4410
* CEE 4630

**A motion was made to *approve* a request from the School of Civil and Environmental Engineering for a pre-requisite modification. The motion was approved.**

Pre-requisite Modification – APPROVED, Acknowledged without Concern

CEE 3340

Current

CEE 2300 with a minimum grade of D and (BIOL 1510 or BIOL 1511) with a minimum grade of D

Proposed

CEE 2300 with a minimum grade of D and (BIOL 1510 or BIOL 1511 or (BIOS 1107 and BIOL 1107L)) with a minimum grade of D

**A motion was made to *approve* a request from the School of Civil and Environmental Engineering for a new course. The motion was approved.**

NEW COURSE – APPROVED

CEE 4170: Construction Law (3-0-0-3)

Note: It was noted that there is a course in the School of Building Construction which currently exists in the Catalog that appears could be duplicative of this course – BC 3610 Construction Law. This course was a required course in Building Construction curriculum prior to its deactivation and now could be an elective in

the new curriculum as of May 2020. CEE explained that their course would be an important course for their students so they may use it as an engineering elective and it would need to carry an Engineering subject code. A BC subject-coded course would be a concern for ABET requirements. It was suggested that CEE consult with the School of Building Construction to discuss this new course and their existing one to determine if a cross-listing might be a solution to what appears to be duplication of content.

**A motion was made to *approve* a request from the School of Civil and Environmental Engineering for a program modification. The motion was approved.**

PROGRAM MODIFICATIONS – APPROVED

Bachelor of Science in Civil Engineering

Bachelor of Science in Environmental Engineering

The request is to replace the School-specific Ethics list with the Institute-approved Ethics list.

Note: This request sparked conversation from the Committee that the current Institute-approved list should be reviewed as some of the courses seem questionable if they are still applicable. The Registrar has added this as an item for future discussion.

1. A motion was made to *approve* a request from the School of Chemistry and Biochemistry for pre-requisite modifications. The motion was approved.

Pre-requisite Modifications – APPROVED, Acknowledged without Concern

CHEM 4511

Current

CHEM 2312 or CHEM 2313 with minimum grade of D

Proposed

CHEM 2311 with minimum grade of D

CHEM 4512

Current

CHEM 4511 with minimum grade of D

Proposed

CHEM 4511 with minimum grade of D AND

CHEM 2312 or CHEM 2313 with minimum grade of D

CHEM 4521

Current

CHEM 3411 and CHEM 4511 with minimum grade of D

Proposed

CHEM 3411 with a minimum grade of D and (CHEM 3511 or CHEM 4511 with minimum grade of D)

**A motion was made to *approve* a request from the School of Chemistry and Biochemistry for a new course. The motion was approved.**

NEW COURSE – APPROVED

CHEM 4485: Computational Chemistry (3-0-0-3)

**A motion was made to *approve* a request from the School of Chemistry and Biochemistry for a minor modification. The motion was approved.**

MINOR MODIFICATION – APPROVED

Minor in Chemistry and Biochemistry

1. CHEM 4485: Computational Chemistry is a new course that has previously been taught as CHEM 4803. We would like to add this course to the pick list of courses for the minor. Adding it to the list of options for the CHBC minor will allow students more flexibility in their minor courses.
2. CHEM 2312: Organic Chemistry II is being added as a required course for the minor, with the students having the option of choosing between CHEM 2312: Organic Chemistry II OR CHEM 2313: Organic and Bioorganic Chemistry. CHEM 2312: Organic Chemistry II is replacing one of the instances of CHEM 2313: Organic and Bioorganic Chemistry so that students have the choice between CHEM 2312 and CHEM 2313. Students may not earn credit for both courses. This change will allow students greater flexibility and reduce confusion due to the redundancy in the previous catalog.
3. A footnote is being added to indicate that students may not earn credit for both CHEM 2312: Organic Chemistry II and CHEM 2313: Organic and Bioorganic Chemistry. This change increases clarity for students interested in pursuing the minor.
4. A footnote is being added to indicate that students may not earn credit for both CHEM 3511: Survey of Biochemistry and CHEM 4511: Biochemistry I. This change increases clarity for students interested in pursuing the minor.
5. The minor requires six credit hours of additional coursework from the pick list; the bolded title for this is being corrected to reflect this (previously, the title indicated nine, although only six were required).
6. A footnote is being added to indicate that for students whose major requirements include one of the required courses (CHEM 2311, CHEM 2312, CHEM 2313, CHEM 3511, or CHEM 4511) and that course is not released to the minor, students may choose a different course from the pick list to replace it. This clarifies information for students, where students whose programs require one of these courses have, in the past, been under the impression that they were locked out of the minor.

**A motion was made to *approve* a request from the School of Chemistry and Biochemistry for a program modification. The motion was approved.**

PROGRAM MODIFICATION – APPROVED

Bachelor of Science in Biochemistry

1. CHEM 4699 is an undergraduate research course offered on a letter-grade basis. It can be used as a free elective on all concentrations of the BS BCHM degree and contributes to courses that fulfill the 39 hour rule. We seek to limit the number of letter-grade based CHEM 4699 credits that our students can

earn to twelve hours. There is an audit-based version of the course (CHEM 4698), so students are not limited in research experience (and may be encouraged to seek funding for research). Furthermore, this change encourages students to seek greater breadth in their free elective selection.

1. CHEM 2699 was approved to be offered in both letter-grade and pass/fail modes. However, we have traditionally set it up on a pass/fail basis. We now feel that this puts our students at a disadvantage relative to other programs that routinely offer the course on a letter-grade basis. We would like to begin promoting the course in both modes, and we feel it is reasonable to limit the number of hours that can be taken for letter-grade in alignment with the proposed policy for CHEM 4699. The lower number of credit hours reflects that students earlier in their academic careers are less likely to register for research credits and that they tend to register for fewer hours of research per semester.

**A motion was made to *approve* a request from the School of Chemistry and Biochemistry for a program modification. The motion was approved.**

PROGRAM MODIFICATION – APPROVED

Bachelor of Science in Chemistry

1. CHEM 4699 is an undergraduate research course offered on a letter-grade basis. It can be used as a free elective on all concentrations of the BS CHEM degree and can be used towards the research requirement and/or technical elective requirement for some concentrations. The course contributes to fulfilling the 39 hour rule. We seek to limit the number of letter-grade based CHEM 4699 credits that our students can earn to twelve hours. There is an audit-based version of the course (CHEM 4698), so students are not limited in research experience (and may be encouraged to seek funding for research). Furthermore, this change encourages students to seek greater breadth in their free elective selection.
2. CHEM 2699 is approved for both letter-grade and pass/fail modes. However, we have traditionally set it up on a pass/fail basis. We now feel that this puts our students at a disadvantage relative to other programs that routinely offer the course on a letter-grade basis. We would like to start promoting the course in both modes, and we feel it is reasonable to limit the number of hours that can be taken for letter grade in alignment with the proposed policy for CHEM 4699. The lower number of credit hours reflects that students earlier in their academic careers are less likely to register for research credits and that they tend to register for fewer hours of research per semester.
3. CHEM 3700 is utilized as a breadth elective for the Energy Systems minors (there are variations by major). It was approved 10 years ago having been previously offered as an Honors Program course. The course number reflects prerequisites at the 1000- and 2000-level as well as the breadth of the course content (overview of the most popular alternative energy sources) as opposed to great depth in any one topic. However, after reviewing the course content and the importance of the covered topics, the School concludes that the course is an appropriate as a CHEM elective (currently only 4XXX- and 6XXX courses).
4. Originally, our BS CHEM and BS BCHM pre-health options both required 15 credit hours of pre-health science electives. For the 2020-2021 catalog, we modified the BS BCHM pre-health option to require 12 credit hours of pre-health science electives to accommodate the reincorporation of a seminar course. We now seek to modify the BS CHEM pre-health option in a parallel fashion so that the number of pre-health science credit hours for the two degrees are equivalent. The hours will revert to free electives, offering students greater flexibility.
5. Facility with programming and data science is becoming increasingly important in the careers of physical scientists. Our faculty wish to modify our BSCHEM curriculum so that these skills can be built and practiced over of a series of courses. A common foundational experience in programming will aid this task. Currently, CS 1301, 1315 and 1371 satisfy our computing requirement. We wish to only allow CS 1301 (Python). If students switch majors and have already completed CS 1315 or 1371, then they will NOT be required to take CS 1301.
6. A motion was made to *approve* a request from the Schools of Economics and Modern Languages for a program modification. The motion was approved.

PROGRAM MODIFICATION – APPROVED

Bachelor of Science in Global Economics and Modern Languages

1. First, the Schools request a small amendment to the Core Area B requirement, to allow either CS 1301 *or* CS 1351 to count for the Core Area B requirement. Currently, only CS 1315 is allowed. We would like to add CS 1301 as an additional course option to satisfy the Core Area B requirement. CS 1301 is an option for all other College of Ivan Allen programs, so this aligns BSECON with the other IAC programs.
2. Second, the Schools seek to update the economics core degree requirements to better reflect the current course offerings in the School of Economics. The proposed changes are:
	1. Remove courses that are no longer offered by the School and instead allow students to take additional economics electives (total economics credit hours would remain unchanged).
	2. Eliminate the requirement that students take 3 credit hours of Individual Research Credits (ECON 4901) and instead allow students to take an additional economics elective.
	3. Eliminate the requirement that students select an economics “specialization” requiring them to take specific elective combinations. Instead, we propose to allow students to take any economics electives offered by the School of Economics, provided that they take at least 3 electives that have a development and/or international focus (a list of such courses is provided below).
	4. Add ECON 2250 as an option for the probability/statistics requirement.
3. Third, the Schools wish to update the modern languages core degree requirements in three ways:
	1. Remove the “non-credit requirement,” which currently reads:
		1. “With the goal of enhanced educational and career prospects and in accordance with the pedagogical objectives of the degree in Global Economics and Modern Languages, all GEML students are required to fulfill an International Experience as part of their graduation requirements. This requirement can be met through one of two ways:
	2. Complete a minimum 6-week overseas experience. If this is not a country whose primary language is in the student's language of study, the student must justify and receive prior approval.
	3. Complete a 15-week internship or similar experience of at least 10 hours per week at an international organization such as consulate, CNN International, etc. The internship must be approved in advance.”
		1. Instead of this requirement, we wish to add the following note: “*Students are strongly encouraged to study, intern, or work abroad in the language of study or to seek out internship or research opportunities with international organizations*.”
	4. Allow FREN 2002, GRMN 2002, and SPAN 2002 to count as part of the language requirements for the French, German, and Spanish concentrations. The 2002 class currently counts in Chinese, Japanese, Korean, and Russian. To be consistent across languages, we would like to count 2002 in all seven language concentrations.
	5. Limit the number of 34XX courses to one (3 credits) for the 21-credits of required language electives. We currently use the 34XX numbers to designate culture courses taught in English.
4. A motion was made to *approve* a request from the College of Business for a program modification. The motion was approved.

PROGRAM MODIFICATION – APPROVED

Bachelor of Science in Business Administration (Marketing concentration)

1. Group A electives for the concentration:

Select ~~one~~ three of the following (9 credit hours):

MGT 3310: Marketing Research: Analytics

MGT 4311: Digital Marketing (move from group B to group A electives)

MGT 4345: Marketing Consulting Practicum (move from group B to group A electives)

MGT 4803: Special Topics (Marketing Research: Tools and Design) Add

1. Group B electives for the concentration:

~~Select three of the following:~~

Students must select one of two options: (1) they may select 9 credit hours of coursework from Group B or (2) select 6 credit hours of coursework from Group B and 3 credit hours of coursework from Group C.

MGT 3312: Pricing Strategy & Analytics (special topics moved to permanent course #) Add

MGT 3313: Social Media Marketing (special topics moved to a permanent course #) Add

MGT 3325: Product Planning Add

MGT 4303: Personal Selling and Sales Management

MGT 4304: Strategic Brand Management

MGT 4308: Advertising & Promotion: Integrated Marketing Communications

MGT 4309: Services Marketing

~~MGT 4311: Digital Marketing~~ (move to group A electives)

MGT 4331: Consumer Behavior

MGT 4335: International Marketing

~~MGT 4345: Marketing Consulting Practicum~~ (move to group A electives)

MGT 4803: Special Topics (Understanding Markets with Data Science) Add

MGT 4803: Special Topics (Sustainable Marketing) Add

1. Group C electives for the concentration: Add a list of Group C electives to the concentration

MGT 3744: Managing Product, Service & Technology Development

MGT 4050: Business Analytics

MGT 4367: Revenue Analytics

The proposed changes address major findings of the internal review process described below (item d). The Group A/B/C structure is intended to provide a more streamlined set of course options and reduce confusion, while still providing students the flexibility to pursue their unique interests. The four courses in Group A are intended to reflect the evolution of the marketing field, as well as the strengths of the College and Institute in the areas of research, analytics, and technology. By requiring three of the four Group A

options, we will ensure that students acquire knowledge, skills, and experience that prepare them for a variety of contemporary and emerging career paths. The new Group C electives are intended to highlight the relevance of those topics to the marketing discipline and to emphasize the particular value of cross-functional training to marketers, who represent the “interface” between the various functions of a firm and its customers.

**Discussion Items**

There was discussion again about the role of the Committee in reviewing the syllabus and how far “into the weeds” we need to go in determining whether the document presented with a new course proposal contains the proper amount and type of information on the course.

The Committee recommends use of the CTL template to ensure that essential information is included. The goal of recommending the template is to ensure that students are provided with all the essential information they need about a course.

<https://ctl.gatech.edu/resources/syllabus>

It was noted that concern has been expressed over time about grading and other information on the syllabus being unclear and resulting in grade grievances. Aside from the essential information as recommended by the CTL template, the Committee in the past has deemed it important for students to be aware of how their work will be evaluated. Opinions vary as to how much detail on topics like grading need to be addressed in the generic syllabus since different faculty teaching the course may adapt the syllabus to their offering of it in any given term. The syllabus may not remain exactly the same each time the course is offered.

Dr. Ferri has suggested that perhaps a use of a checklist would make the review of the syllabus more efficient as new course proposals are evaluated. The Registrar noted that the Graduate Curriculum Committee has had similar discussions about syllabi and which things must be included. The Registrar will add this as a future discussion item for the Committee.

In the meantime, the Committee will offer suggestions back to the proposing units as questions are raised at meetings about the proposed syllabus.

**Administrative Items (no action needed from Committee)**

The following items are considered as administrative update due to the very insignificant changes to course information.

Course Updates
PSYC 2020:
PSYC 4100:

Pre-requisite updates due to BIOL to BIOS changes and MATH update changes

Course Title Change
ME 3345 - Course Long Form Title Change: ME 3345 From Conduction and Radiation Heat Transfer to Heat Transfer

Course Description Updates
APPH 3832
ARCH 1855
ARCH 2803

Made the descriptions for these Special Topics courses more standard

Course Description Update
CHBE 4710 – course was created without Catalog description. CHEM 6710 exists as the graduate version, so this description was added

Course Deactivation
BMED 2210 (due to creation of BMED 2110)

**Remaining Agenda Items at the Close of the Meeting**

There were other items on the agenda, but due to the lateness of the hour, the decision was made to adjourn the meeting and review those remaining items to determine if they could be handled in a separate manner or rolled over to the next agenda. The Registrar will follow up with the Chair to determine how best to proceed.

1. Student petitions were summarized in the Chat, but a vote was not taken.
2. The Study Abroad Sub-Committee requests:
	1. Request to update Charge to the SAC
3. Administrative item (s):
	1. IUCC Gen Ed/Policy Subcommittee Minutes (Approval of minutes needed)
	2. Degree Modification Addendums:
		1. Minor updates to degree modifications for the Bachelor of Science in Computer Engineering and Electrical Engineering previously submitted. These requirements have not yet been published as they go into effect for the upcoming Catalog year.
4. Discussion Item (s):
	1. The BOR/USG 39-Hour Rule (what courses may be used to meet this requirement. Students must complete at least 39 hours of 3000/4000-level coursework as part of program requirements)

Adjourned,

Reta Pikowsky

AVP of Enrollment Services/Registrar

Secretary of IUCC