Graduate Curriculum Committee
Minutes
Academic Matters (Full Committee)
April 14, 2016

Present: Breedveld (CHBE), Pikowsky (Registrar), Cozzens (Vice Provost), Flowers (ARCH), Neitzel (ME), Omiecinski (CoC-CS), Schmidt-Krey (BIOL), Sluss (CoB)

Visitors: Hodges (REG), Cole (REG), Henneman (IC/CS), Zhou (ECE), Bishop (GTRI), Register (GTRI), Barker (BME), Levine (PUBP), Mueller (PUBP), Borenstein (PUBP), Folds (GTRI), Rinehart (CoA), Singh (MSE), Jacobs (CoE), Berthelot (VPII), Mulholland (CEE), Williams (ECE)

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. It may also be that approval of the Southern Association of Colleges and Schools is required.

There was no quorum for the face-to-face meeting. An email ballot subsequently approved the actions of those Committee members who were present at the meeting and approved the Minutes themselves. A quorum of the members participated in the email ballot.

Administrative Matters

1. The Office of International Initiatives gave an update on the initiatives in Shenzhen. There are opportunities in this area that may be worth exploration. Things are happening quickly and it is an excellent location in China. Specific mention was made of the OMS-CS program and the possibility of a hybrid model for this location. Other locations are also being considered. Committee members noted that proposals must come before the Committee and depending on their nature, approval or notification could also have to occur with the Board of Regents and/or the Southern Association of Colleges and Schools-Commission on Colleges.

Academic Matters

1. A motion was made to *approve* a request from the Schools of Mechanical Engineering for pre-requisite modifications. This motion was seconded and approved.

   Pre-requisite Modifications – APPROVED

ME 6222
Current: ME 4210
Proposed: ME 4215
ME 6225
Current: ME 3015 and ME 6222
Proposed: ME 3017 and ME 6222
ME 6401
Current: ME 3015
Proposed: ME 3017
ME 6403
Current: ME 3015
Proposed: ME 3017
ME 6441
Current: ME 3015
Proposed: ME 3017
ME 6442
Current: ME 3015 and ME 3201
Proposed: ME 3017

2. A motion was made to *approve* a request from the College of Architecture for a college name change. This motion was seconded and approved.

College Name Change – APPROVED

Current Name:
College of Architecture

Proposed Name:
College of Design

The College of Architecture is changing the name of the college to the **College of Design** to encompass and better describe the full range of academic offerings by the Schools within the college.

3. A motion was made to *approve* a request from the School of Civil and Environmental Engineering for School specializations name change. This motion was seconded and approved.

School Specialization Name Change – APPROVED

The School of Civil and Environment Engineering's graduate programs are organized by six affinity groups, based on faculty research interests, sub disciplines of civil engineering, and professional standards.

Currently, the six specializations listed in catalog are:

- Construction Engineering
- Environmental Engineering
- Environmental Fluid Mechanics and Water Resources
- Geosystems Engineering

- Structural Engineering, Mechanics and Materials
- Transportation Systems Engineering

CEE is updating "Construction Engineering" to "Construction and Infrastructure Systems Engineering".

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

CEE 6215: Coastal Structures 3-0-3
Note: The Committee recommended that learning outcomes be added to the syllabus.
CEE 6538: Introduction to Non-Destructive Testing and Forensic Evaluation in Structures 2-3-3
CEE 6650: Discrete Choice Making 3-0-3
CEE 8099: Seminars in Structural Engineering Mechanics and Materials for PhD students 1-0-1

4. A motion was made to *approve* a request from the Department of Biomedical Engineering for a degree modification. This motion was seconded and approved.

Degree Modification – APPROVED
Doctor of Philosophy with a major in Biomedical Engineering (GT/Emory and GT/Emory/Peking)

Overview

Integrative Core courses, taken during a student's first year of matriculation, were originally designed to help students develop core skills needed to be successful in the BME PhD program, focusing heavily on critical-thinking and problem-solving skills at the intersection of engineering and bioscience. Course design features include written assignments, oral presentations, experimental design, and teamwork, and works most efficiently went kept to a maximum of 20 students per course. Traditionally, students were required to take two such courses (each course has a particular topical area focus) in order to gain more than on perspective. However, as the PhD student enrollment has increased, some of these courses have had as many as 40 students in them, diminishing the efficacy of the original course design. After multiple discussions with all Integrative Core instructors, as well as PhD student surveys, we determined that each Integrative Core course covered the same essential core skills. Therefore, in order to decrease the enrollment in each individual course (to better fit the course design structure), while still achieving the overall objectives of the course, we wish to require students to take only of the three offered Integrative Core courses, starting Fall 2016. Each course will be capped at 20 students.

Decreasing the number of required hours of Integrative Core courses from six to three frees up three hours in the curriculum. One complaint raised by both faculty and students is an insufficient requirement level for technical courses. To this end, we wish to use these freed three hours toward raising the requirements for BME Engineering and Bioscience Fundamental hours from 18 to 21. BME Engineering and Bioscience Fundamentals are a collection of courses, chosen based on curriculum track and research interests, which provide fundamental and technical knowledge in engineering and bioscience.

Changes to course requirements, including the following

- Decrease number of required hours of Integrative Core courses (BMED 7011, 7012, & 7013—3 hours each) from six to three.
- Increase the number of BME Engineering & Bioscience Fundamentals hours from 18 to 21.

Degree Requirements

CURRICULUM

BME PROGRAM

The BME program curriculum is designed to offer flexibility. The specific goals of the curriculum components are (1) to leverage our expertise in teaching methodologies, such as problem-based learning, that are a model to other departments internationally, (2) to facilitate adequate depth of knowledge acquisition in areas critical to each student's thesis research, and (3) to provide advanced graduate courses in the areas of research in which the department faculty excel. The BME-PKU program curriculum is modeled after the BME program curriculum and has additional requirements including a year of residency at the secondary campus.

The curriculum will facilitate individual flexibility and depth of study through coursework selected by the student (and thesis advisor) in specific categories as follows:

BME Integrative Core ~~Series~~ Course (~~two~~ one courses required = ~~6~~3 hours)
Engineering/Bioscience Fundamentals (~~18~~21 hours minimum)
BME Advanced Graduate Seminar (one 3-hour course required)

Additional course requirements include:

Ethics Training: JPE600 AND JPE610 (at Emory=0 hours). Remaining RCR requirements are fulfilled within other courses within the curriculum (BMED

7002, BMED 7011/7012/7013)

Teaching Series TATT 600 (at Emory=1 hour), BMED7002 and BMED7003 (at GT=1 hour each)

Seminar Participation Series (4 hours)
Thesis Hours (variable)

Secondary Institution Placeholder(s)
Minor *(9 hours):* This GT requirement is typically met using courses in the Engineering/Bioscience Fundamentals category.

The resulting total minimum number of required hours is 34. It is anticipated (although not required) that students may take other elective coursework to fulfill the requirements of their individual research projects and/or training grants.

According to GT College of Engineering requirements, students must carry a total of 21 hours in the fall and spring terms and 16 hours in the summer terms. The variable Thesis hours are used to supplement actual courses to meet these minimum totals.

Course Information

Details on all BMED courses, including course numbers, sample syllabi, and projected offerings by semester, are found on the Academic Programs/Graduate section of the department's website.

BME INTEGRATIVE CORE SERIES COURSE (Course numbers vary)

This component will introduce students to the open-ended, problem-solving environment that is central to their success in a PhD program. Each course will be co-taught (ostensibly by an "engineer" and a "bioscientist") and will focus on a particular topical area. Students will—in the context of that topical area—address fundamental technical issues, critically read and evaluate literature, pose well- developed research questions that can be addressed by either experimental or modeling approaches (or both), and understand the importance and limitations of these approaches. As a group, the three courses will span the research areas of our program and the organizational hierarchy from molecular to organismic. Each student will select ~~two~~ one of these courses that fit her/his interests, and typically will take ~~these~~ this course~~s~~ in the Fall ~~and~~ or Spring semesters of the first year in the program.

ENGINEERING/BIOSCIENCE FUNDAMENTALS (Course numbers vary)

This component focuses on the learning of fundamental knowledge in engineering, in bioscience, and at the intersection of the two. These courses will be delivered both by the Coulter BME Department and by other engineering and bioscience programs/departments at Georgia Tech and Emory (building on the complementary strengths of the two institutions). Although various teaching methods may be used, it is expected that most of these courses will follow a more traditional lecture-based format. The minimal requirement in this category is ~~18~~ 21 semester hours total between engineering and bioscience. At least one of the engineering courses should be a "traditional engineering" course (such as those taught by ME and ECE) and the interdisciplinary Bioengineering Program's approved list of courses may be used as a reference for acceptable courses in this area. (See the Handbook

on the Bioengineering website at www.bioengineering.gatech.edu.) Eligibility of all courses for this category will be based on proposals by the faculty research groups in the BME Program and on approval by the BME Graduate Committee.

Proposed DR-BMEJ curriculum (same as currently proposed DR-BMED with additions of Global Perspectives and Chinese Language requirements):

BME-PKU Program Curriculum

The specific goals of the curriculum components are:

1) to leverage our expertise in teaching methodologies, such as problem-based learning, that are a model to other departments internationally,
2) to facilitate adequate depth of knowledge acquisition in areas critical to each student's thesis research, and
3) to provide advanced graduate courses in the areas of research in which the department faculty excel.

The curriculum will facilitate individual flexibility and depth of study Through coursework selected by the student and thesis advisor in specific categories as follows:

- **Integrative Core** (~~two courses required=6 hours~~ one course required = 3 hours)
- **Engineering/Bioscience Fundamentals** (~~18 hours minimum~~ 21 hours minimum)
- **Advanced Graduate Seminar** (one 3–5hour course required)

Additional course requirements include:

- **Ethics Series** (2 hours)
- **Teaching Series – TATTO I (Emory) & Teaching Practicum I & II** (2+1+1 hours)
- **BMED Seminar Series** (4 semesters @ 1 hour / semester)
- **9 hour academic minor** (typically met using Eng/Bio Fund's courses)
- **Global Perspectives (specific courses to be approved by BME Graduate Committee, one course at each campus—Atlanta & Beijing)** (3+3 hours)
- **Chinese Language (CHIN 1001, 1002, or exemption by Modern Languages)** (0-4 hours)

The resulting total minimum number of required hours is 43. It is anticipated (although not required) that students may take other elective coursework to fulfill the requirements of their individual research projects and/or training grants.

BME INTEGRATIVE CORE SERIES COURSE
(Course numbers vary)

This component will introduce students to the open-ended, problem-solving environment that is central to their success in a PhD program. Each course will be co-taught (ostensibly by an "engineer" and a "bioscientist") and will focus on a particular topical area. Students will—in the context of that topical area—address fundamental technical issues, critically read and evaluate literature, pose well- developed research questions that can be addressed by either experimental or modeling approaches (or both), and understand the importance and limitations of these approaches. As a group, the three courses will span the research areas of our program and the organizational hierarchy from molecular to organismic. Each student will select ~~two~~ one of these courses that fit her/his interests, and typically will take ~~these~~ this course~~s~~ in the Fall ~~and~~ or Spring semesters of the first year in the program.

ENGINEERING/BIOSCIENCE FUNDAMENTALS (Course numbers vary)

This component focuses on the learning of fundamental knowledge in engineering, in bioscience, and at the intersection of the two. Thesecourses will be delivered both by the Coulter BME Department and by other engineering and bioscience programs/departments at Georgia Tech and Emory (building on the complementary strengths of the two institutions). Although various teaching methods may be used, it is expected that most of these courses will follow a more traditional lecture-based format. The minimal requirement in this category is ~~18~~ 21 semester hours total between engineering and bioscience. At least one of the engineering courses should be a "traditional engineering" course (such as those taught by ME and ECE) and the interdisciplinary Bioengineering Program's approved list of courses may be used as a reference for acceptable courses in this area. (See the Handbook on the Bioengineering website at www.bioengineering.gatech.edu.) Eligibility of all courses for this category will be based on proposals by the faculty research groups in the BME Program and on approval by the BME Graduate Committee.

BME Advanced Graduate Seminar

This component will provide students with in-depth study in a research area within the BME program. Each course will require prerequisite material from both the Engineering and Bioscience Fundamentals. Each course and its prerequisites will be defined by one of the faculty research areas. The courses will not be lecture-based, but instead will focus on the reading and analysis of literature in the research area—building upon the skills learned in the Integrative Core courses. Students will be expected to

present papers to the class and will be required to produce a "product" (e.g., research proposal, in-depth analysis of a set of papers) at the end of the semester. Each student must take one of these courses and will be encouraged to select that course prior to the start of the first year in order to meet the prerequisite requirements.

A motion was made to approve a request from the Department of Biomedical Engineering for a degree modification. This motion was seconded and approved.

Degree Modification – APPROVED
Master of Science in Biomedical Engineering

Overview
Integrative Core courses, taken during a student's first year of matriculation, were originally designed to help students develop core skills needed to be successful in the BME PhD program, focusing heavily on critical-thinking and problem-solving skills at the intersection of engineering and bioscience. Course design features include written assignments, oral presentations, experimental design, and teamwork, and works most efficiently went kept to a maximum of 20 students per course. Traditionally, students were required to take two such courses (each course has a particular topical area focus) in order to gain more than on perspective. However, as the PhD student enrollment has increased, some of these courses have had as many as 40 students in them, diminishing the efficacy of the original course design. After multiple discussions with all Integrative Core instructors, as well as PhD student surveys, we determined that each Integrative Core course covered the same essential core skills. Therefore, in order to decrease the enrollment in each individual course (to better fit the course design structure), while still achieving the overall objectives of the course, we wish to require students to take only of the three offered Integrative Core courses, starting Fall 2016. Each course will be capped at 20 students.

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Changes to course requirements, including the following

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- Increase the number of BME Engineering & Bioscience Fundamentals hours from 18 to 21.

Degree Requirements - BME PROGRAM

The BME program curriculum is designed to offer flexibility. The specific goals of the curriculum components are (1) to leverage our expertise in teaching methodologies, such as problem-based learning, that are a model to other departments internationally, (2) to facilitate adequate depth of knowledge acquisition in areas critical to each student's thesis research, and (3) to provide advanced graduate courses in the areas of research in which the department faculty excel. The BME-PKU program curriculum is modeled after the BME program curriculum and has additional requirements including a year of residency at the secondary campus.

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Seminar Participation Series (4 hours)
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Secondary Institution Placeholder(s)
Minor *(9 hours):* This GT requirement is typically met using courses in the Engineering/Bioscience Fundamentals category.

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5. A motion was made to *approve* a request from the School of Materials Science and Engineering for a degree modification. This motion was seconded and approved.

Degree Modification – APPROVED
Doctor of Philosophy with a major in Materials Science and Engineering

Overview

The faculties of the Schools of Materials Science and Engineering and Polymer, Textile and Fiber Engineering merged in 2010 to form the current School of Materials Science and Engineering (MSE). At that time, to accommodate students from the two schools, the graduate curriculum was

developed with two separate concentrations; hard materials concentration, and Macro-molecular concentration. **The course requirements for the two prior concentrations are shown in Attachment 1 and Attachment 2 respectively**. There were different core course requirements for the two sets of MSE students, which also made the current MSE graduate curriculum very rigid (with a total of five required courses).

To address the above stated concerns, joint MSE faculty started to design an integrated curriculum for the new MSE. Although the interim curriculum catered well to the legacy students already in these schools at the time of the merger, **it was our intention to design a unified curriculum, as was also mentioned in the prior Proposal # 1269 approved at the time of school merger**. For the last two years, the MSE faculty has been working together to define a set of common core topics that were important for all MSE graduates, irrespective of their research areas. The main goal for the revised curriculum is to provide a set of fundamental core courses common to all MSE graduate students, and also provide flexibility in our curriculum for students with different research interests, so that the students are able to take the elective courses important to their research topics.

We request that the institute curriculum committee approves the changes proposed to the MSE graduate program.

- Decrease the number of required core courses to only **two** core courses for all MSE students, instead of the current requirement of **five** required courses *(3 core + 2 MSE major courses for each concentration)*.
- Remove concentrations from the MSE graduate degree program.
- The remaining MSE required approved courses will be elective courses. All other requirements for the PhD in MSE [total number of credit hours required (37 credit hours after BS and 25 credit hours after MS), format of the qualifier exam, the requirements for the minor (9 credit hours), and the minimum overall GPA requirement of 3.0] will remain the same.

Degree Requirements

Current Hard Materials Concentration

Core Courses	Hours	Description
MSE 6401A (Fall)	3-0-3	Thermodynamics of Materials
MSE 6402 (Fall)	3-0-3	Crystallography, Structure and Defects
MSE 6403 (Spring)	3-0-3	Kinetics of Diffusional & Non-Diffusional Phase

Major Courses	Hours	Description
Course of Choice*	3-0-3	Characterization
Course of Choice*	3-0-3	Computations
MSE 8001**	1-0-1	Seminar (Technical Communications)

* See suggested list & submit Program of Study to MSE Academic Office for Approval
** Minimum requirement – can be substituted for an approved technical communication alternative. Only 1 hour of the alternative course credit will be allowed to satisfy total MSE hours required.

Ph.D. Requirements

- Students must complete all core courses with a grade of B in each course or an overall 3.2 GPA before proceeding to the qualifying examination. Students are dropped from Ph.D. program having either 2 'C's or a combination of a 'W' and a 'C' in the 6 core courses
- Six hours from general MSE curriculum (6 hours)
- Nine hours in an approved minor (9 hours)
- Pass the oral and written qualifying exam
- Complete all course work with a minimum GPA of 3.0
- Write, present and defend a Ph.D. dissertation

Additional Ph.D. Requirements

- 37 credit hours are required for Ph.D. if direct from B.S.
- 25 course credit hours are required for Ph.D. if direct from M.S.

Courses in Characterization could include (not limited to):

MSE 6105	Diffraction Studies
MSE 6110	Transmission Electron Microscopy
MSE 6120	Quantitative Characterization of Microstructures
MSE 6130	Surface Characterization
MSE 6404	Scattering Theory
CHEM 6172	Physical Methods in Inorganic Chemistry
CHEM 6181	Chemical Crystallography
CHEM 6283	Electroanalytical Chemistry
CHEM 6572	Macromolecular Structure
CHEM 6752	Polymer Characterization
MSE 8803	Advanced X-ray Diffraction

Courses in Computations could include (not limited to):

MSE 6795	Mathematical, Statistical, and Computational Techniques in Materials Science
CHEM 6382	Computational Methods in Organic Chemistry and Biochemistry
ISyE 6739	Basic Statistical Methods
ME 6104	Computer-aided Design

ME 6124	Finite-Element Method: Theory & Practice
MATH 4255	Monte Carlo Methods
MATH 4347	Partial Differential Equations I
MATH 4348	Partial Differential Equations II

The proposed graduate qualifying system is in essentially two parts:

(1) *Core Courses* - All core courses must be completed with a grade of 'B' or better or an overall 3.2 GPA before proceeding to the qualifying examination. Students are dropped from the Ph.D. program if they have a combination of 2 'C's or a 'W' and a 'C' in the 6 core courses.

(2) *Written exam* – Students will be provided with research papers supplied by faculty involved in graduate courses (or by selection from graduate committee). A written exam will be taken by the students 3-4 weeks after receiving papers and will have to answer 6 out of 12 questions, each based on the research papers. The written exam will last 3 hours and will test the ability to read, understand and critically analyze the pre-supplied research papers, but will require knowledge of the core courses and related science discussed in the papers. Students are not allowed to discuss the research papers with their supervisors, but are encouraged to discuss them with their colleagues.

Current Macro-Molecular Concentration

Core Courses	Hours	Description
MSE 6401B (Fall)	3-0-3	Thermodynamics of Materials
MSE 6768 (Spring)	3-0-3	Polymer Structure, Physical Properties & Characterization
MSE 6751 (Spring)	3-0-3	Physical Chemistry of Polymers in Solutions

Major Courses	Hours	Description
MSE 8001*	1-0-1	Seminar (Technical Communications)

*Minimum requirement – can be substituted for an approved technical communication alternative. Only 1 hour of the alternative course credit will be allowed to satisfy total MSE hours required.

Minimum of 2**		
MSE 6750	3-0-3	Preparation & Reactions of Polymers
MSE 6752	3-0-3	Polymer Characterization
MSE 6755	3-0-3	Theoretical Chemistry of Polymers/Statistical Mechanics
MSE 6600	3-0-3	Advanced Polymer Processing
MSE 7771	3-0-3	Mechanics of Polymer Solids & Fluids

**Submit Program of Study to MSE Academic Office for Approval

Ph.D. Requirements

- Students must complete all core courses with a grade of B in each course or an overall 3.2 GPA before proceeding to the qualifying examination. Students are dropped from Ph.D. program having either 2 'C's or a combination of a 'W' and a 'C' in the 6 core courses
- Six hours from general MSE curriculum (6 hours)
- Nine hours in an approved minor (9 hours)
- Pass the oral and written qualifying exam
- Complete all course work with a minimum GPA of 3.0
- Write, present and defend a Ph.D. dissertation

Additional Ph.D. Requirements

- 37 credit hours are required for Ph.D. if direct from B.S.
- 25 course credit hours are required for Ph.D. if direct from M.S.

The proposed graduate qualifying system is in essentially two parts:

(1) *Core Courses* - All core courses must be completed with a grade of 'B' or better or an overall 3.2 GPA before proceeding to the qualifying examination. Students are dropped from the Ph.D. program if they have a combination of 2 'C's or a 'W' and a 'C' in the 6 core courses.

(2) *Written exam* – Students will be provided with research papers supplied by faculty involved in graduate courses (or by selection from graduate committee). A written exam will be taken by the students 3-4 weeks after receiving papers and will have to answer 6 out of 12 questions, each based on the research papers. The written exam will last 3 hours and will test the ability to read, understand and critically analyze the pre-supplied research papers, but will require knowledge of the core courses and related science discussed in the papers. Students are not allowed to discuss the research papers with their supervisors, but are encouraged to discuss them with their colleagues.

New MSE Graduate Curriculum

Core Courses	Hours	Description
MSE 6411 (Fall)	3-0-3	THERMODYNAMICS
MSE 6412 (Fall)	3-0-3	STRUCTURE OF MATERIALS
MSE 8001**	1-0-1	Seminar (Technical Communications)

** Minimum requirement – can be substituted for an approved technical communication alternative. Only 1 hour of the alternative course credit will be allowed to satisfy total MSE hours required.

Ph.D. Requirements

- Students must complete all core courses with a minimum grade of B in each course before proceeding to the qualifying examination. Students who receive a 'C' or lower grade in a core course will be given only one chance to improve their grade in that course. Students will be dropped from Ph.D. program having either 2 'C's or a combination of a 'W' and a 'C' in core courses. (6 Hours)
- Twenty one hours from approved MSE curriculum (21 hours)
- Nine hours in an approved minor (9 hours)
- Pass the oral and written qualifying exam
- Complete all course work with a minimum GPA of 3.0
- Write, present and defend a Ph.D. dissertation

Additional Ph.D. Requirements

- 37 credit hours are required for Ph.D. if direct from B.S.
- 25 course credit hours are required for Ph.D. if direct from M.S.

MSE Approved Elective Courses *(not limited to)*:

MSE 6010	Functional Materials
MSE 6105	Diffraction Studies
MSE 6110	Transmission Electron Microscopy
MSE 6120	Quantitative Characterization of Microstructures
MSE 6130	Surface Characterization
MSE 6403	Kinetics of Phase Transformations
MSE 6404	Scattering Theory
MSE 6405	Advanced Nanomaterials
MSE 6406	Corrosion of Materials
MSE 6407	Biological Properties
MSE 6510	Polymers for Electronic and Photonic Applications
MSE 6600	Advanced Polymer Processing
MSE 6602	Tensor Anal and Math Tech
MSE 6750	Preparation & Reactions of Polymers
MSE 6751	Physical Chemistry of Polymers in Solutions
MSE 6752	Polymer Characterization
MSE 6754:	Engineering Communication
MSE 6755	Theoretical Chemistry of Polymers or Statistical Mechanics
MSE 6768	Polymer Structure, Physical Properties
MSE 6774	(MSE/BMED): Biomaterials: Structure and Function
MSE 6776	Integrated Low-Cost Microelectronics System Packaging
MSE 6777	Advanced Biomaterials

MSE 6795	Mathematical, Statistical, and Computational Techniques in Materials Science
MSE 6796	Structure-Property Relationships in Materials
MSE 7771	Mechanics of Polymer Solids and Fluids
MSE 7772	Fundamentals of Fracture Mechanics
MSE 7774	Fatigue of Materials and Structures
MSE 8803A	Nanomaterials and Nanotechnology
MSE 8803C	Advanced X-ray Diffraction
MSE 8803 E	Materials for Energy Storage and Conversion
MSE 8803HG	Statistical Mechanics of a Heterogeneous Media
MSE 8803I	Fundamentals of Nanomaterials & Energy
MSE 8803M	Biomaterials Properties
ME 6104	Computer-aided Design
ME 6124	Finite-Element Method: Theory & Practice
ISyE 6739	Basic Statistical Methods
CHEM 6172	Physical Methods in Inorganic Chemistry
CHEM 6181	Chemical Crystallography
CHEM 6283	Electroanalytical Chemistry
CHEM 6382	Computational Methods in Organic Chemistry and Biochemistry
CHEM 6752	Polymer Characterization
CHEM 6572	Macromolecular Structure
MATH 4247	Partial Differential Equations I
MATH 4348	Partial Differential Equations II
MATH 4255	Monte Carlo Methods

Graduate qualifying system is in essentially two parts:

(1) *Core Courses* –Ph.D. students must complete both core courses with a minimum grade of B in each course. Students will be dropped from Ph.D. program having either 2 'C's or a combination of a 'W' and a 'C' in core courses. A maximum of one course can be repeated. A second grade below B will result in being dropped from the Ph.D. program.

(2) *Written exam* – Students will be provided with research papers supplied by faculty involved in graduate courses (or by selection from graduate committee). A written exam will be taken by the students 3-4 weeks after receiving papers and they will have to answer 6 out of 12 questions, each based on the research papers. The written exam will last 3 hours and will test the ability to read, understand and critically analyze the pre-supplied research papers, but will require knowledge of the core courses and related science discussed in the papers. Students are not allowed to discuss the research papers with their supervisors, but are encouraged to discuss them with their colleagues.

A motion was made to approve a request from the School of Materials Science and Engineering for new courses. This motion was seconded and approved.

New Courses – APPROVED

MSE 6411: Thermodynamics of Materials 3-0-3
*Note: Box 9 on NCP should indicate that MSE 6401 is an equivalent course and the syllabus should be revised to include the most up-to-date Office of Disability services statement.
MSE 6412: Structure of Materials 3-0-3
*Note: Box 9 on NCP should indicate that MSE 6402 is an equivalent course and the syllabus should be revised to include the most up-to-date Office of Disability Services statement.
MSE 7757: Teaching Practicum 3-0-3
*Note: The grade mode should be revised to allow pass/fail only. The syllabus should be revised to include the most up-to-date statement on the Office of Disability Services. It should also include a reference to the CETL website.

6. A motion was made to *approve* a request from the College of Engineering for a new course. This motion was seconded and approved.

New Course – APPROVED

ASE 6131: Analysis and Synthesis: Human Systems Integration 3-0-3
*Note: Box 13 should include the name of a tenure track faculty member. The syllabus should be edited to remove the word "classroom" from the Learning Accommodations statement.
*Update: New version of NCP and syllabus with requested items has been submitted and uploaded to the IUCC website 04/16/2016.

A motion was made to approve a request from the College of Engineering for a degree modification. This motion was seconded and approved.

Degree Modification – APPROVED
Professional Masters in Applied Systems and Engineering

Overview

The purpose of this program modification proposal is to formally add ASE 6131, Analysis and Synthesis: Human Systems Integration, to the Professional Master's Degree in Applied Systems Engineering (PMASE). This course was included in the original PMASE program proposal and has been taught as a special topics course (ASE 8803) in Fall 2013, 2014 and 2015. This course is the domain elective in human systems integration and serves as an introduction, along with the other domain electives, to the four course complex systems sequence in the second year of the PMASE program.

Degree Requirements

Current Requirements:

YEAR 1: CORE COURSES

FALL

ASE 6001 - Introduction to Systems Engineering (4-day Campus Visit Required)

ASE 6004 - Leading Engineering Teams

SPRING

ASE 6003 - Systems Modeling and Optimization

ASE 6005 - Advanced Topics in Systems Engineering – Systems Modeling with SysML

SUMMER

ASE 6002 - Systems Design and Analysis

YEAR 2: COMPLEX SYSTEMS TRACK SEQUENCE

FALL

ASE 6006 - Systems Engineering Laboratory (4-day Campus Visit Required)

ASE 61X1 – Analysis and Synthesis
Select one elective from the following:

• ASE 6111 - Sensor Systems Analysis and Synthesis

• ASE 6121 - Information Systems Analysis and Synthesis

• ASE 8803 - Human Systems Integration Analysis and Synthesis

SPRING

ASE 6102 – Systems of Systems and Architectures

ASE 6103 – Lifecycle and Integration

SUMMER

ASE 6104 – Complex System Capstone Project (3-day Campus Visit Required)

Proposed Requirements:

YEAR 1: CORE COURSES

FALL

ASE 6001 - Introduction to Systems Engineering (4-day Campus Visit Required)

ASE 6004 - Leading Engineering Teams

SPRING
ASE 6003 - Systems Modeling and Optimization
ASE 6005 - Advanced Topics in Systems Engineering – Systems Modeling with SysML
SUMMER
ASE 6002 - Systems Design and Analysis
YEAR 2: COMPLEX SYSTEMS TRACK SEQUENCE
FALL
ASE 6006 - Systems Engineering Laboratory (4-day Campus Visit Required)
ASE 61X1 – Analysis and Synthesis Select one elective from the following:
• ASE 6111 - Sensor Systems Analysis and Synthesis
• ASE 6121 - Information Systems Analysis and Synthesis
• ASE ~~8803~~ 6131 - Human Systems Integration Analysis and Synthesis
SPRING
ASE 6102 – Systems of Systems and Architectures
ASE 6103 – Lifecycle and Integration
SUMMER
ASE 6104 – Complex System Capstone Project (3-day Campus Visit Required)

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

   Degree Modification – APPROVED
   Doctor of Philosophy with a major in Computer Science

   Overview

   We are proposing to remove a few courses that haven't been taught in quite some time from the Networking and Communications breadth list. We also would like to add a new course. This request is being made by the Networking group faculty and has been approved by the College of Computing's Graduate Curriculum Committee.

The key difference is that we would like to make sure the courses on the Networking and Communications breadth list are courses that are often offered.

Networking and Communications	CS 6250 Computer Networks ~~CS 6280 Performance Evaluation and Communication Networks~~ ~~CS 7250 Broadband Networking Systems~~ CS 7260 Internetworking Architectures and Protocols CS 7270 Networked Applications and Services CS 7280 Network Science

8. A motion was made to *approve* a request from the School of Public Policy for a new course. This motion was seconded and approved.

   New Course – APPROVED

   PUBP 6725: Info Security Policies 3-0-3
   *Note: Box 9 on the NCP should not include PUBP 4725 as an equivalent course as it has not been approved yet.

   A motion was made to approve a request from the School of Public Policy for a new course. This motion was seconded and approved.

   New Course – APPROVED

   PHIL 6710: Ethics of Biotechnology and Bioengineering Research 3-0-3

   Note: It was noted that since there were instructors from outside disciplines listed on the NCP, the proposing unit should ensure that those instructors are able to produce documentation that they have the credentials necessary to teach the course. If questioned by SACS-COC, this information would be needed.

   A motion was made to approve a request from the School of Public Policy to deactivate a course. This motion was seconded and approved.

   Deactivate Course – APPROVED

   PHIL 6010

9. A motion was made to *approve* a request from the School of Applied Physiology for a new course. This motion was seconded and approved.

   APPH 6710: Ethics of Biotechnology and Bioengineering Research 3-0-3

   Note: It was noted that since there were instructors from outside disciplines listed on the NCP, the proposing unit should ensure that those instructors are able to produce documentation that they have the credentials necessary to teach the course. If questioned by SACS-COC, this information would be needed.

10. A motion was made to *approve* a request from the School of Electrical and Computer Engineering for new courses. This motion was seconded and approved.

    New Courses – APPROVED (Contingent upon Revised Syllabi)

    ECE 6254: Statistical Machine Learning 3-0-3

    ***Note:** This is an existing course. There was concern expressed that this change in both content and title is made to an existing course that has been taught before. The Committee asked the proposer whether there was enough overlap in content between the two versions to justify not changing the course number. It was determined in the end that the content was sufficiently similar to justify not requiring a new number. However, the Registrar pointed out that we need to be very careful with this question since we wish to have academic records be clear and consistent. Changing the content of a course sufficiently and giving it a new title would indicate that it actually is a new course and should have a new number. Academic records need to be as transparent as possible to the viewer.

    ECE 6337: Electricity Markets 3-0-3
    ECE 6445: Power IC Design 3-0-3

    *Note: All three courses should include the most up-to-date information on the Office of Disability Services (formerly ADAPTS), reference to GT's Honor Code, and learning outcomes. This approval is contingent upon ECE providing new syllabi for all three courses.

11. A motion was made to *approve* a request from The Schools of Interactive Computing; Industrial Design; Psychology; and Literature, Media, and Communication for a degree modification. This motion was seconded and approved.

Degree Modification – APPROVED

Master of Science in Human-Computer Interaction

Overview

We propose editing the course electives in some of the picks, updating LCC to LMC, and changing the grade requirement. These changes were proposed and voted on by the facultys from all of the involved Programs. The key differences are that we are updating the course requirements for some of the tracks, updating LCC to LMC, and changing the grade requirement.

Degree Requirements

The goal of this document is to specify grade requirements for the MS-HCI program, to update Psychology track elective requirements, and to update the list of elective courses that can be used to meet program requirements to be submitted to school, deans, and the GCC.

Summary:

- Add minimum grade requirements "B" to fixed core, specialization and project course requirements.
- Change "LCC" courses to "LMC" courses
- Adjust Psychology-track elective requirements to fix an inconsistency in elective credit requirements and to allow for more flexibility in what electives can be used to fulfill requirements (making the Psychology track similar to LMC and ID tracks)
- Add new courses; remove courses that are no longer being offered.
- Add elective courses for the "Management of Technology" certificate.

Table of Contents

Master of Science in Human - Computer Interaction

The interdisciplinary Master of Science in Human-Computer Interaction (HCI) degree program is a cooperative effort of the School of Interactive Computing; the School of Literature, Media and Communication; the School of Industrial Design, and the School of Psychology. The program provides students with the practical *and* interdisciplinary skills and theoretical understanding they will need to become leaders in the design, implementation, and evaluation of the computer interfaces of the future.

Degree Requirements – Overview

The HCI master's degree is a four-semester program consisting of a total of 36 credit hours. Each student is required to complete a set of four core courses, a set of elective courses based on their academic background and interests, a set of area specialization courses based on the academic unit in which they reside, and a Master's research project. The specific courses for each student are determined by the HCI program coordinator in consultation with the academic unit. The area specialization courses are determined by the academic unit in which the student resides. The areas of specialization are: Interactive Computing; Digital Media (DM, through the School of Literature, Media and Communication); Industrial Design; and Psychology.

Specializations	Fixed Core Credit Hours	Specialization Credit Hours	Elective Credit Hours	Project Credit Hours
Interactive Computing	9	9	12	6
Digital Media	9	12	9	6
Industrial Design	9	12	9	6
Psychology	9	~~11~~ 10	~~10~~ 11	6

Each student is required to maintain a 3.0 grade point average across credit hours used to fulfill degree requirements, a minimum grade of "B" in Fixed Core, Specialization, and Project credit hours, and a minimum grade of "C" in Elective credit hours.

Fixed Core (9 Credit hours)

~~CS/PSYC 6750, Human-Computer Interaction (must be taken during the first semester)~~

CS 8803-HCI, Human-Computer Interaction (must be taken during the first semester)

PSYC 6023 Psychology Research Methods for HCI (4 credit hours with lab)

CS/ID/~~LCC~~ *LMC*/PSYC 6753 Human-Computer Interaction – Professional Preparation and Practice (1 credit hour Fall of first year and 1 credit hour Fall of second year)

Students are expected to take CS8803-HCI and PSYC 6023 during the same semester.

A minimum grade of "B" is required in each of the Fixed Core classes.

Specializations

INTERACTIVE **COMPUTING SPECIALIZATION (9 credit hours)**

Software (3 credit hours):

CS 6300, Software Development Process
CS 6452, Prototyping Interactive Systems
CS 6456, Principles of User Interface Software
CS 6457, Video Game Design
CS 7470, Ubiquitous Computing

CS 7497, Virtual Environments
CS 8803-MAS, Special Topics: Mobile Apps and Services

Design, Evaluation, and Cognitive Modeling (6 credit hours):

CS 6010, Principles of Design
CS 6150, Computing for Good
CS 6451, Introduction to Human-Centered Computing
CS 6455, User Interface Design and Evaluation
CS 6457, Video Game Design
CS 6460, Educational Technology: Conceptual Foundations
CS 6465 Computational Journalism
CS 6470, Design of Online Communities
CS 6770/LMC 6340, Mixed Reality Experience Design (offered every two years)
CS ~~6753~~ 6763, Design of Environments
CS 6795, Introduction to Cognitive Science
CS 7450, Information Visualization
CS 7460, Collaborative Computing
CS 7465, Educational Technology Design and Evaluation
CS 7632, Game AI
CS 7633, Human-Robot Interaction
CS 6474, Social Computing
CS/PSYC 7790, Cognitive Modeling
CS 8803-DG, Special Topics: Design Games
~~CS 8803-GAI Special Topics: Game AI~~
CS 8803-HEF, Special Topics: Healthcare Informatics
CS 8803-HAR, Special Topics: Handheld Augmented Reality Game Studio
CS 8803-IBI, Special Topics: Introduction to Bio Informatics
~~CS 8803-SOC, Social Computing~~
CS 8803-VDA, Visual Data Analysis
CS 8803-CC, Computational Creativity
CS 8803-TD/INTA 8803, Technology & Poverty
CS 8803-HI, Personal Health Informatics
CS 8803-PCB, Ubiquitous Computing & Human Behavior
CS 8903, Special Problems in Human-Computer Interaction

A maximum of 3 hours of CS 8903 may count toward the Interactive Computing specialization.

A minimum grade of "B" is required in each of the Interactive Computing Specialization classes.

~~The master's degree requirements for students in the College of Computing supplement those of the Institute. Students must achieve a grade point average of at least 3.0 to graduate, and no course grade below C will count toward graduation.~~

DIGITAL MEDIA (DM) SPECIALIZATION (12 credit hours)

Required

One of the following *four courses,* preferably in the first year of study:
LCC 6310, The Computer as an Expressive Medium
LCC 6313, Principles of Interactive Design
LCC 6399, Discovery and Invention in Digital Media
LCC 8903, Special Problems in HCI
and
LCC 6650, Project Studio (enrollment by permission of instructor)
(*must be taken at least once, may be taken up to three times for degree credit)*

Optional

Students may fulfill the rest of the required *12* credits ~~hours~~ with any other LCC 6000 or 8000 level course.

A maximum of 3 hours of LCC 8903 *Special Problems in HCI* may count toward the Digital Media specialization.

A minimum grade of "B" is required in each of the Digital Media Specialization classes.

INDUSTRIAL DESIGN SPECIALIZATION (12 credit hours)

Required (9 credit hours)

ID 6100, Intro to ID Grad Studies
ID 6101, Human-Centered Design
ID 6401, Visualizing Interaction

One of the following courses (3 credit hours)

ID 6214, Strategic Design Language
ID 6215, Service Design
ID 6271, Healthcare Design of the Future
ID 6420, Advanced Sketching
ID 6509, Computing, Creativity and Design Cognition
ID 6510, Design for Interaction
ID 6515, Interface Prototyping
ID 6763, Design of Interactive Environments
ID 6800, Universal Design
ID 6820, Web Design Accessibility

A minimum grade of "B" is required in each of the Industrial Design Specialization classes.

PSYCHOLOGY SPECIALIZATION (~~11~~ 10 credit hours)

Required (~~8~~ 7 credit hours):

PSYC 6022, Psychological Statistics for HCI (4 credit hours including lab, Fall or Spring)
PSYC 7101, Engineering Psychology I (3 credits)
~~PSYC 6032, Engineering Psychology Stressors (1 credit hour minicourse, Fall)~~
~~PSYC 6033, Engineering Psychology Cognitive Ergonomics (1 credit hour minicourse, Spring)~~
~~PSYC 6034, Engineering Psychology Displays (1 credit hour minicourse, Spring)~~
~~PSYC 6035, Engineering Psychology Controls &Workspaces (1 credit hour minicourse, Spring)~~

One of the following courses (3 credit hours):

PSYC 6011, Cognitive Psychology (3 credit hours)
PSYC 6012, Social Psychology (3 credit hours)
PSYC 6014, Sensation and Perception (3 credit hours)
PSYC 6041, Topics in Cognitive Aging (3 credit hours)

A minimum grade of "B" is required in each of the Psychology Specialization classes.

Elective Courses

- 12 credit hours for Interactive Computing
- 9 credit hours for Digital Media
- 9 credit hours for Industrial Design
- ~~10~~ 11 credit hours for Psychology

All Specialization courses may also be taken as part of the Elective courses in each of the four areas of specialization. However, for the *I*nteractive *C*omputing ~~and Psychology~~ track~~s~~, at least 9 credit hours of the Elective must be taken outside ~~your~~ of the specialization. For the Psychology, Digital Media and Industrial Design tracks, at least 6 credit hours must be taken outside your specialization. A maximum of 3 credit hours of Special Problems in HCI (CS/ID/LCC/PSYC 8903) may count toward the Elective Courses.

A minimum grade of "C" is required in each of the Elective classes used to satisfy degree requirements.

Aerospace Engineering

AE 6551, Cognitive Engineering

AE 6721, Evaluation of Human-Integrated Systems

Computer Science

~~**Software**~~ [NOTE: These courses are still approved electives, but they have been combined with the next section to create a single list of approved Computer Science courses]

~~*CS 6300, Software Development Process*~~
~~CS 6452, Prototyping Interactive Systems~~
~~CS 6456, Principles of User Interface Software~~
~~CS 7470, Ubiquitous Computing~~
~~CS 8803-MAS, Special Topics: Mobile Apps and Services~~
~~CS 8803, Special Topics: Adaptive Personalized Information Environments~~
~~Interaction (variable hours)~~

~~**Design, Evaluation, and Cognitive Modeling**~~

CS 6010, Principles of Design
CS 6150, Computing for Good
CS 6300, Software Development Process
CS 6451, Introduction to Human-Centered Computing
CS 6452, Prototyping Interactive Systems
CS 6455, User Interface Design and Evaluation
CS 6456, Principles of User Interface Software
CS 6457, Video Game Design
CS 6460, Educational Technology: Conceptual Foundations
CS 6465 Computational Journalism
CS 6470, Design of Online Communities
CS 6474, Social Computing
CS 6770/LMC 6340, Mixed Reality Design
CS 7633, Human-Robot Interaction
CS 6795, Introduction to Cognitive Science
CS 7450, Information Visualization
CS 7460, Collaborative Computing
CS 7465 Computational Journalism
CS 7470, Ubiquitous Computing
CS 7632, Game AI
CS 7633, Human-Robot Interaction
CS 7610, Modeling and Design
CS/PSYC 7790, Cognitive Modeling
CS 8803-ANI, Special Topics: Animal Interaction
CS 8803-DG Special Topics: Design Games
CS 8803-HEF Special Topics: Healthcare Informatics

CS 8803-HAR Special Topics: Handheld Augmented Reality Game Studio
~~CS 8803-HRI Special Topics~~
CS 8803-IBI Special Topics: Introduction to Bio Informatics
CS 8803-MAS, Special Topics: Mobile Apps and Services
CS 8803, Special Topics: Adaptive Personalized Information Environments

Interaction (variable hours)
~~CS 8803-VG Special Topics: Video Game Design~~
~~CS 8803-SOC Social Computing~~
CS 8803-VDA, Visual Data Analysis
CS 8803-CC, Computational Creativity
CS 8803-TD/INTA 8803, Technology & Poverty
CS 8803-HI, Personal Health Informatics
CS 8803-PCB, Ubiquitous Computing & Human Behavior-
CS 8903 Special Problems in Human-Computer Interaction

International Affairs

INTA 8803, Special Topics: Computers, Communications, and International Development

Industrial Design

ID 6100, Intro to Grad Studies
ID 6101, Human Centered Design
ID 6200, Graduate Studio I
ID 6214, Strategic Design Language
ID 6215, Service Design
ID 6401, Visualizing Interaction
ID 6510, Design for Interaction
ID 6515, Interface Prototyping
ID 6420, Advanced Sketching
ID 6271, Healthcare Design of the Future
ID 6763, Design of Interactive Environments
ID 6820, Web Design Usability and Accessibility
ID 8903, Special Problems in Human-Computer Interaction

Industrial and Systems Engineering

~~ISYE 6205 / AE 8803, Cognitive Engineering~~
~~ISYE 6215, Models in Human-Machine Systems~~
~~ISYE 6231, Design of Human-Integrated Systems~~
ISYE 6413, Design and Analysis of Experiments
ISYE 6414, Regression Analysis
ISYE 6739, Basic Statistical Methods
ISYE 6772, Managing the Resources of Technological Firms
ISYE 7210, Real-Time Interactive Simulations

Literature, Media and Communication (Digital Media)

LMC ~~LCC~~ 6215, Issues in Media Studies
LMC ~~LCC~~ 6310, The Computer as an Expressive Medium
LMC ~~LCC~~ 6311, Visual Culture and Design
LMC ~~LCC~~ 6312, Design Technology and Representation
LMC ~~LCC~~ 6313, Principles of Interactive Design
LMC ~~LCC~~ 6314, Design of Networked Media
LMC ~~LCC~~ 6315, Project Production
LMC ~~LCC~~ 6316, Historical Approaches to Digital Media
LMC ~~LCC~~ 6317, Interactive Fiction
LMC ~~LCC~~ 6318, Experimental Media
LMC ~~LCC~~ 6319, Intellectual Property Policy and Law
LMC ~~LCC~~ 6325, Game Design and Analysis
LMC ~~LCC~~ 6399, Discovery and Invention in Digital Media
LMC ~~LCC~~ 6650, Project Studio
LMC ~~LCC~~ 8000, Proseminar in Media Theory
LMC ~~LCC~~ 8001, Pro-Seminar in Digital Media Studies
LMC ~~LCC~~ 8903, Special Problems in Human-Computer Interaction

Management of Technology (MOT)

MGT 6056, Electronic Commerce
MGT 6057, Business Process Analysis and Design
MGT 6059, Analysis of Emerging Technologies
MGT 6086, Entrepreneurial Finance and Private Equity
MGT 6111, Innovation; Entrepreneurial Behavior
MGT 6165, New Venture Creation
MGT 6326, Collaborative Product Development
MGT 6359, Business Strategies for Sustainability
MGT 6450, Project Management
MGT 6772, (K, TSA) Managing Resources of the Technological Firm
MGT-ME 6799, Legal Issues in Technology Transfer
MGT-ME-ECE-CHE-BMED 6789 Technology Ventures
~~MGT 8803, Software Project Management~~
MGT 8803, Big Data Analytics in Business

Music

MUSI 6001, Music Perception and Cognition
MUSI 6002, Interactive Music
MUSI 6003, Music Technology History and Repertoire
MUSI 6004, Technology Ensemble
MUSI 6103, Music Recording & Mixing
MUSI 6203, Project Studio in Music Technology
~~MUSI 6104, Integrating Music in Multimedia~~
~~MUSI 6301, Music Interface Design~~
~~MUSI 6303, Network Music~~
MUSI 7100, Music Technology Research Lab

Psychology

PSYC 6011, Cognitive Psychology (3 credit hours)
PSYC 6012, Social Psychology (3 credit hours)
PSYC 6014, Sensation and Perception (3 credit hours)
PSYC 6022, Psychological Statistics for HCI (4 credit hours including lab, Fall or Spring)
~~PSYC 6032, Engineering Psychology Stressors (1 credit hour minicourse, Fall)~~
~~PSYC 6033, Engineering Psychology Cognitive Ergonomics (1 credit hour minicourse, Spring)~~
~~PSYC 6034, Engineering Psychology Displays (1 credit hour minicourse, Spring)~~
~~PSYC 6035, Engineering Psychology Controls &Workspaces (1 credit hour minicourse, Spring)~~
PSYC 6041, Topics in Cognitive Aging (3 credit hours)
PSYC 7101, Engineering Psychology I (3 credits hours)
PSYC 7102, Engineering Psychology II (3 credits)
PSYC 7104, Psychomotor and Cognitive Skills
PSYC 8903, Special Problems in Human-Computer Interaction

Public Policy

PUBP 6111, Special Topics: The Internet and Public Policy
PUBP 6401, Science, Technology, and Public Policy

Non-credit seminars

Various seminars can be used as one way to fill out your schedule if you are required to carry a full course load (12 credits), but they cannot be used as credit toward your degree. Some of the available seminars include:
CS 8001-AHS, Aware Home Seminar
CS 8001-ELC, Electronic Learning Communities Seminar
CS 8001-GVU, GVU Brown Bag

***Research* Project (6 credit hours)**

Each student completes this requirement, under the supervision of a faculty member, ~~normally~~ *typically* during the last two semesters of their program. Students must submit a project proposal and *a* final report and present their work to ~~the three school faculty~~ *program* coordinators and other MS-HCI students late during the semester of graduation (as described in the MS-HCI Project Requirements document).

CS 6998, MS-HCI Project (repeatable; variable semester hours), or
ID 6998, MS-HCI Project (repeatable; variable semester hours), or

~~LCC~~ *LMC* 6998, MS-HCI Project (repeatable; variable semester hours), or
PSYC 6998, MS-HCI Project (repeatable; variable semester hours)

A minimum grade of "B" is required in the project course.

Seminar (2 credit hours as part of Fixed Core)

The ~~HCI MS~~ *MS-HCI* professional preparation and practice course aims to prepare students for success in their studies and careers. It includes presentations by leading HCI practitioners concerning career choices and *employment* preparation and new developments *in HCI-relevant domains*, visits to corporate HCI labs in the Atlanta area, research presentations, skills tutorials, discussion of potential MS projects and "how to succeed" in graduate school and as a professional. Students take this seminar in the Fall semester of their first and second years of study.

~~Quite a few students work as graduate research assistants or as corporate interns as part of their master's project; all students are expected to do a summer internship between their second and third semesters.~~

CS 6753, Human-Computer Interaction - Professional Preparation and Practice (may be repeated for credit once), or
ID 6753, Human-Computer Interaction - Professional Preparation and Practice (may be repeated for credit once), or
~~LCC~~ *LMC* 6753, Human-Computer Interaction - Professional Preparation and Practice (may be repeated for credit once), or
PSYC 6753, Human-Computer Interaction - Professional Preparation and Practice (may be repeated for credit once)

A minimum grade of "B" is required in the seminar course.

Other expectations

All students are expected to complete a corporate internship in an HCI-relevant position between their second and third semesters.

Student Petitions

1. A motion was made to approve actions from the Petitions Subcommittee on petitions in the following areas. The motion was seconded and approved.

   Petitions reviewed from 12/04/15 to 04/13/16.

   (All approved except where noted.)

   2- Term Withdrawal
   4- Selective withdrawals **(2 Denied)**
   2- Change grade mode
   1- Blanket petition to change grade mode for course
   1- Blanket petition to allow exception to Pass-Fail hour limitation

The following petitions were reviewed administratively by the Registrar's office.

(All approved except where noted.)

16- Late registration for current term
3- Selective withdrawal
10- Term withdrawal **(1 Denied)**
1- Cancel registration for current term
1- Three-hour rule waiver
5- Seven-year rule waiver
4- Change grade mode
5- Full graduate standing
7- Registration hour adjustment for current term
8- Readmit after 1st drop
1- Petition to return after withdrawing in current term
2- Use excess pass-fail hours toward degree
13- One-hour rule waiver
1- Count courses taken on special status toward degree
2- Enrollment waivers
1-Reinstate student
2- Extend BSMS graduation deadline
2- Course substitutions
2-Count 9000 level as 7000 level for degree requirement
2-Extend thesis deadline (later discussed with Graduate Studies and referred to them)
1-Hour overload request

Adjourned,

Reta Pikowsky, Registrar
Secretary