

2016-2017 GCC Members:

_____ Bafna, Sonit (CoD-Arch)

_____ Balch, Tucker (CoC-IC)

✓ David Bamburowski _____ Bamburowski, David (Graduate Studies)

✓ Laurens Breedveld _____ Breedveld, Laurens (CHBE - GCC Chair)

_____ Ceccagnoli, Marco (CoB)

_____ Chow, Edmond (CoC-CSE)

signed page 2 _____ Cozzens, Susan (Vice Provost)

_____ Dickson, Robert (CHEM)

_____ Dovrolis, Konstantions (CoC-CS)

_____ Flowers, Benjamin (CoD-ARCH)

James Hays _____ Hays, James (CoC-IC)

_____ Henderson, Clifford (ChBE)

signed page 2 _____ Jagoda, Jechiel (AE)

_____ Jayaraman, Sundaresan (MSE)

[Signature] _____ Johnson, Henderson (GCC – Student Representative)

_____ Macrakis, Kristie (HSOC)

_____ Mihail, Melina (Faculty Exec Board Liaison)

_____ Pikowsky, Reta (Registrar)

_____ Ranjan, Devesh (ME)

_____ Ries, Christine (ECON)

[Signature] _____ Schmidt-Krey, Ingeborg (BIOL)

_____ Sluss, David (CoB – GCC-Vice Chair)

signed page 2 _____ Smith, Marilyn (AE)

_____ Vigoda, Eric (CoC-CS)

_____ Wang, Dongmei (BMED)

Visitors:

Name	Dept/School
✓ Amy Hodges	Reg
✓ Christopher Fink	BioSci
✓ GEEB KOGLER	BIO SCI
✓ James Black	Grad Studies
✓ Susan Cozzens	VPGEFD
✓ David White	CoC
✓ Mustique Howard	CoC
✓ BRIAN HAMMER	BIO SCI
✓ Mike Goodman	Bio Sci
✓ Jennifer Woolley	GTPE
✓ Nelson Babo	GTPE
✓ Sue Woodard	Acad Effect -
✓ Teng Zhou	ECE
✓ Joel Sobel	ISyE/Analytics
✓ Marilyn Smith	AE
✓ Jeff Jagoda	PE
✓ Devesh Ranjan	ME
✓ Robin Tucker	Arch

Name	Dept/School
✓ Heather Hogarth-Smith	Reg

Institute Graduate Curriculum Committee
Minutes
Thursday, June 22, 2017

Present: Breedveld (ChBE – IGCC Chair), Bamburowski (Grad Studies), Cozzens (Vice Provost), Hays (CoC-IC), Jagoda (AE), Johnson (IGCC Student Rep), Schmidt-Krey (BIOS-BIOL), Smith (AE), Ranjan (ME)

Visitors: Hodges (Registrar), Hogarth-Smith (Registrar), Fink (BIOS), Kogler (BIOS), Black (Graduate Studies), White (CoC), Ahamed (CoC), Hammer (BIOS), Goodisman (BIOS), Wooley (GTPE), Baker (GTPE), Woolard (Academic Effectiveness), Zhou (ECE), Sokol (ISyE), Ranjan (ME), Tucker (CoD)

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. Approval by the Southern Association of Colleges and Schools may also be required.

There are 24 voting members with 13 needed to reach a quorum.

The meeting was not quorate. Therefore, votes taken will be treated as recommendations. The draft Minutes will be circulated via email to the full committee for voting and approval.

All votes are unanimous except as noted.

Academic Matters:

1. 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 7626: Behavioral Imaging (3-0-3)

2. Dr. Mustaque Ahamed (College of Computing) addressed the Committee on forthcoming proposals for an embedded and a stand-alone Cyber certificate based on courses from the Online Master of Science in Computer Science (OMSCS) program.

The consensus from the Committee was favorable for a proposal requesting a new embedded Cyber Certificate.

The Committee discussed several questions and concerns about offering a stand-alone certificate as Georgia Tech does not currently offer these types of certificates. There was discussion on:

- How would these students be classified? Students are classified as degree seeking or non-degree seeking, so would there be a need to create another category for students seeking only a certificate?
 - What types of processes and guidelines would need to be in place for those students who complete the certificate and wish to continue to pursue a Master's degree in Computer Science?
 - Logistics: What role would the Registrar's Office play in monitoring the stand-alone certificate students? How would the certificate be created in Banner?
 - Will this program be flexible enough to allow students to complete the requirements in a timely manner? Will there be enough faculty to support the certificate?
 - How would this impact the situation of double counting graduate course credit?
 - What types of services can certificate seeking students expect?
3. Tong Zhou, School of Electrical and Computer Engineering/Director of Georgia Tech – Shenzhen, addressed the Committee with an update of the Shenzhen campus. Currently, the only Georgia Tech program offered in Shenzhen is the Master of Science in Electrical and Computer Engineering with GT's Chinese partner Tianjin University. GT-Shenzhen plans to proceed with moving to a new campus and offering five additional programs in Shenzhen at the new campus: MS in Environmental Engineering, MS in Computer Science, Master of Industrial Design, MS in Analytics, and a Ph.D. with a major in Electrical and Computer Engineering.

GT Degree Programs in Shenzhen

The degree programs in Shenzhen will follow the same processes and procedures as the Atlanta campus regarding admission, degree requirements and diploma.

The application will use the existing GT graduate admissions portal and students will select the Shenzhen campus. The admissions process will be handled by the Office of Graduate Studies in Atlanta. There will be a dedicated academic advisor in Shenzhen trained by the Graduate Office in Atlanta. Also, complex cases will be referred to the Graduate Office in Atlanta. The degree petition and degree conferring process will be handled from Atlanta campus. The academic calendar also will synchronize with GT-Atlanta.

Course Delivery Modes

The courses at the Shenzhen campus are taught in English. Additional notes on course delivery modes:

- Face-to-face instruction by GT-Atlanta faculty on rotation to Shenzhen
- Face-to-face instruction by adjunct faculty approved by academic unit and GT Office of Faculty Affairs
- Video delivery from GT-Atlanta
- Face-to-face instruction in Atlanta in last semester (exchange option)

GT-Shenzhen Location Summary

Current campus (location A)

- Serves MS ECE program only
- Use until Dec 2017

Transitional campus (location B)

- Serves MS ECE program starting in Jan 2018
- Serves additional GT graduate programs starting in August 2018 or later following MOE approval

Note: The presentation included a note that MSCS would begin Fall 2018. David White (College of Computing) confirmed that MSCS would be offered at the GT-Shenzhen campus effective Fall 2019 along with the other proposed programs.

- Use until July 2020 (estimated timeline)

Permanent campus (location C)

- The permanent location will serve all GT graduate programs starting in August 2020 (estimated timeline).

Note: The Committee confirmed that each new program being proposed would not require any degree modifications. It was also confirmed that the student learning outcomes are and will remain constant among campuses (Atlanta, Lorraine, and Shenzhen).

It is also noted that the additional existing programs proposed to be offered at the GT-Shenzhen campus may not go into effect until the new campus has been approved. The Registrar's Office will work with Sandi Bramblett to ensure proper documentation is submitted to the Board of Regents and to SACSCOC for approval and notification of the new campus and addition of existing programs to be offered at the new campus.

A motion was made to *approve* a request from the School of Civil and Environmental Engineering for a degree to be offered at an off-campus location. The motion was seconded and approved.

EXTERNAL DEGREE OFFERING OF AN APPROVED PROGRAM AT AN EXISTING INSTRUCTIONAL SITE – APPROVED

Master of Science in Environmental Engineering

A motion was made to *approve* a request from the College of Business, Schools of Computational Science & Engineering, and Industrial & Systems Engineering for a degree to be offered at an off-campus location. The motion was seconded and approved.

EXTERNAL DEGREE OFFERING OF AN APPROVED PROGRAM AT AN EXISTING INSTRUCTIONAL SITE – APPROVED

Master of Science in Analytics

A motion was made to *approve* a request from the School of Industrial Design for a degree to be offered at an off-campus location. The motion was seconded and approved.

EXTERNAL DEGREE OFFERING OF AN APPROVED PROGRAM AT AN EXISTING INSTRUCTIONAL SITE – APPROVED

Master of Industrial Design

A motion was made to *approve* a request from the School of Electrical and Computer Engineering for a degree to be offered at an off-campus location. The motion was seconded and approved.

EXTERNAL DEGREE OFFERING OF AN APPROVED PROGRAM AT AN EXISTING INSTRUCTIONAL SITE – APPROVED

Doctor of Philosophy with a major in Electrical and Computer Engineering

A motion was made to *approve* a request from the College of Computing for a degree to be offered at an off-campus location. The motion was seconded and approved.

EXTERNAL DEGREE OFFERING OF AN APPROVED PROGRAM AT AN EXISTING INSTRUCTIONAL SITE – APPROVED

Master of Science in Computer Science

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

DEGREE MODIFICATION - APPROVED

Doctor of Philosophy with a major in Aerospace Engineering

Overview

The Ph.D. with a major in Aerospace program's current coursework requirement of 50 credit hours beyond the B.S. degree far exceeds other CoE schools and some of our peer institutions. The Ph.D. should be focused largely on research rather

than yet more coursework. It is noted that the very weighty Ph.D. course requirement:

- Takes time away from student research and publishing. These activities benefit the school and students far more than just taking additional classes.
- Increases the time it takes to complete the degree.
- Makes the GTech program less attractive relative to others.

Curriculum

The change primarily lowers the required number of course credit hours beyond the BS degree from 50 to 42.

- ~~50~~ **42** hours of letter-grade, formal coursework beyond the BS degree
 - May include up to 30 hours of relevant grad. coursework from an accredited univ.
 - MS courses count toward this total
 - Special Problems credits (e.g. AE8900) do not count toward this total
 - Must be at 4xxx level or above

Includes:

- At least ~~12~~ **9** hours of Math
 - Satisfies Institute Ph.D. minor requirement using “Math” courses
- No more than ~~9~~ **6** hours at 4xxx level
- At least ~~19~~ **18** hours of GT AE coursework
- No more than ~~9~~ **6** hours of relevant non-technical courses

5. A motion was made to *approve* a request from the Schools of Aerospace Engineering, Industrial & Systems Engineering, and Mathematics, the Department of Biomedical Engineering, and the College of Computing for a new academic unit to participate in an existing degree program. The motion was seconded and approved.

ACADEMIC UNIT TO JOIN EXISTING PROGRAM – APPROVED **Doctor of Philosophy with a major in Machine Learning**

At the School of Aerospace Engineering (AE) Faculty Meeting on May 2, 2017, the AE Faculty voted in favor of participating as a unit in the Georgia Tech Machine Learning Ph.D. program. The change was based on evaluation, recommendation and vote by the School of AE Graduate Committee on May 1, 2017. Institute approval is hereby requested for the School of AE to be included as a participant in the Machine Learning Ph.D. program.

Note: There are no changes to the Ph.D. with a major in Machine Learning at this time. AE courses are already incorporated into the program.

6. A motion was made to *approve* a request from the School of Biological Sciences for a degree modification. The motion was seconded and approved.

DEGREE MODIFICATION – APPROVED

Master of Science in Biology

Overview

The School of Biological Sciences is requesting a degree modification to clearly distinguish between the Master's in Biology thesis and non-thesis options as well as to clarify degree requirements. This is based on discrepancies between the catalog entry and the information on the School's website. In addition, while a proposed deactivation of BIOL 8002 and BIOL 8003 is in the minutes from 2/2005, these classes were not deactivated and are currently being taught. The School of Biological Sciences (SoBS) would like to clarify that it plans to continue teaching these classes.

Curriculum

Current curriculum (according to the catalog) is <http://catalog.gatech.edu/programs/biology-ms/>

~~The requirements for the MS degree are a research thesis and 30 credit hours of coursework, which includes twelve credit hours in a major field. Twelve of the credit hours must be in formal graduate level courses. The thesis must be defended in an oral examination. A non-thesis master's degree is available for students unable to carry out a thesis project; information on its requirements is available from the graduate coordinator in the School of Biology.~~

The new text (modified from the School's website) below serves as an introduction to the added study plan in the proposed new catalog entry. It also serves to remove misleading wording such as, "unable to carry out a research project" and more accurately reflects the career options for both types of Master's degrees:

The School of Biological Sciences offers two distinct options leading to the M.S. in Biology degree. The M.S. in Biology (non-thesis) is intended for students who plan to pursue need advanced training in one some aspect of modern biology but do not intend to pursue a career in research. The M.S. in Biology (with thesis) is intended for students wishing to obtain a strong background in modern biology and independent research experience in preparation for a wide range of career options, or further training leading to the Ph.D. in Biology. Students admitted to the Master's degree program in the School of Biological Sciences are enrolled in a non-thesis program of study. If a student wishes to obtain a Master's degree with Thesis, he or she may petition the Graduate Committee for approval along with support from the thesis advisor.

Requirements according to the current SoBS handbook, which will be added to

the catalog entry:

Thesis option:

Course requirements

Students are required to complete ~~30~~ **36** credit hours of coursework, including 12 credit hours in biology, and **nine** credit hours of master's thesis research. A maximum of ~~six~~ **nine** credit hours of formal class work from another MS degree program relevant to the student's program may be transferred.

These credits do not count toward the GPA requirement since they are credited as ~~only pass/fail~~ **transfer courses**. A summary of the requirements is as follows:

Coursework Credit Hours

Biology graduate courses (BIOL 6000-9000) with a letter grade	12
MS thesis (BIOL 7000)	6 9**
Special Problems – Research (BIOL 890X)*	3 7**
Biology Seminar (BIOL 8002 and BIOL 8003)#	2
Tools of Science (BIOL 8106) ***	2 ***
Other biology courses (4000 or higher) with a letter grade	5 6**
Total Required	30 36##

**to account for 8106 requirement removal on 1/20/05 and correction of total required hours.

***requirement removed 1/20/05

BIOL 8002 and BIOL 8003: While a proposed deactivation of these classes is in the minutes from 2/2005, these classes were not deactivated and are currently being taught. The SoBS would like to clarify that it plans to continue teaching these classes.

Correction to total required hours.

Non-thesis option:

Course Requirements

Students are required to complete ~~35~~ **36** credit hours of coursework, including 21 credit hours in biology. A maximum of nine credit hours of formal coursework from another MS degree program relevant to the student's program may be transferred. These credits do not count toward the GPA requirement since they are credited as ~~only pass/fail~~ **transfer courses**.

Coursework Credit Hours

Biology graduate courses (BIOL 6000-9000) with a letter grade	15
Other graduate courses (6000-9000) with a letter grade.	
These may be taken in biology or other departments	9
Other biology courses (4000 or higher) with a letter grade	6
Special Problems – Research (BIOL 890X)*	3 4#
Biology Seminar (BIOL 8002 and BIOL 8003)*##	2
Total Required	35 36###

*A maximum of ~~three~~ **four** credit hours of Special Problems – Research (BIOL 890X) and ~~six~~ **three** credit hours of seminar courses may be counted toward the MS course requirements.

#Hour adjusted due to correction of total required hours.

BIOL 8002 and BIOL 8003: While a proposed deactivation of these classes is in the minutes from 2/2005, these classes were not deactivated and are currently being taught. The SoBS would like to clarify that it plans to continue teaching these classes.

Correction to total required hours.

A motion was made to *approve* a request from the School of Biological Sciences for a new BS/MS Option. The motion was seconded and approved.

NEW BS/MS OPTION – APPROVED

BSBIO/MSBIO Option

Georgia Tech General Catalog Reference: Academics (BS/MS Degree Programs)
<http://www.catalog.gatech.edu/academics/special-academic-programs/bs-ms-programs/>

I. Rationale and Justification

A 5-year combined BS/MS program in BIO would address a number of challenges faced by the School of Biological Sciences. For example, it would...

- Better serve our students by providing an MS degree to highly-qualified Biology undergrads in half the time of our standard program (and therefore at half the cost).
- Enable students who otherwise might not get a Master's degree to compete better on the job market.
- Provide a degree that recognizes the research accomplishments of highly motivated students.
- Allow 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 MS-BIOL candidates. With increased student quality comes better job placement, more loyal alumni, and a better network for career/internship placement and policy-linkages.

II. Responses to Potential Concerns

How much would this cost the School of Biological Sciences? Implementation of a BS/MS option in the School of Biological Sciences may lead to additional administrative costs, but these should be minimal. No additional courses or faculty will be needed. Students who are likely to pursue the BS/MS in Biology are active in research and will be advised by their lab supervisor. In order to minimize any additional administrative costs, the School will ensure that advising of these students from both the undergraduate and graduate sides of the program is closely coordinated and that oversight of the program itself is a shared function of both the undergraduate and graduate programs within the School.

Over a dozen units at Georgia Tech currently offer a 5-year BS/MS, including¹:

• Aerospace Engineering	• Computer Engineering	• Nuclear & Radiological Engineering
• Chemical & Biomolecular Engineering	• Environmental Engineering	• Public Policy
• Civil Engineering	• International Affairs	• Science, Technology, and Culture/Digital Media
• Computational Media & Digital Media	• Materials Science Engineering	
• Electrical Engineering	• Mechanical Engineering	

How large is the potential pool of MS/BS students? Initially, we anticipate that BS/MS candidates will be drawn from the large pool of students already doing independent research in faculty labs. In recent years, about a third of our students have pursued their senior research in a faculty lab (BIOL 4690 and BIOL 4910), and these will be the most likely candidates for the BS/MS program. In addition, we believe that this program will attract additional students to Biology, which could lead to a larger pool of qualified students, a change we would welcome.

When do we want this program up and running? As soon as possible. We will start accepting applications as soon as our program is approved. All courses and most of the infrastructure are already in place, so we just need to get the program approved by the School, College, and Institute.

Who would administer this program? As a joint BS/MS program, general advising will be carried out by our undergraduate advisors, the research supervisors, and the Chair of the School of Biological Sciences graduate program as appropriate. Admissions and program administration will be handled by the School of Biological Sciences Graduate Committee.

III. BIO 5yr BS/MS Degree Eligibility Requirements

Students with an interest in research and a GPA of 3.3 or higher in courses required for the BS in Biology are eligible to apply after completion of 30 semester credits at Georgia Tech, but before the completion of 90 semester credit hours, including transfer and advanced placement credits. Students who have more than 90 credit hours will be considered for the program on a case-by-case basis. 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 3.0 or higher in Biology courses.

The 5 Year BS/MS degree program in Biology would require the following changes to the BS degree, all in the fourth year of a typical degree program:

¹ <http://www.catalog.gatech.edu/academics/special-academic-programs/bs-ms-programs/>

BS Major Requirement Changes

Current Course	Current Credit	Proposed Course	Proposed Credit
<i>Fourth Year – Fall</i>			
BIOL 4590 or 4690 or 4910: Research Project Lab or Independent Rsch Proj or Honors Rsch Thesis	3	BIOL 4690/4699/4910: Independent Rsch Proj or Undergraduate Rsch or Honors Rsch Thesis	3
Biology Electives	6	Biology Electives	3
		Biology graduate coursework	3
<i>Fourth Year – Spring</i>			
Biology Electives	3	Biology graduate coursework	3

IV. Example BS/MS degree (including modifications to the BS-Bio course of study).

SEE NEXT PAGE.

BS: Total Degree Hours = 122

FIRST YEAR - FALL	COURSE HRS	TOTAL SEM HRS
ENGL 1101 ENGLISH COMPOSITION I	3	
MATH 1551 DIFFERENTIAL CALCULUS	2	
BIOL 1510 OR 1511 BIOLOGICAL PRINCIPLES	4	
CHEM 1211K CHEMICAL PRINCIPLES I	4	
GT 1000 FRESHMAN SEMINAR [B]	1	14
FIRST YEAR - SPRING	COURSE HRS	TOTAL SEM HRS
HIST 2111 or 2112 or POL 1101 or PUBP 3000 or INTA1200	3	
ENGL 1102 ENGLISH COMPOSITION II	3	
MATH 1553 LINEAR ALGEBRA	2	
BIOL 1520 OR 1521 INTRODUCTION TO ORGANISMAL BIOLOGY [C]	4	
CHEM 1212K CHEMICAL PRINCIPLES II	4	16
SECOND YEAR - FALL	COURSE HRS	TOTAL SEM HRS
BIOL 2335 ECOLOGY OR BIOL 2344 GENETICS OR BIOL 2354 HONORS GENETICS [D]	3	
BIOL 2336 ECOL LAB, BIOL 2345 GEN LAB, OR BIOL 2355 HONS. GEN LAB	1	
CHEM 2311 ORGANIC CHEMISTRY I	3	
FREE ELECTIVE	3	
GLOBAL PERSPECTIVE (Either Humanities or Social Science elective)	3	
COMPUTING REQUIREMENT	3	15 or 16
SECOND YEAR - SPRING	COURSE HRS	TOTAL SEM HRS
BIOL 2344 GENETICS OR BIOL 2335 ECOLOGY OR BIOL 2337 HONORS ECOLOGY	3	
BIOL 2345 GENETICS LAB OR BIOL 2336 ECOLOGY LAB OR BIOL 2338 HONORS ECOLOGY LAB [D]	1	
CHEM 2312 ORGANIC CHEMISTRY II	3	
CHEM 2380 SYNTHESIS LAB	2	
MATH 1555 (OR MATH 1552) INTEGRAL CALCULUS	4	
QUANTITATIVE BIOLOGY REQUIREMENT [E] OR FREE ELECTIVE	3	15 or 16
THIRD YEAR - FALL	COURSE HRS	TOTAL SEM HRS
BIOL 3450 CELL & MOLECULAR BIOLOGY OR BIOL 3600 EVOLUTION [D]	3	
BIOLOGY ELECTIVE(S) [G] or QUANTITATIVE BIOLOGY REQUIREMENT	3	
FREE ELECTIVE	2	
PHYS 2211 INTRODUCTORY PHYSICS I	4	
HUMANITIES OR SOCIAL SCIENCE ELECTIVE	3	15
THIRD YEAR - SPRING	COURSE HRS	TOTAL SEM HRS
BIOL 3450 CELL & MOLECULAR BIOLOGY OR BIOL 3600 EVOLUTION [D]	3	
BIOL 2345 GENETICS LAB OR BIOL 2336 ECOLOGY LAB OR BIOL 2338 HONORS ECOLOGY LAB OR CELL & MOLECULAR BIOLOGY LAB [D]	1	
BIOLOGY ELECTIVES [G]	6	
PHYS 2212 INTRODUCTORY PHYSICS II	4	
WELLNESS	2	16
FOURTH YEAR - FALL	COURSE HRS	TOTAL SEM HRS
SENIOR RESEARCH EXPERIENCE [F][H]	3	
BIOL 4690/4699/4910 INDEPENDENT RESEARCH OR SENIOR RESEARCH EXPERIENCE	3	
BIOL 4460 COMMUNICATING BIOL RESEARCH [H]	1	
BIOLOGY ELECTIVES [G]	6	
BIOLOGY ELECTIVES [G]	3	
BIOL GRADUATE COURSEWORK (graded, double-counted)	3	
FREE ELECTIVE(S)	3	
HUMANITIES OR SOCIAL SCIENCE ELECTIVE	3	16
FOURTH YEAR - SPRING	COURSE HRS	TOTAL SEM HRS
BIOLOGY ELECTIVE(S) [G]	3	
BIOL GRADUATE COURSEWORK (graded, double-counted)	3	
FREE ELECTIVE(S)	6	
HUMANITIES OR SOCIAL SCIENCE ELECTIVES	6	15
TOTAL PROGRAM HOURS INCLUDING WELLNESS (2 HOURS) AND DOUBLE-COUNTED CREDITS (6 HOURS) =		122

[A] MATH 1501 and 1502 can be substituted for MATH 1503 and 1504

[B] Not required for graduation.

[C] Four hours of Biology Elective credit can be substituted. Students should discuss this option with their academic advisor.

[D] Students must take two of the following three lab courses with the corresponding lecture courses: Ecology, Genetics, Cell & Molecular Biology.

[E] The quantitative biology requirement can be met by taking BIOL 2400, 4150, or 4401.

[F] The Senior Research Experience can be met by taking BIOL 4590, 4690, or 4910.

[G] Biology electives include 12 "depth" credit hours of "BIOL" courses (excluding BIOL 4694-4699) and 9 "breadth" credit hours of courses, as described in the Student Handbook.

[H] Senior Research Experience and Communicating Biology Research may be swapped with biology elective in fourth year.

MS: Total Degree Hours = 36

FIFTH YEAR - FALL	COURSE HRS	TOTAL SEM HRS
MS RESEARCH	8	
Biology graduate coursework (graded)	6	
Biology Seminar	1	
		15
FIFTH YEAR - SPRING	COURSE HRS	TOTAL SEM HRS
MS RESEARCH	8	
Biology graduate coursework (graded)	6	
Biology seminar	1	
		15
TOTAL PROGRAM HOURS INCLUDING DOUBLE-COUNTED CREDITS (6 HOURS) =		36

Discussion Items:

1. The Vice Provost for Graduate Education and Faculty Development and the Office of Graduate Studies distributed a draft document to address admission processes within a proposed division for interdisciplinary programs. The proposal suggests a unified admissions process and creating the Division for Interdisciplinary Programs which would solve the following issues:
 - Creates a collectively-owned administrative space to replace the “holding school/college” concept in Proposal One.
 - Allows for aggregated application, acceptance, and enrollment statistics on the interdisciplinary programs, replacing the need to roll numbers up from under the various schools and colleges.
 - For example, it would facilitate allocation of Presidential Fellowship slots directly to the interdisciplinary programs, outside the college allocations.
 - Facilitates reporting to the relevant deans, rather than leaving the burden entirely on the program director to create that opportunity.

The draft can be found on the ICC site under Proposal 5293. **This will be an agenda item for discussion at a future IGCC meeting.**

2. James Black, Office of Graduate Studies, addressed the Committee with proposals for Ph.D. qualifying exams which include approving basic principles for the exams, changes to languages in the next edition of the catalog, and other recommendations. The Committee concluded that it would be beneficial to discuss these items at the next GCC meeting in August, as quorum is expected, as it is anticipated to be a lengthy discussion regarding the proposed changes.

The Committee was encouraged to review the requested updates which can be found under Proposals 5322, 5323, and 5324 on the ICC site.

3. Robin Tucker (CoD) presented for the Committee’s information a renewal of a Cooperation Agreement between the College of Design at Georgia Tech and the College of Architecture and Urban Planning at Tongji University. Through this exchange student program, GT students study in the Department of Architecture in TJ-CAUP and can earn the Degree: Master of Architecture. TJ students study in GT-Design and can earn the Degree: Master of Science in Urban Design.

RENEWAL OF COOPERATION AGREEMENT - ACKNOWLEDGED

Adjourned,
Victor Breedveld, CHBE
Chair, Graduate Curriculum Committee