Institute Undergraduate Curriculum Committee
Appeals and Academic Matters (Full Committee)
Tuesday, February 14, 2012

Present: Seitzman (AE), Pikowsky (REG), Goodisman (BIOL), Hollengreen (ARCH), Isbell (CoC), Riley (ECE), Grover (ChBE), Higgins (MGT), Senf (LCC), Smith (ME), Whetten (CHEM)

Visitors: Laros (REG), Howson (REG), Simon (REG), Michaels (ECE), Hughes (ECE), Sharp (CoA)

N**ote:** All action items in these minutes require approval by the Academic Senate. In some instances, items may require further approval by the Board of Regents or the University System of Georgia. If the Regents' approval is required, the change is not official until notification is received from the Board to that effect. Academic units should take no action on these items until USG and/or BOR approval is secured. In addition, units should take no action on any of the items below until these minutes have been approved by the Academic Senate or the Executive Board.

Academic Matters

1. A 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)
   Bachelor of Science in Aerospace Engineering

   The BSAE program has an ECON requirement. We currently allow AE students to take ECON 2100 (Engineering economics), ECON 2105 (Macroeconomics), or ECON 2106 (Microeconomics). We also allow students pursuing the International Plan to take ECON 2101 (The Global Economy).

   We request consent of the Institute to expand our ECON requirement in the catalog to include ECON 2101, permitting all our students to take ECON 2101 to meet our ECON requirements. This would also allow our students to meet our ECON requirement, International Plan requirements (where applicable), and Institute's global perspectives requirement all with a single course.

   Most importantly, students taking ECON 2101 would be better prepared to work in a global work force, and would be better equipped to incorporate global economic issues in their design, analyses, and research work.

   Request: Replace "ECON 2100 or 2105 or 2106" in the curriculum with "ECON 2100 or 2101 or 2105 or 2106."

2. A motion was made to **approve** a request from the School of Architecture for a new courses and deactivation of courses. The motion was seconded and approved.

NEW COURSES: (approved)

ARCH 4142: Dwelling: Histories and Theories of Environmental Behavior and Design 3-0-3
Jointly listed with ARCH 6142

ARCH 4143: Museums: History, Theory, & Design 3-0-3
Jointly listed with ARCH 6143

DEACTIVATE COURSES: (approved)

ARCH 4021: Architecture Core Studio I
ARCH 4022: Architecture Core Studio II
ARCH 4023: Architecture Core Studio III
ARCH 4105: History of Architecture I
ARCH 4106: History of Architecture II
ARCH 4219: Construction Tech I
ARCH 4420: Intro to Design Computing

The above courses are requested to be deactivated when the Graduate versions of them are created.

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

DEGREE MODIFICATION: (approved)

Bachelor of Science in Computational Media
Interdisciplinary with COC and Ivan Allen College

The CM Undergraduate Curriculum Committee (UCC), with the approval of the LCC UCC and the COC, recommends minor corrections to the catalog to facilitate the proper function of the DegreeWorks software. The following three recommendations do not alter the substance of the degree requirements, and they conform to advising practice in CM for the last four years. The proposed revisions will clarify or correct details in the current degree requirements as described in the General Catalog.

The CM UCC recommends the following revisions to the catalog:

- Replace CS 1050 with CS 2050
  Note: CS 1050 was renumbered last year and became CS 2050. Although this proposal asked to add CS 2050 to the list, it really is a replacement since CS 1050 has not been deactivated, but has been made equivalent to the new CS 2050. This is how the change has been worded in the past: Replace requirement of CS 1050 (3 hours) with CS 2050 or CS 2051. Justification: CS is replacing CS 1050 with CS 2050 or CS 2051.
- Add the following classes to the LCC Specialty options:
  - Film: 3257, 3258, 3259 (these courses were recently added to the catalog)

    - Technology and Culture: 3102, 3104, 3106, 3108, 3110, 3112, 3114, 3116, 3118, 3219, 3225 (these courses were renumbered after the creation of CM)
    - Narrative: 3210, 3219, 3502, 3504, 3506, 3508, 3510, 3512, 3514, 3516, 3518, 3823 (these courses were created or renumbered since the creation of CM)
- Add "or MATH 2401 (for students who transfer from another major or another university)" to the Mathematics requirement.

These changes do not constitute a formal change to the CM program, but rather reflect necessary updates because of course numbering changes or because of policy that was simply left out of earlier catalog copy. These amendments will formalize course choices already available to CM students and do not represent a substantive change to the program.

4. A motion was made to **approve** a request from the School of Electrical and Computer Engineering for degree modifications, new courses, and prerequisite modifications. The motion was seconded and approved.

DEGREE MODIFICATION: (approved)
Bachelor of Science in Computer Engineering
This modification to the BSCMPE degree also includes the International Plan and Cooperative Plan.

The proposed changes to the BSCmpE and BSEE degrees have three primary objectives: (a) greater differentiation between the two degree programs, (b) update core courses to reflect changes that have occurred within the disciplines since the last major curriculum revision more than a decade ago, and (c) provide greater flexibility for students, including an increased number of elective hours to allow specialization within the field and greater range of options outside the major.

For the BSCmpE, the following changes in degree requirements are proposed:

<u>Delete</u> (42 credits hours)
CS 1372 (3-0-3) – Program Design for Engineers
ECE 2025 (3-3-4) – Introduction to Signal Processing
ECE 2030 (3-0-3) – Introduction to Computer Engineering
ECE 3025 (3-0-3) – Electromagnetics
ECE 3035 (3-3-4) – Mechanisms for Computing Systems
ECE 3040 (4-0-4) – Microelectronic Circuits
ECE 3041 (1-3-2) – Instrumentation and Circuits Laboratory
ECE 3042 (1-3-2) – Microelectronic Circuits Laboratory
ECE 3055 (3-3-4) – Computer Architecture and Operating Systems
ECE 3060 (3-3-4) – VLSI and Advanced Digital Design
ECE 4001 (2-0-2) – Engineering Practice and Professionalism
ECE 4007 (2-6-4) – ECE Culminating Design Project
Discrete Mathematics elective (x-x-3)

Add (28 credit hours)
ECE 2020 (3-0-3) – Fundamentals of Digital System Design
ECE 2026 (2-3-3) – Introduction to Signal Processing
ECE 2035 (3-3-4) – Programming for Hardware/Software Systems
ECE 2036 (3-3-4) – Engineering Software Design
ECE 3020 (3-0-3) – Mathematics of Computation
Note: ECE will contact School of Mathematics to verify that use of the word Mathematics in the title of this course is acceptable.
ECE 3030 (3-0-3) – Physics of Computation
Note: ECE will contact School of Physics to verify that use of the word Physics the title of this course is acceptable.
ECE 3056 (3-0-3) – Architecture, Concurrency, and Energy in Computation
ECE 4011 (2-0-2) – ECE Culminating Design Project I
ECE 4012 (1-6-3) – ECE Culminating Design Project II

Modify (net increase of 14 credit hours)
Non-ECE engineering electives reduced from 6 hours to 5 hours
Approved electives increased from 9 hours to 12 hours.
ECE/CS electives increased from 10 hours to 22 hours.

There is no net change in the number of hours required for the BSCmpE.

All three degree options (Cooperative Plan, International Plan, and Research Option) continue to have the same degree requirements as the basic degree. Courses satisfying various elective categories and other restrictions are listed in the curriculum summary on pages 6-7 below.

The two primary goals were to provide greater differentiation between the BSCmpE and BSEE and to increase student flexibility. The following indicators demonstrate the extent to which these objectives have been attained in the revised BSCmpE program:

- ECE credit hours common to BSEE and BSCmpE reduced from 29 to 20
- Three CmpE-specific junior level courses (ECE 3020, 3030, 3056) required for BSCmpE
- ECE/CS elective hours increased from 10 to 22
- Approved (free) elective hours increased from 9 to 12
- Option to satisfy ECE communication requirement through co-curricular activities, such as undergraduate research or Vertically Integrated Projects Program

For the BSCmpE program (refer to page 8 of the corresponding proposal)
Note 5. Approved ethics courses include all courses on the Institute list of ethics courses (http://www.catalog.gatech.edu/students/ugrad/core/ethics.php) plus CS 4002.

Note 8. The following courses may NOT be used to satisfy the non-ECE engineering elective hours: BMED 2400, CHBE 2120, ISYE 2027, ISYE 2028, ME 2016, ME 2110, or any 28xx special topic course. At most one of the following thermodynamics courses may be included: CHBE 2130, ME 3322, ME 3720. At most one of the following dynamics courses may be included: AE 2220, CEE 2040, ME 2202.

Blanket substitutions for current students graduating under the current BSCmpE requirements

Current Course(s):	Hours	Can Substitute New Course(s):	Hours
ECE2030, Intro Computer Engineering	3-0-3	ECE2020, Fund. Digital Systems Design	3-0-3
ECE2025, Intro to Signal Processing	3-3-4	ECE2026, Intro to Signal Processing	2-3-3
CS1372, Program Design for Engineers	3-0-3	ECE2036, Software Design for Engineers	3-3-4
ECE3035, Mechanisms Computing Sys	3-3-4	No substitution allowed	
ECE3041, Inst. & Circuits Lab ECE3042, Micro. Circuits Lab	1-3-2 1-3-2	ECE3043, Meas. & Circuits Lab Approved senior lab course ECE3005 or ECE3006	1-3-2 variable
ECE3055, Computer Architecture and Operating Systems	3-3-4	ECE3056, Architecture, Concurrency and Energy	3-0-3
ECE3060, VLSI and Adv Digital Design	3-3-4	No substitution allowed	
ECE4001, Eng. Practice and Prof. ECE4007, ECE Culm. Design Project	2-0-2 2-6-4	ECE4011, ECE Culm. Design Project I ECE4012, ECE Culm. Design Project II	2-0-2 1-6-3
Discrete Math Elective	x-x-3	ECE3020, Mathematics of Computation	3-0-3
Prob/Stat Requirement	3-0-3	ECE3077, Prob/Stat for ECE	3-0-3
Non-ECE Engineering Courses		May select courses using the new rules.	

Blanket substitutions for current students graduating under the new BSCmpE requirements

New Required Course(s)	Hours	Can Substitute Old Course(s):	Hours
ECE2020, Fund. Digital Systems Design	3-0-3	ECE2030, Intro Computer Engineering	3-0-3
ECE2026, Intro to Signal Processing	2-3-3	ECE2025, Intro to Signal Processing	3-3-4
ECE2035, Programming HW/SW Sys	3-3-4	ECE3035, Mechanisms Computing Sys	3-3-4
ECE2036, Engineering Software	3-3-4	CS1372, Program Design for	3-0-3

Design		Engineers	
ECE3005 or ECE3006, Tech. Comm.		ECE3041/3042	
ECE3020, Mathematics of Computation	3-0-3	MATH2602 or MATH 3012 plus 3 hours of ECE electives (if already taken)	3-0-3
ECE3030, Physics of Computation	3-0-3	ECE 3025 and ECE 3040, if at least one has already been taken	3-0-3 4-0-4
ECE3056, Architecture, Concurrency & Energy	3-0-3	ECE3055, Computer Architecture and Operating Systems	3-3-4
ECE4011, ECE Culm. Design Project I ECE4012, ECE Culm. Design Project II	2-0-2 1-6-3	ECE4001, Eng. Practice and Prof. ECE4007, ECE Culm. Design Project	2-0-2 2-6-4
Prob/Stat Requirement		ISYE2027 (if already taken)	

Additional Notes:

Excess hours or shortage of hours will be adjusted in ECE/CS elective hours category.

Credit not allowed for both courses in any of the following combinations of existing/new courses: ECE3075/4260, ECE 3035/2035.

DEGREE MODIFICATION: (approved)
Bachelor of Science in Electrical Engineering
This modification to the BSEE degree also includes the International Plan and Cooperative Plan.

The proposed changes to the BSCmpE and BSEE degrees have three primary objectives: (a) greater differentiation between the two degree programs, (b) update core courses to reflect changes that have occurred within the disciplines since the last major curriculum revision more than a decade ago, and (c) provide greater flexibility for students, including an increased number of elective hours to allow specialization within the field and greater range of options outside the major.

For the BSEE, the following changes in degree requirements are proposed:

<u>Delete</u> (20 credits hours)
CS 1372 (3-0-3) – Program Design for Engineers
ECE 2025 (3-3-4) – Introduction to Signal Processing
ECE 2030 (3-0-3) – Introduction to Computer Engineering
ECE 3041 (1-3-2) – Instrumentation and Circuits Laboratory
ECE 3042 (1-3-2) – Microelectronic Circuits Laboratory
ECE 4001 (2-0-2) – Engineering Practice and Professionalism
ECE 4007 (2-6-4) – ECE Culminating Design Project

<u>Add</u> (19 credit hours)
ECE 2020 (3-0-3) – Fundamentals of Digital System Design
ECE 2026 (2-3-3) – Introduction to Signal Processing

ECE 3043 (1-3-2) – Measurements, Circuits, and Microelectronics Laboratory
ECE 3072 (2-3-3) – Energy Systems
ECE 3084 (3-0-3) – Signals and Systems
ECE 4011 (2-0-2) – ECE Culminating Design Project I
ECE 4012 (1-6-3) – ECE Culminating Design Project II

Modify (net increase of 1 credit hour)
Non-ECE engineering electives reduced from 8 hours to 5 hours.
ECE electives increased from 20 hours to 24 hours, which must include an ECE programming elective (ECE 2035 or ECE 2036, 3-3-4) and a senior EE laboratory.

There is no net change in the number of hours required for the BSEE.

All three degree options (Cooperative Plan, International Plan, and Research Option) continue to have the same degree requirements as the basic degree. Courses satisfying various elective categories and other restrictions are listed in the curriculum summary on pages 7-8 below.

The two primary goals were to provide greater differentiation between the BSCmpE and BSEE and to increase student flexibility. The following indicators demonstrate the extent to which these objectives have been attained in the revised BSEE program:

- ECE credit hours common to BSEE and BSCmpE reduced from 29 to 20
- Two new EE-specific junior level courses (ECE 3072, 3084) required for BSEE
- Junior-level breadth electives (9 credit hours) become general ECE elective hours
- Second required programming course and one required ECE laboratory replaced by category electives to provide more flexibility and options for greater specialization
- Option to satisfy ECE communication requirement through co-curricular activities, such as undergraduate research or Vertically Integrated Projects Program

For the BSEE program (refer to page 8 of the corresponding proposal)

Note 5. Approved ethics courses include all courses on the Institute list of ethics courses (http://www.catalog.gatech.edu/students/ugrad/core/ethics.php) plus CS 4002.

Note 8. The following courses may NOT be used to satisfy the non-ECE engineering elective hours: BMED 2400, CHBE 2120, ISYE 2027, ISYE 2028, ME 2016, ME 2110, or any 28xx special topic course. At most one of the following thermodynamics courses may be included: CHBE 2130, ME 3322, ME 3720. At most one of the following dynamics courses may be included: AE 2220, CEE 2040, ME 2202.

Note 11c. The following courses may be used to satisfy this senior EE lab requirement: ECE 4043, ECE 4180, ECE 4185, ECE 4550

Blanket substitutions for current students graduating under the current BSEE requirements

Current Course(s):	Hours	Can Substitute New Course(s):	Hours
ECE2030, Intro Computer Engineering	3-0-3	ECE2020, Fund. Digital Systems Design	3-0-3
ECE2025, Intro to Signal Processing	3-3-4	ECE2026, Intro to Signal Processing	2-3-3
CS1372, Program Design for Engineers	3-0-3	ECE2036, Software Design for Engineers	3-3-4
ECE3041, Inst. & Circuits Lab ECE3042, Micro. Circuits Lab	1-3-2 1-3-2	ECE3043, Meas. & Circuits Lab Approved senior lab course ECE3005 or ECE3006, Tech. Comm.	1-3-2 variable
ECE4001, Eng. Practice and Prof. ECE4007, ECE Culm. Design Project	2-0-2 2-6-4	ECE4011, ECE Culm. Design Project 1 ECE4012, ECE Culm. Design Project 2	2-0-2 1-6-3
Prob/Stat Requirement CEE/ISYE/MATH3770, ISYE2027		ECE3077, Prob/Stat for ECE (counts as ECE elective, not engineering elective)	3-0-3
Non-ECE Engineering Courses		May select courses using the new rules, but still must fulfill 8 credit hours total.	
The following substitutions apply to the EE breadth requirement as part of the ECE elective hours			
ECE3050, Analog Electronics	3-0-3	ECE3400, Analog Electronics	3-0-3
ECE3055, Computer Architecture and Operating Systems	3-3-4	ECE3056, Arch., Concurrency and Energy	3-0-3
ECE3060, VLSI and Advanced Digital Design	3-3-4	No equivalent course	
ECE3065, Electromagnetic Applications	3-0-3	No equivalent course	
ECE3070, Energy Conversion	3-0-3	ECE3300, Energy Conversion	3-0-3
ECE3071, Modern Electric Energy Sys	2-3-3	ECE3072, Energy Systems	2-3-3
ECE3075, Random Signals	3-0-3	No equivalent course	
ECE3076, Computer Communications	3-0-3	ECE3600, Computer Communications	3-0-3
ECE3080, Semiconductor Devices	3-0-3	ECE3450, Semiconductor Devices	3-0-3
ECE3085, Intro to Systems & Controls	3-0-3	ECE3550, Feedback Control Systems	3-0-3
ECE3090, Software Fund. Engg. Systems	3-3-4	No equivalent course	
		ECE3084, Signals and Systems	3-0-3

Blanket substitutions for current students graduating under the new BSEE requirements

New Required Course(s)	Hours	Can Substitute Old Course(s):	Hours
ECE2020, Fund. Digital Systems Design	3-0-3	ECE2030, Intro Computer Engineering	3-0-3
ECE2026, Intro to Signal Processing	2-3-3	ECE2025, Intro to Signal Processing	3-3-4
Programming Elective (ECE2035 or ECE2036)	3-3-4	CS1372, Program Design for Engineers	3-0-3
ECE3043, Meas. & Circuits Lab Approved senior lab course ECE3005 or ECE3006, Tech. Comm.	1-3-2 1-3-2	ECE3041, Inst. & Circuits Lab ECE3042, Micro. Circuits Lab	1-3-2 1-3-2
ECE3072, Energy Systems	2-3-3	ECE3071, Modern Electric Energy Systems	2-3-3
ECE3084, Signals and Systems	3-0-3	No substitutions allowed	
ECE4011, ECE Culm. Design Project 1 ECE4012, ECE Culm. Design Project 2	2-0-2 1-6-3	No substitutions allowed	
Prob/Stat Requirement		ISYE2027 (if already taken)	

Additional Notes:

Excess hours or shortage of hours will be adjusted in ECE elective hours category.

Credit not allowed for both courses in any of the following combinations of existing/new courses: ECE3075/4260, ECE 3035/2035.

NEW COURSES: (approved)

Since the transition to the new curricula will occur over a two-year period, the School is not currently requesting that any existing courses be deactivated. Once the transition is largely complete, an appropriate request will be submitted to deactivate courses that will no longer be offered and to update prerequisites accordingly.

ECE 20X2 Transfer Digital Design Laboratory 1-3-2
ECE 2020: Fundamentals of Digital System Design 3-0-3
Add equivalency of CS 2110
ECE 2026: Introduction to Signal Processing 2-3-3
ECE 2035: Programming for Hardware/Software Systems 3-3-4
ECE 2036: Engineering Software Design 3-3-4
Will work with ECE on editing catalog description
ECE 3005: Professional and Technical Communications for ECE 1-0-1
Edit transcript title
ECE 3006: Co-curricular Professional Communications for ECE 0-0-0
This is a placeholder course to verify student completed the requirement with co-curricular work, not by taking a course.
ECE 3020: Mathematics of Computation 3-0-3
Note: ECE will contact the School of Mathematics to ask if use of the word

Mathematics in the title of this course is acceptable.

ECE 3030: Physics of Computation 3-0-3
Note: ECE will contact the School of Physics to ask if use of the word Physics in the title of this course is acceptable.

ECE 3043: Measurements, Circuits, and Microelectronics Laboratory 1-3-2
ECE 3056: Architecture, Concurrency, and Energy in Computation 3-0-3
ECE 3072: Electrical Energy Systems 2-3-3
Note: ECE will review again the title and transcript notation.

ECE 3077: Introduction to Probability and Statistics for ECE 3-0-3
Equivalent to MATH/ISYE/ME 3770
Note: ECE will review again the title and transcript notation.

ECE 3084: Signals and Systems 3-0-3
Note: ECE To review and list any equivalencies.

ECE 3300: Electromechanical and Electromagnetic Energy Conversion 3-0-3
ECE 3400: Analog Electronics 3-0-3
ECE 3450: Semiconductor Devices 3-0-3
ECE 3550: Feedback Control Systems 3-0-3
ECE 3600: Computer Communications 3-0-3
ECE 4011: ECE Culminating Design Project I 2-0-2
ECE 4012: ECE Culminating Design Project II 1-6-3
ECE 4043: Senior Analog Electronics Laboratory 1-3-2
Equivalent to ECE 3041 and 3042

ECE 4185: Embedded Microcontroller Design 3-3-4
Delete "in C" from course description

ECE 4260: Random Signals and Applications 3-0-3
ECE 4550: Control System Design 3-3-4
Delete "in C" from course description

NOTE: The Energy Systems Minor will need to be reviewed and updated in relation to all these changes. ECE will follow up on that issue.

Summary of Prerequisites in Banner Format for New Courses
All courses require minimum grade of D and do not allow concurrency, unless otherwise specified below.

Course		Prerequisites	min grade	conc?
ECE 20X2		no prereqs		
ECE 2020		CS 1371	C	
	OR	CS 1171	C	
	OR	CS 1301	C	
ECE 2026		(MATH 1502	C	
	OR	(MATH	C	

			15X2			
	AND		MATH	C		)
			1522			
	OR		MATH	C		)
			1512			
	AND	(	CS 1371	C		
	OR		CS 1171	C		
	OR		CS 1372	C		
	OR		ECE 2035	C	Y	
	OR		ECE 2036	C	Y	)
ECE 2035		(	ECE 2020	C		
	OR		ECE 2030	C		)
ECE 2036		(	ECE 2020	C		
	OR		ECE 2030	C		)
	AND	(	ECE 2026	C	Y	
	OR		ECE 2025	C	Y	)
ECE 3005		(	ECE 2031	C		
	OR		ECE 20X2	C		)
	AND	(	ECE 3025	C	Y	
	OR		ECE 3040	C	Y	
	OR		ECE 3072	C	Y	
	OR		ECE 3084	C	Y	
	OR		ECE 3020	C	Y	
	OR		ECE 3030	C	Y	
	OR		ECE 3056	C	Y	)
ECE 3006		no prereqs				
ECE 3020		(	ECE 2035	C		
	OR		ECE 2036	C		)
	AND	(	MATH 2401	C		
	OR		MATH 2411	C		
	OR		MATH 24X1	C		
	OR		MATH 2403	C		
	OR		MATH 2413	C		
	OR		MATH	C		)

ECE 3030		(	ECE 2020	C	
	OR		ECE 2030	C	)
	AND		ECE 2040	C	
ECE 3043	**COREQ:**		**ECE 3040**		
ECE 3056			ECE 2031	C	
	AND	(	ECE 2035	C	
	OR		ECE 3035	C	)
ECE 3072			ECE 2040	C	
	OR		ECE 3710		
ECE 3077		(	ECE 2020	C	
	OR		ECE 2030	C	)
	AND		ECE 2040	C	
	AND	(	MATH 2401	C	
	OR		MATH 2411	C	
	OR		MATH 24X1	C	)
ECE 3084		(	ECE 2026	C	
	OR		ECE 2025	C	)
	AND		ECE 2040	C	
ECE 3300			ECE 3025	C	
	AND		ECE 3040	C	
ECE 3400			ECE 3040	C	
ECE 3450			ECE 3040	C	
ECE 3550			ECE 2040	C	

ECE 3600		(	ECE 2020	C		
	OR		ECE 2030	C		)
	AND	(	ECE 2026	C	Y	
	OR		ECE 2025	C	Y	)

ECE 4011		(	ECE 3025	C	Y	
	AND		ECE 3040	C		
	AND		ECE 3043	C		
	AND		ECE 3072	C		
	AND		ECE 3084	C	Y	
	OR		ECE 3020	C		
	AND		ECE 3030	C		
	AND		ECE 3056	C		)
	AND	(	ECE 3005			
	OR		ECE 3006		Y	)
	AND	(	ECON 2100			
	OR		ECON 2101			
	OR		ECON 2105			
	OR		ECON 2106			)
	AND	(	CEE 3770			
	OR		ISYE 3770			
	OR		MATH 3770			
	OR		ECE 3077			)
ECE 4012			ECE 4011	C		
	AND	(	ECE 3025	C		
	AND		ECE 3084	C		
	OR		ECE 3020	C		
	AND		ECE 3030	C		)
ECE 4043			ECE 3043	C		
ECE 4185			ECE 2031	C		
	AND	(	ECE 3040	C		
	OR		ECE 3055	C		
	OR		ECE 3056	C		
	OR		CS 3240			

	OR	CS 3510			)
ECE 4260		ECE 3084	C		
	AND (	CEE 3770			
	OR	ISYE 3770			
	OR	MATH 3770			
	OR	ECE 3077			)
ECE 4550		ECE 2031	C		
	AND	ECE 3550			

Revised Prerequisites in Banner Format for Existing Courses January 31, 2012

All courses require minimum grade of D and do not allow concurrency, unless otherwise specified below.

Course		Prerequisites	min grade	conc?	
		edits to existing prereqs shown in red text			
ECE 2031	(	ECE 2020	C		
	OR	ECE 2030	C		)
	AND (	ECE 2035	C	Y	
	OR	ECE 2036	C	Y	
	OR	CS 1372	C		)
ECE 2040		~~ECE 2025~~	~~C~~		
	~~AND~~ (	PHYS 2212	C		
	OR	PHYS 2232	C		)
	AND (	MATH 24X3	C		
	OR	MATH 2413	C	Y	
	OR	MATH 2403	C	Y	)
ECE 3025	(	ECE 2040	C		
	OR	ECE 3710			)
	AND (	ECE 2025	C		
	OR	ECE 2026	C		
	OR	NRE 2110			)
	AND (	MATH 2401	C		
	OR	MATH 2411	C		
	OR	MATH 24X1	C		)
	AND (	MATH 2403	C		

	OR	MATH 2413	C		
	OR	MATH 24X3	C		)
	~~AND~~	~~ECE 2025~~	~~C~~		
ECE 3040	**COREQ:**	**ECE 3043**			
ECE 3040		~~(ECE 2030~~	~~C~~		
	~~OR~~	~~BMED 2200~~		~~Y~~	~~)~~
		ECE 2031	C		
	AND (	ECE 2035	C		
	OR	ECE 2036	C		)
	AND	ECE 2040	C		
	AND (	CHEM 1310			
	OR	CHEM 1211K			
	OR	CHEM 12x1			)
	AND (	MATH 2401	C		
	OR	MATH 2411	C		
	OR	MATH 24X1	C		)
	AND (	MATH 2403	C		
	OR	MATH 2413	C		
	OR	MATH 24X3	C		)
	~~AND~~	~~ECE 2025~~	~~C~~		

Course		Prerequisites	min grade	conc?	
edits to existing prereqs shown in red text					
ECE 4100		ECE 3055			
	OR	ECE 3056			
ECE 4110		ECE 3076			
	OR	ECE 3600			
	OR	CS 3251			
	OR	CEE 3770			
	OR	ISYE 3770			
	OR	MATH 3770			
	~~OR~~	~~ISYE 2027~~			
	OR	ECE 3077			
ECE 4112		ECE 3076			
	OR	ECE 3600			
	OR	ECE 4110			
	OR	CS 3251			
ECE 4180		CS 1372	C		
	AND (	ECE 3035	C		
	OR	ECE 3055	C		
	OR	ECE 3056	C		)
	OR	ECE 2031	C		

	AND	(	ECE 2035	C	
	OR		ECE 3035	C	)
	AND	(	ECE 3040	C	
	OR		ECE 3056	C	)
ECE 4320			ECE 3070		
	OR		ECE 3300		
ECE 4321			ECE 3070		
	OR		ECE 3300		
ECE 4325			ECE 3070		
	OR		ECE 3300		
ECE 4330			ECE 3040	C	
	~~AND~~		~~ECE 3042~~	~~C~~	~~¥~~
	AND		ECE 3043	C	
ECE 4335			ECE 3070		
	OR		ECE 3300		
ECE 4415			ECE 3025	C	
	AND	(	ECE 3050		
	OR		ECE 3400		)

Course	Prerequisites	min grade	conc?
edits to existing prereqs shown in red text			
ECE 4430	ECE 3050		
	OR ECE 3400		
ECE 4435	ECE 3041	C	
	OR ECE 3043	C	
ECE 4451	ECE 3080		
	OR ECE 3450		
ECE 4555	ECE 3085		
	OR ECE 3550		
ECE 4560	ECE 3085		
	OR ECE 3550		
ECE 4562	ECE 3085		
	OR ECE 3550		
ECE 4570	ECE 3085		
	OR ECE 3550		

ECE 4580			ECE 2025			
	OR		ECE 2026			
ECE 4601			ECE 3040	C	Y	
	AND	(	CEE 3770			
	OR		ISYE 3770			
	OR		MATH 3770			
	~~OR~~		~~ISYE 2027~~			~~)~~
	OR		ECE 3077			)
ECE 4604			ECE 3076			
	OR		ECE 3600			
ECE 4605			ECE 3076		Y	
	OR		ECE 3600		Y	
ECE 4606		(	ECE 2025	C		
	OR		ECE 2026	C		)
	AND	(	ECE 3040	C	Y	
	OR		ECE 3710			)
	AND	(	CEE 3770			
	OR		ISYE 3770			
	OR		MATH 3770			
	~~OR~~		~~ISYE 2027~~			~~)~~
	OR		ECE 3077			)

Course			Prerequisites	min grade	conc?	

edits to existing prereqs shown in red text

ECE 4607			ECE 3076		Y	
	OR		ECE 3600		Y	
ECE 4755		(	CHEM 1310			
	OR		CHEM 1211K			
	OR		CHEM 12x1			)
	AND		PHYS 2212			
ECE 4761			ECE 3085			
	OR		ECE 3550			
ECE 4783		(	ECE 2025			
	OR		ECE 2026			)
	AND	(	MATH 3770		Y	
	OR		ISYE 3770		Y	
	OR		CEE 3770		Y	
	~~OR~~		~~ISYE 2027~~		~~Y~~	
	OR		ECE 3077		Y	

OR BMED 2400)

NOTE: ECE will deactivate courses likely in two waves. As the transition continues, the courses that need to be deactivated will be brought in batches to the IUCC.

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

   The original proposal called for creation of seven new minors, but was reconsidered at the meeting and the proposal was changed and accepted to adding seven tracks not adding seven new minors.

   Minor Modification:
   Minor in Computer Science

   The existing minor does not fully take advantage of the existing thread based curriculum in the College of Computing. As a result, the faculty proposes to modify the minor and use seven different tracks to offer this minor to students in other disciplines (students outside of the College of Computing) who want to be competitive in the global marketplace or leaders in the technological age. These seven minor tracks along with the set of general minor requirements provide a solid foundation for integrating computing principles and advancements within a vast array of career options.

   The College of Computing proposes multiple tracks within the Computer Science Minor to offer a flexible curriculum that is in conjunction with the existing Threads curriculum. The College proposes to offer the following seven different minor tracks:

   Computing and Devices:
   This minor focuses on creating devices embedded in physical objects that interact in the physical world. The devices thread is concerned with embedded computational artifacts that interact with people or the physical world. In the Devices Minor students will learn how to create and evaluate devices that operate under physical constraints such as size, power and bandwidth.

   Computing and Information Internetworks:
   This minor focuses on representing, transforming, transmitting, and presenting information. The Information Internetworking minor is where computing meets the data enterprise and deals with its implications in the context of personal and organizational information management. The minor will prepare students for all levels of information management by helping them to capture, represent, organize, transform, communicate, and present data so that it becomes information, using geographically distributed multi-national organizations and their information needs as context.

Computing and Intelligence:
The Intelligence Minor concerned with top-to-bottom computational models of intelligence. To this end, we emphasize designing and implementing artifacts that exhibit various levels of intelligence as well as understanding and modeling natural cognitive agents such as humans, ants, or bees. Students will acquire the technical knowledge and skills necessary for expressing, specifying, understanding, creating, and exploiting computational models that represent cognitive processes. The minor will prepare students for fields as diverse as artificial intelligence, machine learning, perception, and cognitive science, as well as for fields that benefit from applications of techniques from those fields.

Computing and Media:
The Media Minor emphasizes building systems in order to show computing abilities to provide creative outlets. The minor will prepare students by helping them to understand the technical and computational capabilities of systems in order to exploit their abilities to provide creative outlets.

Computing and People:
Designing, building, and evaluating systems that treat the human as a central component is the emphasis in the People Minor. is where computing meets users. This minor will prepare students by helping them to understand the theoretical and computational foundations for where computing meets the user.

Computing and Platforms:
The Platforms Minor focuses on creating computer architectures, systems and languages and more of the practical skills of computing. This Minor will teach students about the organization of computer systems, how they are built using different hardware and software layers and how they are programmed. The Minor will expose students to a complete vertical slice of system building from processor design, memory organization to virtualization and operating system layers all the way up to the programming interfaces, languages and the tool chains such as compilers, debuggers and profilers. We emphasize different system properties such as performance, power consumption, reliability, security, and availability.

Computing and Theory:
The Theory minor will explore the theoretical foundations underlying a wide range of computing disciplines. The theory thread is where computing models and addresses scaling. Theory quantifies, in mathematical terms, the efficiency by which problems are solved, as problem instances grow in size. In the Theory Minor, students study abstractions of universal computational models, complexity classes within which many natural problems fall, and abstract methods to design efficient algorithms and analyze algorithmic performance.

Curriculum [*Academic Unit; Reviewed and approved by Institute Curriculum Committee*]

General Requirements -

- Each minor is 5 classes (except for Media, which is 6 classes because of course prerequisites), 15-19 hours
- CS 1331 (or CS 1372 where indicated) is the prerequisite course for each minor, i.e. must be taken but not included in the 15 -19 hours
- Only CS courses are included in the minor
- 9 hours must be 3000/4000 level

Minor specific -

Computing and Devices:

- Prerequisite for the minor is CS 1331 or CS 1372 (ECE majors).
- Required courses: CS 2110, CS 2200, CS 3251, one CS course from Devices in the Real World, and CS 3651 or one CS 3000/4000 level course from one of the elective categories in the Devices Thread. Total = 17 hours.
- ECE students with credit for CS 1372 and ECE 2030 may substitute another CS 3000/4000 level Devices Thread course for CS 2110.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and Information Internetworks:

- Prerequisite for the minor is CS 1331 or CS 1372 (ECE majors).
- Required courses: CS 2110, CS 2200, two CS courses from Introduction to Information Management, and one CS course from Advanced Information Management. Total = 17 hours.
- ECE students with credit for CS 1372 and ECE 2030 may substitute another CS 3000/4000 level Information Internetworks Thread course for CS 2110.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and Intelligence:

- Prerequisite for the minor is CS 1331.
- Required courses: CS 1332, CS 2110, CS 3600, one CS course from Embodied Intelligence, and one CS course from Approaches to Intelligence. Total = 16 hours.
- ECE students with credit for CS 1372 and ECE 2030 may substitute another CS 3000/4000 level Intelligence Thread course for CS 2110.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and Media:

- Prerequisite for the minor is CS 1331.
- Required courses: CS 1332, CS 2110 or 2261, CS 2340, CS 3451, and two CS courses from Media Technologies. Total = 19 hours.
- ECE students with credit for CS 1372 and ECE 2030 may substitute another CS 3000/4000 level Media Thread course for CS 2110.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and People:

- Prerequisite for the minor is CS 1331.
- Required courses: CS 2340, two CS courses from Human-Centered Technology, one CS course from User Support Technology, and another CS course from User Support Technology or one CS 3000/4000 level course from one of the elective categories in the People Thread. Total = 15 hours.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and Platforms:

- Prerequisite for the minor is CS 1331 or CS 1372 (ECE majors).
- Required courses: CS 2110, CS 2200, CS 3210, one CS course from Platform Interfaces, and one CS course from Computer Architectures. Total = 17 hours.
- ECE students with credit for CS 1372 and ECE 2030 may substitute another CS 3000/4000 level Platforms Thread course for CS 2110.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Computing and Theory:

- Prerequisite for the minor is CS 1331.
- Required courses: CS 1332, CS 2050 or CS 2051, CS 3510 or CS 3511, CS 4510, and CS 4540. Total = 15 hours.
- No Special Problems or Internship coursework may be used towards the CS minor.
- All courses must be completed with a grade of C or better.

Administrative Items

1. A motion was made to approve recommendations from the General Education Subcommittee to ask the General Education Council to allow the Global Perspectives attribute for the following courses. The motion was seconded and approved.

   HIST 3065 History of Global Societies
   ECON 4415 Conflict and Security in Developing Countries
   MGT 3606 International Business Law

MGT 3660 International Business

2. A motion was made to approve a request from the School of Literature, Communication and Culture for a posthumous degree. The motion was seconded and approved.

3. A motion was made to approve a request from the Sam Nunn School of International Affairs for a posthumous degree. The motion was seconded and approved.

4. A motion was made to approve a request from the School of Electrical and Computer Engineering for a posthumous degree. The motion was seconded and approved.

   Note: The committee had a long discussion about these requests for posthumous degrees. It was agreed that our current policy does not provide any specific guidance for these requests. Some specific criteria for award of a posthumous degree are needed. The chair will form a workgroup to review policies from other institutions and propose changes to the IUCC, with consultation with other groups as needed.

Student Petitions

1. A motion was made to approve a written appeal to change registration in BIOL 4698 to BIOL 4699 from the Spring 2011 term. The motion was seconded and approved.

Adjourned,

Reta Pikowsky
Registrar