

University Curriculum Committee  
February 16, 2012

The University Curriculum Committee met Thursday, February 16 at 3:00 p.m. in the Dean's Conference Room, Derryberry Hall.

Members present:

Dr. Curtis Armstrong  
Dr. J.P. Barfield  
Dr. Jeff Boles  
Dr. Brad Cook  
Ms. Edith Duvier  
Dr. Kurt Eisen  
Dr. Ahmed Elsayy  
Dr. Dan Fesler  
Dr. Billye Foster  
Dr. Sherry Gaines  
Ms. Julie Galloway  
Dr. Susan Gore  
Dr. Mike Harrison  
Dr. Bobby Hodum  
Dr. X. Sharon Huo  
Dr. Steven Isbell  
Mr. Ted LaBar

Dr. Marketta Laurila  
Dr. Roy Loutzenheiser  
Dr. Allan Mills  
Ms. Deanna Nipp-Kientz  
Dr. Francis Otuonye  
Dr. P.K. Rajan  
Dr. James Raymondo  
Dr. Joseph Rencis  
Dr. Jeff Roberts  
Dr. Stephen Robinson  
Dr. Paul Semmes  
Dr. Barry Stein  
Dr. Mark Stephens  
Dr. Doug Talbert  
Ms. Janet Whiteaker  
Ms. Jerri Winningham  
Ms. Emily McDonald

Members absent:

Dr. Melinda Anderson  
Dr. Pedro Arce  
Dr. Pat Bagley  
Mr. Ward Doubet  
Dr. Susan Elkins  
Dr. Darrell Hoy  
Dr. David Huddleston  
Dr. James Jordan-Wagner

LTC Bret Martin  
Ms. Beth Rogers  
Dr. Matt Smith  
Mr. Will Burns  
Mr. Jacob Hoot  
Ms. Kristen Jones  
Ms. Mary Wade  
Mr. Samuel Wright

Official Representatives:

Dr. Michael Clark for Dr. Barnes  
Dr. Kristin Pickering for Dr. Kemp

Guests:

Ms. Denise Burgess  
Mr. Mark Creter

## SUMMARY OF PROCEEDINGS

1. Approval of agenda as revised
2. Approval of October 27, 2011 minutes
3. Dr. Hodum – Students participating at commencement ceremonies
4. Approval of curriculum changes from the Department of Earth Sciences
5. Approval of curriculum changes to the B.F.A. in Art Education from the Department of Music and Art
6. Approval of course and curriculum changes from the Department of Music and Art
7. Approval of course changes from the School of Human Ecology
8. Approval of Five-Semester Generic BSN Option from the Whitson-Hester School of Nursing
9. Approval of course changes from the Department of Biology
10. Approval of course deletion and changes from the Department of Biology
11. Approval of course addition, deletion and changes from the Department of Biology
12. Approval of course addition and deletion from the Department of Biology
13. Approval of course addition and deletion from the Department of Biology
14. Approval of MSCI 1020 from the Departments of Physics and Mathematics
15. Approval of course addition from the Department of Mathematics
16. Approval of catalog statement emphasizing concentration options from the Department of English & Communications
17. Approval of curriculum change from the Department of English & Communications
18. Approval of course changes from the Department of English & Communications
19. Approval of catalog revisions and curriculum changes for Journalism from the Department of English & Communications
20. Approval of course addition from the Department of English & Communications
21. Approval of course change from the Department English & Communications
22. Approval of course addition from the Department of Curriculum & Instruction
23. Approval of course additions from Basic Engineering
24. Approval of course additions, deletions and changes and curriculum changes from the Department of Electrical & Computer Engineering
25. Approval of course changes from the Department of Civil & Environmental Engineering
26. Approval of degree title change – BSIT to BSET from the Department of Manufacturing & Industrial Technology
27. Appointment of nominating committee for 2012-13 chairperson
28. Other such matters – CAPP program

## PROCEEDINGS

### **1. Approval of Agenda as Revised**

Dr. Laurila requested that the proposal from Earth Sciences be moved to item # 4, moving all other items down one position.

**Motion.** Dr. Boles moved to approve the agenda as revised. The motion was seconded by Dr. Rencis and carried.

### **2. Approval of October 27, 2011 Minutes**

**Motion.** Dr. Loutzenheiser moved to approve the minutes as submitted. The motion was seconded by Dr. Elsway and carried.

### **3. Dr. Hodum – Students Participating in Commencement Ceremonies**

Dr. Hodum stressed the importance of spreading the word that there is no longer a summer commencement ceremony. Students who graduate summer can return and participate in the December ceremonies. He stated there are very few exceptions to this policy.

Dr. Hodum pointed out the large number of students who are applying for graduation after the deadline. Any help from departments to alleviate this problem will be appreciated.

### **4. Approval of Curriculum Change from the Department of Earth Sciences**

In a memorandum dated January 25, 2012, approval was requested for the following:

#### Curriculum Change:

In the Geography concentration (Geosciences degree), change 6 hours of Social/Behavioral Science electives (junior year) to elective hours. Also, mathematical errors were corrected to total 120 hours and the wording was clarified regarding required courses and directed electives.

### **Proposed Geography Concentration Curriculum**

#### **Freshman Year**

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- [GEOL 1020 - Field Experiences in the Geosciences](#) Credit: 1. <sup>1</sup>
  - [GEOL 1040 - The Dynamic Earth](#) Credit: 4.
- [GEOL 1045 - Earth Environment, Resources, and Society](#) Credit: 4.
  - [ENGL 1010 - Writing I](#) Credit: 3.
  - [ENGL 1020 - Writing II](#) Credit: 3.
  - [CHEM 1110 - General Chemistry I](#) Credit: 4.
  - [CHEM 1120 - General Chemistry II](#) Credit: 4.
  - [HIST 2010 - American History I](#) Credit: 3.
  - [HIST 2020 - American History II](#) Credit: 3.
    - MATH Credit 3-5. <sup>2</sup>

**Total: 32-34**

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#### **Sophomore Year**

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- [GEOL 2500 - Geological Fundamentals](#) Credit: 3.
- **Two required courses from Geography concentration Credit 6.**
  - [PHYS 2010 - Algebra-based Physics I](#) Credit: 4. and
  - [PHYS 2020 - Algebra-based Physics II](#) Credit: 4.

- Or
- [BIOL 1020 - Introduction to Biology II](#) Credit: 4. and
  - [BIOL 3130 - General Ecology](#) Credit: 4.
- 
- [MATH 3070 - Statistical Methods I](#) Credit: 3.
- [Humanities/Fine Arts Electives](#) Credit 6.
- 
- [ENGL 2130 - American Literature](#) Credit: 3. or
- [ENGL 2230 - British Literature](#) Credit: 3. or
- [ENGL 2330 - World Literature](#) Credit: 3.
- 
- [GEOG 4510 \(5510\) - Theory of GIS, I](#) Credit: 3.

**Total: 32**

### Junior Year

- **Free electives Credit 6.**
- [SPCH 2410 - Introduction to Speech Communication](#) Credit: 3.
- **Three required courses from Geography concentration Credit 9.**
- **One directed elective from Geography concentration** Credit 3-4
  - MATH or free elective Credit 3. <sup>3</sup>

**Total: 24-25**

### Senior Year

- [GEOG 4930 - Senior Thesis](#) Credit: 3.
- [GEOG 4931 - Senior Thesis](#) Credit: 3.
- **One required course Credit 3.**
- **Three directive electives from Geography concentration Credit 9-11.**
  - Free Electives **9-14.**

**Total: 29-32**

### Note:

2

[MATH 1130](#) , [MATH 1730](#) , or [MATH 1910](#)

3

If [MATH 1130](#) was taken then take [MATH 1720](#) ; otherwise take a free elective.

**Geography Concentration Required Courses (18 hours)**

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- [GEOG 1010 - Weather and Climate](#) Credit: 3.
- [GEOG 1120 - Human Geography](#) Credit: 3.
- [GEOG 1130 - Geography of Natural Hazards](#) Credit: 3.
  - [GEOG 3200 - Water Resources](#) Credit: 3.
  - [GEOG 4210 \(5210\) - Cartography](#) Credit: 3.
- [GEOG 4650 \(5650\) - Environmental Applications of GIS](#) Credit: 3.

**Geography Concentration Directed Electives, any four of the following courses (12-14)**

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- GEOG 105 World Regional Geography (RODP) Credit 3.
  - [GEOG 1110 - World Geography](#) Credit: 3.
- [GEOG 2000 - Earth Evolution and Life History](#) Credit: 3.
- GEOG 3710 Geography of the U.S. (RODP) Credit 3.
  - [GEOG 4150 \(5150\) - Geomorphology](#) Credit: 4.
  - [GEOG 4410 \(5410\) - Remote Sensing](#) Credit: 3.
  - [GEOG 4511 \(5511\) - Theory of GIS, II](#) Credit: 3.
  - [GEOG 4711 \(5711\) - Hydrogeology](#) Credit: 4.
  - [GEOG 4850 \(5850\) - Advanced GIS](#) Credit: 3.

**Motion.** Dr. Harrison moved to approve the change effective immediately. The motion was seconded by Dr. Elsayy and carried.

**5. Approval of Changes to the B.F.A. in Art Education from the Department of Music and Art**

In a memorandum dated November 14, 2011, approval was requested for the following:

Curriculum Changes:

Redistribution of courses in the Art Education curriculum to produce a more logical sequence.

(NEW)

**Art Education**

**ART EDUCATION (ARED)**

**(Leading to the B.F.A. in Education Degree with endorsement, Grades K-12)**

<b>Freshman Year</b>		sem. hrs.	<b>Sophomore Year</b>	sem. hrs.
ENGL 1010	Writing I	3	ENGL 2130, 2230 or 2330	3

ENGL 1020	Writing II	3	HIST 2010	American History I	3
Natural Science Elective		8	ART 2070	Digital Art Basics	2
Any General Education Math		3	Social/Behavioral Science Elective		
Social/Behavioral Science Elective		3	PC 2500 or SPCH 2410		3
ARED 2020	Art Education Theory	2	ART 2110	Art History I	3
ART 1010	Two-Dimensional Design	3	ART 2120	Art History II	3
ART 2010	Three-Dimensional Design	3	ART 2320	Drawing II	3
ART 2310	Drawing I, Introduction	3	ART 2410	Painting I, Introduction	3
UNIV 1020, UNAR 1020 or equivalent <sup>1</sup>		1	ART 2510, 2610, 2710, 2810, 2910		3
			ART 3200	Art Applications I	2
				Studio emphasis (from clay, glass, fibers, metals, painting or wood) <sup>2</sup>	3
<b>Total</b>		<b>32</b>	<b>Total</b>		<b>34</b>

<b>Junior Year</b>		sem. hrs.	<b>Senior Year<sup>3</sup></b>		sem. hrs.
HIST 2020	American History II	3	ARED 4871	Residency I	5
EDPY 2200	Educational Psychology	3	ARED 4872	Professional Seminar I	5
ARED 3155	Elementary Practicum	1	ARED 4881	Residency II	10
ARED 3165	Secondary Practicum	1	ARED 4882	Professional Seminar II	2
ART 2040	Printmaking: Relief	2	Studio emphasis (from clay, glass, fibers, metals, painting or wood) <sup>2</sup>		2
ART 2060	35mm Photography	2			
ART 2070	Digital Art Basics	2			
ART 3205	Methods and Media	2			
ART 3130, 3150, 3160, 4100, or 4170		6			
Studio emphasis (from clay, glass, fibers, metals, painting or wood) <sup>2</sup>		11			
<b>Total</b>		<b>31</b>	<b>Total</b>		<b>24</b>

<sup>1</sup> This course not included in 120-hour curriculum.

<sup>2</sup> Studio Emphasis hours can be divided between two media.

<sup>3</sup> Must submit evidence of current First Aid/CPR Training.

Degree total 120  
Upper Division hours: 36

Effective date: Immediate

**Motion.** Mr. LaBar moved to approve the changes effective immediately. The motion was seconded by Dr. Mills and carried.

## **6. Approval of Course and Curriculum Changes from the Department of Music and Art**

In a memorandum dated February 6, 2012, approval was requested for the following:

### Changes:

1. Correction of course description for

**From:** MUS 1140 – Harmony II.

Prerequisite: MUS 1120 with a grade of C or better. Corequisite: MUS 1150. Modulation to closely related keys, borrowed chords, neapolitans, irregular chord resolution, original composition, and musical analysis.

**To:** Prerequisite: MUS 1120. Study of diatonic harmony through part-writing, analysis, and stylistic composition.

2. Please delete the corequisites for the following courses:

- MUS 1120 - Harmony I. Corequisite: MUS 1130
- MUS 1130 - Aural Techniques I. Corequisite: MUS 1120
- MUS 1140 - Harmony II. Corequisite: MUS 1150
- MUS 1150 - Aural Techniques II. Corequisite: MUS 1140
- MUS 2110 - Harmony III. Lec. 1. Corequisite: MUS 2120
- MUS 2120 - Aural Techniques III. Corequisite: MUS 2110
- MUS 2130 - Harmony IV. Corequisite: MUS 2140
- MUS 2140 - Aural Techniques IV. Corequisite: MUS 2130.

3. Course Additions

MUS 1111 - Functional Performance Band

Lab. 2-5. Credit 1.

Corequisite: MUS 1025, 1026, 1033, 1040 or 1045. Techniques involved in preparation for public band performance.

MUS 1112 - Functional Performance Choir

Lab. 2-5. Credit 1.

Corequisite: MUS 1060, 1065 or 1070. Techniques involved in preparation for public choral performance.

MUS 1113 - Functional Performance Orchestra

Lab. 2-3. Credit 1.

Corequisite: MUS 1080 or 1085. Techniques involved in preparation for public orchestral performance.

MUS 1114 - Functional Performance Jazz

Lab. 3. Credit 1.

Corequisite: MUS 1090 or 1091. Techniques involved in preparation for public jazz performance.



4. Course deletion

MUS 1014 - Functional Performance

Lab. 2. Credit 1.

Corequisite: Major ensemble. Techniques involved in preparation for public performance.

5. Catalog content change for B.M. in Performance, [Music Business](#) option

**From:**

Upper Division . . .

d. Wind/Percussion:

- Jazz: Jazz Ensemble plus Symphony band or Wind Ensemble
- Non-Jazz: Wind Ensemble (fall) and Symphony Band (spring) plus University Orchestra or Bryan Symphony Orchestra, or Jazz Ensemble as assigned by the advisor

**To:**

d. Wind/Percussion:

- Jazz: Jazz Ensemble plus Symphony band or Wind Ensemble
- **Music Business: Wind Ensemble (fall) and Symphony Band (spring)**
- **All other** non-Jazz: Wind Ensemble (fall) and Symphony Band (spring) plus University Orchestra or Bryan Symphony Orchestra, or Jazz Ensemble as assigned by the advisor

**Motion.** Mr. LaBar moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Gaines and carried.

**7. Approval of Course Changes from the School of Human Ecology**

In a memorandum dated January 23, 2012, approval was requested for the following:

Course Changes:

**From:**

HEC 4242 (5240) Food Systems Administration                      Lec. 3. Credit 3.

Prerequisite: HEC 2240 and HEC 3240. Systems approach to food service management; facilities, financial, personnel, equipment, and legal issues in food service.

**To:**

HEC 4242 (5242) Food Systems Administration                      Lec. 3. Credit 3.

Prerequisites: HEC 2240 and HEC 3240. Systems approach to food service management; facilities, financial, personnel, equipment, and legal issues in food service.

**From:**

HEC 4250 (5250) – Field Experience in School Food Service                      Credit 4.

Prerequisite: HEC 3240, HEC 4240 (5240). Work experience in school food service management.

Supervision by instructor and Tennessee certified school food service supervisor. Students enrolled in the 5000-level course will be required to complete additional work as stated on the syllabus.

**To:**

HEC 4250 (5250) – Field Experience in School Food Service                      Credit 4.

Prerequisite: HEC 3240, HEC 4242 (5242). Work experience in school food service management. Supervision by instructor and Tennessee certified school food service supervisor.

**From:**

HEC 2250 Child Life Theory and Practice

Course Objectives:

At the completion of this course, the student will be able to:

1. describe the unique role of the Child Life Specialist as a professional member of the interdisciplinary medical team (SLO 1)
2. define therapeutic play and its benefits to hospitalized children (SLO 1)
3. recognize Child Life work with diverse patient populations in various healthcare settings (SLO 1)
4. share the function and importance of the Child Life Council to the field of Child Life (SLO 1)
5. identify the process for becoming a Certified Child Life Specialist (SLO 1)
6. demonstrate knowledge of the Child Life profession by educating others (SLO 1)

**To:**

HEC 2250 Child Life Theory and Practice

Course Objectives:

At the completion of this course, the student will be able to:

1. describe the unique role of the Child Life Specialist as a professional member of the interdisciplinary **health care** team **including Child Life scope of practice** (SLO 1);
2. define therapeutic play and **preparation methods emphasizing** benefits to **children in health care** (SLO 1);
3. recognize Child Life work with diverse patient populations in various healthcare settings (SLO 1);
4. share the function of the Child Life Council (CLC) to the field of Child Life **including importance of the CLC Official Documents to Child Life practice** (SLO 1);
5. **determine impact of illness, injury and health care on patients and families** (SLO 1);
6. **discover principles of Family Centered Care in pediatric health care and Child Life's role to support** (SLO 1);
7. identify the process for becoming a Certified Child Life Specialist (SLO 1); and
8. demonstrate knowledge of the Child Life profession by educating others (SLO 1)

**Course Change**

**FROM:** HEC 2500 Creative Play. Lec. 2. Credit 2.

**TO:** HEC 2510 Creative Play. Lec. 2. Lab 1. Credit3.

**Motion.** Dr. Foster moved to approve the course changes effective Fall 2012. The motion was seconded by Dr. Gaines and carried.

**8. Approval of Five-Semester Upper-Division Program Option**

In a memorandum dated January 17, 2012, approval was requested for the following:

**I. Curricular Changes: Shifting courses from one year to another**

- a. Proposed recommended sequencing of coursework to change with students admitted into Upper Division Nursing Program in the second semester of sophomore year (see attached Program of Studies). The Whitson-Hester School of Nursing is proposing the following curriculum changes/additions to allow for the transition from a four-semester curriculum for upper-division nursing students to a five-semester curriculum. Within this memorandum is a summary of the changes. Appendix A to the memorandum contains more detail of the proposed changes. Two Excel files are attached, showing the current four-semester program plan and the proposed five-semester program plan.
- b. Summary of Justification: The upper-division nursing program will expand from four semesters to five in an effort to increase retention, promote student success, and allow for more logical sequencing of course material. The transition to a five-semester curriculum has been approved by the TTU Curriculum Committee (3/17/2011), the Curriculum Committee of the College of Agriculture & Human Sciences (e-vote, 3/11/2011), and by the Faculty of the Whitson-Hester School of Nursing at the Faculty Organization Meeting (2/9/2011). The program change will not require students to enroll in an extra semester in the School. Students will begin their nursing classes the second semester of their sophomore year instead of the first semester of their junior year. Before students are accepted into the upper-division nursing program, they must complete the majority of the general education classes required of all TTU majors. The change will bring TTU's program in line with most of the other Tennessee Board of Regents baccalaureate nursing programs with the exception of one, Tennessee State University. After the program expands its timeline, it is anticipated that enrollment in the upper-division nursing program will expand from approximately 200 students to 240, contributing to retention in upper-division nursing.

These curricular changes will primarily affect the generic baccalaureate undergraduate option. Courses in the RN/BSN option of the undergraduate program that will change are marked with an asterisk. If an asterisk is not indicated, the RN/BSN will not adopt the change but maintain current course work and/or sequencing.

**II. Course Changes:**

- a. **Summary of Deletion of Hours:**

<b>Course Change</b>	<b>Current Credit Hour</b>	<b>Proposed Credit Hour Change</b>	<b>Difference</b>
<b>Elective hours</b>	<b>6</b>	<b>3 credit hours (Deleted 3 credit hours;</b>	<b>- 3 hours</b>

		<b>3 hours of elective credit will remain. Remaining 3 hours of electives may be obtained through successful completion of 1-3 hour nursing electives or other electives substituted by special permission of nursing school.)</b>	
<b>N3360 Medical/Surgical Nursing II</b>	<b>5</b>	<b>4 credit hours</b>	<b>-1 hour</b>
<b>N4350 Health Care of Communities</b>	<b>4</b>	<b>3 credit hours Changed to one 3 credit hour course NURS 4430 Health Care of Communities</b>	<b>-1 hour</b>
<b>Total number of deleted hours to be reallocated in the curriculum</b>			<b>-5 hours</b>

- i. Elective hours of 3 will be deleted
- ii. N3360 Medical/Surgical Nursing II will change from a 5 credit hour course to a 4 credit hour course
- iii. N4450 Healthcare of Communities will change from a 4 hour credit hour course to a 3 hour credit hour course
- iv. Total of 5 hours to be redistributed to significant course content

**b. Summary of Reallocation of Hours:**

<b>Course Change</b>	<b>Current Credit Hour</b>	<b>Proposed Credit Hour Change</b>	<b>Difference</b>
<b>N3380 Patho-physiological Process for the Professional Nurse</b>	<b>3</b>	<b>Changed to two 2 credit hour courses: NURS 3290 Pathophysiological Process for the Professional Nurse I (2 credit hours) NURS 3390 Pathophysiological Process for the Professional Nurse II (2 credit hours)</b>	<b>1 hour</b>
<b>N3230 Pharmacological Concepts in Nursing I</b>	<b>2</b>	<b>3 credit hours</b>	<b>1 hour</b>

<b>Addition of Course: N4460 Preparation for Licensure</b>	<b>0</b>	<b>1 credit hour</b>	<b>1 hour</b>
<b>Course: N4810 Concepts of Gerontology (3 cr. hr)- -currently a nursing elective (3 credit hour)</b>	<b>0</b>	<b>NURS 4800 Gerontological Nursing (2 credit hours)</b>	<b>2 hours</b>
<b>Total of hours that was reallocated in the curriculum</b>			<b>5 hours</b>

- i. N3380 Pathophysiological Process for the Professional Nurse, a 2 credit hour course, will change to two courses N3290 (2 credit hours) and N3390 (2 credit hours).
  - ii. N3230 Pharmacological Concepts in Nursing I will change from a 2 credit hour course to a 3 credit hour course.
  - iii. Addition of new course: N4460 Preparation for Licensure (1 credit hour)
  - iv. Elective course changed to a required course: N4800 Gerontological Nursing (2 credit hour course). Nursing students in generic BSN program will be required to take a minimum of 2 credit hours.
  - v. Total of 5 hours reallocated to significant course content
- c. Summary of courses being divided into two or three courses with no change in total credit hours

<b>Course Change</b>	<b>Current Credit Hour</b>	<b>Proposed Credit Hour Change</b>	<b>Difference</b>
<b>NURS 3220 Fundamentals of Nursing (3 credit hours)</b>	<b>3</b>	<b>NURS 3270 Fundamentals of Nursing (2 credit hours) NURS 3271 Fundamentals of Nursing: Lab (1 credit hour)</b>	<b>No change in total credit hours</b>
<b>NURS 3281 Health Assessment &amp; Promotion (3 credit hours)*</b>	<b>3</b>	<b>NURS 3260 Health Assessment &amp; Promotion (2 credit hours) NURS 3261 Health Assessment &amp; Promotion: Lab (1 credit hour)</b>	<b>No change in total credit hours</b>

- i. NURS 3220 Fundamentals of Nursing (3-credit hour course) will change to 2 courses: NURS 3220 Fundamentals of Nursing (2 credit hours) and NURS 3221 Fundamentals of Nursing: Lab (1 credit hour).
- ii. NURS 3281 Health Assessment & Promotion (3 credit hour course) will change to 2 courses: N3281 Health Assessment & Promotion (2 credit hours) and NURS 3282 Health Assessment & Promotion: Lab (1

## **Appendix A: Details of Proposed Changes**

### **Tennessee Technological University Whitson-Hester School of Nursing Transition to a Five-Semester Upper-Division Program Option**

#### **CONVERSION FROM FOUR-SEMESTER TO FIVE-SEMESTERS**

Approved: February 9, 2011 by the Whitson-Hester Faculty Organization

Approved: March 11, 2011 by Dr. Pat Bagley and the Curriculum Committee, College of Agriculture & Human Sciences (e-vote)

Approved: March 17, 2011 by the Tennessee Technological University Curriculum Committee

#### **PROPOSED CURRICULUM ADDITIONS AND CHANGES FOR CONVERSION**

Approved: December 15, 2012 by the Whitson-Hester Faculty Organization

Forwarded to Dr. Sherry Gaines, Director, Whitson-Hester School of Nursing: January 17, 2012

Approved: January 17, 2012 by Dr. Sherry Gaines, Director, Whitson-Hester School of Nursing

Forwarded to Dr. Pat Bagley, Dean, and the Curriculum Committee, College of Agriculture and Human Sciences: January 18, 2012

Approved: January 26, 2012 (via e-vote) by the Curriculum Committee, College of Agriculture & Human Sciences

Approved: January 31, 2012 (via email) by Dr. C. Pat Bagley, Dean, College of Agriculture & Human Sciences

#### **PROPOSED ADDITIONS TO CURRICULUM**

**NURS 3290. Pathophysiological Processes for the Professional Nurse I.** Lec. 2. Credit 2.

Focus on the physiological responses to various common diseases, disorders, and disruptions affecting humans.

CHANGE: ADDITION of foundational pathophysiology course to accompany Medical-Surgical Nursing I.

**NURS 3390. Pathophysiological Processes for the Professional Nurse II.** Lec. 2. Credit 2.

Prerequisite NURS 3290. Focuses on physiological responses to acute and critical diseases, disorders, and disruptions affecting humans.

CHANGE: ADDITION of a more complex pathophysiology course as the second of a two-course pathophysiology sequence. This second course will build on the foundational knowledge gained in NURS 3290.

\*NURS 3380 will remain as a 3 credit hour course to be taught in the RN to BSN option of the BSN program.

**NURS 4460. Preparation for Licensure.**

Lec. 1. Credit 1.

Co-requisite: Senior 2 status or permission from the instructor. Preparation for success on the National Registered Nurse Licensure Exam.

CHANGE: ADDITION of a one credit hour course to prepare the student for the NCLEX-RN.

**NURS 4800. Gerontological Nursing .**

Lec. 2. Credit 2.

Physical and psychosocial processes affecting nursing the older adult.

CHANGE: ADDITION of a 2 credit hour course to specifically address the needs of the elderly as recommended by AACN Essentials.

**PROPOSED CHANGES TO COURSES**

**NURS 3270. Fundamentals of Nursing.**

Lec. 2. Credit 2.

Co-requisite: NURS 3271. Course is designed to introduce the student to basic concepts, principles and skills necessary for building an effective nursing practice. Nursing process is introduced as a foundation for future clinical application.

CHANGE: Divide course from a 3 hour course into a 2 hour lecture course with a separate 1 hour lab. Although the course is pushed back to the sophomore 2 semester; it remains in the first semester of the nursing program.

**NURS 3271. Fundamentals of Nursing Lab.**

Lab. 1. Credit 1.

Corequisite NURS 3270. Introductory course in nursing designed to teach the student basic clinical skills and apply the process of critical thinking.

CHANGE: Defines the lab portion of N3271 as a separate course.

**NURS 3240. Pharmacological Concepts in Nursing I.**

Lec. 3. Credit 3.

Introduction to drug classifications, mechanisms of action, and management of medications. Includes study and test-taking skills.

CHANGE: Increase the credits from 2 to 3 credits. Although the course is pushed back to the sophomore 2 semesters, it remains in the first semester of the nursing program.

**NURS 3260. Health Assessment & Promotion .**

Lec. 2. Credit 2.

Corequisite NURS 3261. Introductory course to health assessment will focus on comprehensive data collection through history and physical examination.

CHANGE: Divide course from a 3 hour course into a 2 hour lecture course with a separate 1 hour lab. Although the course is pushed back to the sophomore 2 semester; it remains in the first semester of the nursing program.

**NURS 3261. Health Assessment & Promotion Lab.**

Lab. 1. Credit 1.

Corequisite NURS 3260. Lab experience focuses on the integration and application of the psychomotor skills necessary for assessing the health status of clients.

CHANGE: Defines the lab portion of N3261 as a separate course.

**NURS 3350. Medical-Surgical Nursing II.**

Lec. 4. Credit 4.

Corequisite: NURS 3361. Medical-surgical nursing concepts including communication skills, teaching/learning principles, ethical/legal, and economic issues.

CHANGE: Decrease hours from 5 credits to 4 credits.

**FISCAL CONSIDERATIONS**

1. **Faculty:** Currently, we anticipate admitting 40 Junior 1 students in Fall 2012 (4 semester plan) and 24 Sophomore 2 students (5 semester plan). In the first semester of the changes, there would be a need for additional faculty for the labs in NURS 3271 and NURS 3261 due to there a total of 64 students taking these courses as the program transitions to the 5-semester plan. Pharmacology courses NURS 3240 (3 credit hours) and NURS 3230 (2 credit hours) will need special consideration in Fall 2012 related to an overlap between Junior 1 (four-semester) student groups taking the 2 hour course and Sophomore 2 (five-semester) student groups taking the 3 credit course. In Spring 2013, there will be a need for additional faculty support associated with Pathophysiology. Pathophysiology courses NURS 3380 for Junior 2 (4-semester) students and NURS 3290 for the Junior 1 (5-semester) students. Finally, in Spring 2013 there will be a need for additional faculty for NURS 3371 (Mental Health Clinical) due to there being 64 students affected (40 Junior 2 students plus 24 Junior 1 students) due to the transition from 4 to 5 semesters. Some or all of the adjunct faculty costs should be covered by the high cost program fees collected for enrollment in each nursing course (Student Academic Course Fee).
2. **Instructional Facilities:** Current lab facilities will be sufficient to meet these changes.
3. **Library Resources:** Current library holdings will be sufficient to meet the changes.
4. **Support Services:** It is not anticipated that additional support services will be necessary.

Overall, the proposed changes are expected to be budget neutral or, in the long-term, increase revenues through improved retention and an eventual increased enrollment in the upper-division program from the current 200 students to 240.

**PROGRAM EVALUATION**



The nursing program is accredited by the Commission on Collegiate Nursing Education (CCNE) and undergoes routine review for the accreditation. Part of the accreditation process includes a “continuous improvement plan”, the next one being due for review by CCNE in 2014. An additional evaluation is the tracking and monitoring of NCLEX-RN pass rates, numbers of students retained in the program, matriculation rates and attrition.

**TENNESSEE TECHNOLOGICAL UNIVERSITY  
SCHOOL OF NURSING**

**Five-Semester Generic BSN Option**

**Fall 2012**

**FRESHMAN:**

		Chemistry for the Life						
CHEM	1210	Sciences	4	ENGL	1020	Writing II	3	
ENGL	1010	Writing I	3	HIST	2020	American History II	3	
HIST	2010	American History I	3	BIOL	2010	Human Anat & Phys I	4	
						Intro to Professional		
MATH	1130	College Algebra	3	NURS	2300	Nursing	2	
						Humanities/Fine Arts		
				HUM		Elec	3	
*	NURS	1020	First-Year Connection: Univ. & Nursing	1	SOC	1010	Intro to Sociology (3) <b>OR</b>	3
					SOC	1100	Intro to Anthropology (3)	3
			14				18	

**SOPHOMORE:**

BIOL	3230	Health Science Microbiology	4	**	NURS	3260	Health Assessment	2
BIOL	2020	Human Anat. & Phys. II	4	**	NURS	3261	Health Assessment: Lab	1
HUM		Humanities/Fine Arts Elective	3	**	NURS	3270	Fundamentals of Nursing	2
							Fundamentals of	
				**	NURS	3271	Nursing:Lab	1
ENGL	2130 or 2230 or 2330 (HUM)	Intro to Speech	3					
SPCH	2410	Communications (3) <b>OR</b>	3		PSY	2010	General Psychology	3
		Communication in the						
PC	2500	Professions (3)	17	**	HEC	2020	Nutrition	3
					NURS	3240	Pharm. Concepts in NSG I	3
								15

**JUNIOR:**

							Medical/Surgical Nursing		
NURS	3250	Medical/Surgical Nursing I	4	**	NURS	3350	II	4	
		Medical/Surgical Nursing I:							
NURS	3280	Lab	3		NURS	3361	Medical/Surgical II: Lab	3	
		Patho. Process for the Prof.							
**	NURS	3290	Nurse I	2	**	NURS	4800	Gerontological Nursing	2

NURS	3370	Mental Health Nursing	3	**	NURS		Nursing Elective	1
NURS	3371	Mental Health Nursing: Lab	2	**	NURS	3390	Pathophysiological process for the Prof. Nurse II	2
**	NURS	Nursing Elective	<u>1</u>					<u>2</u>
			15					12

**SENIOR:**

NURS	4000	Women's Health & Perinatal Nurs.	3		NURS	4450	Health Care of Communities	3
NURS	4001	Women's Health & Perinatal Nurs. Lab	2		NURS	4351	Health Care of Communities: Lab Leadership & Management	3
NURS	4100	Nursing Care of Children	3		NURS	4450	Leadership & Management	3
NURS	4101	Nursing Care of Children: Lab Pharmacological Concepts in	2		NURS	4451	Leadership & Management: Lab	4
NURS	4230	Nursing	2	**	NURS	4460	Preparation for Licensure	1
NURS	4300	Research in Health Care	<u>3</u>	**	NURS		Nursing Elective	<u>1</u>
			15					15

**TOTAL: 120 Semester hours required for graduation (Excluding NURS 1020)**

BIOL 1110 **required** for those with Natural Science ACT score below 17

\* Incoming Freshmen Only

\*\* Denotes changes in converting from a four-semester to a five-semester curriculum

Updated December 2011

Approved: Whitson-Hester School of Nursing Faculty Organization on December 15, 2011  
Forwarded to Dr. Gaines, Director, Whitson-Hester School of Nursing on January 17, 2012

**Motion.** Dr. Gaines moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Talbert and carried.

**9. Approval of Course Changes from the Department of Biology**

In a memorandum dated December 8, 2011, approval was requested for the following:

**Course Changes:**

From:

BIOL 3240 Field Botany Lec. 2, Lab. 3, Cr. 3

Prerequisite: BIOL 1120

To:

BIOL 3240 Field Botany Lec. 2, Lab. 3, Cr. 3

Prerequisite: BIOL 1120 and Junior Standing

**Motion.** Dr. Cook moved to approve the changes effective Fall Semester 2012. The motion was seconded by Dr. Elsayy and carried.

**10. Approval of Course Deletion and Change from the Department of Biology**

In a memorandum dated November 1, 2011, approval was requested for the following:

**Course Deletion:**

WFS 3120 General Ecology (Cross-listing: BIOL 3120) Lec. 3, Cr. 3

**Course Change:**

From:

BIOL 3120-General Ecology Lec. 3. Credit 3.

The relationship between plants and animals and their environment. (Same as WFS 3120) This course cannot be taken as part of the university science requirement and credit will not be given for both BIOL/WFS 3120 and BIOL/WFS 3130.

To:

BIOL 3120-General Ecology Lec. 3. Credit 3.

The relationship between plants and animals and their environment. This course cannot be taken as part of the university science requirement and credit will not be given for both BIOL 3120 and BIOL/WFS 3130.

**Motion.** Dr. Cook moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Elsayy and carried.

**11. Approval of Course Additon, Deletion and Curriculum Changes from the Department of Biology**

In a memorandum dated October 4, 2011, approval was requested for the following:

**Course Addition:**

**A. BIOL 1105. Foundations of Biology. Lec. 3. Lab. 2. Credit 4.**

Prerequisites: None. A basic foundation in biological principles common to all organisms with an emphasis on molecules, cells and organelles, respiration, photosynthesis, metabolism and enzymatic function, genetics and inheritance, cellular reproduction, evolution, and speciation. Credit will not be given for both BIOL 1105 and BIOL 1010.

**Course Deletion:**

**BIOL 1050. Principles of Biology. Lec. 3. Credit 3.**

A basic foundation in biological principles common to all organisms with an emphasis on molecules, cells, metabolism, genetics, reproduction, evolution, and speciation.

PROGRAM CHANGES—(Programs of study are attached)

A. Environmental Biology (BIEB) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

B. Wildlife (WFSW) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

C. Fisheries (WFSF) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

D. Conservation Biology (WFSC) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

E. Cellular and Molecular (BIBC) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

F. Health Sciences (BIHS) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

G. Biology (BIOL) Concentration

Replace BIOL 1050 with BIOL 1105. Number of hours is increased by 1.

**Motion.** Dr. Cook moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Elsayy and carried.

### **12. Approval of Course Addition and Deletion from the Department of Biology**

In a memorandum dated January 23, 2012, approval was requested for the following:

#### Course Addition:

BIOL 1115 General Zoology Lec. 3, Lab. 2, Cr. 4

Introduction to the Principles of Zoology

Prerequisite: None, but BIOL 1105 is highly recommended

#### Course Deletion:

BIOL 1110 General Zoology Lec. 3, Lab. 2, Cr. 4

**Motion.** Dr. Cook moved to approve the addition and deletion effective January 2013. The motion was seconded by Dr. Elsayy and carried.

### **13. Approval of Course Addition and Deletion from the Department of Biology**

In a memorandum dated January 24, 2012, approval was requested for the following:

#### Course Addition:

BIOL 2110 General Botany Lec. 3, Lab. 2, Cr. 4

Prerequisite: BIOL 1105. It is highly recommended that students wait until their Sophomore year to take this course. This course addresses the life cycles, morphology, and phylogeny of major clades of organisms, with an emphasis on fungi, protists, and plants.

#### Course Deletion:

BIOL 1120 General Botany Lec. 3, Lab. 2, Cr. 4

#### Curricula Changes

Replace BIOL 1120 with 2110 for all concentrations in Biology and Wildlife and Fisheries Science.

**Motion.** Dr. Cook moved to approve the addition and deletion effective January 2013. The motion was seconded by Dr. Elsayy and carried.

### **14. Approval of a University Connections Course from the Departments of Physics and Mathematics**

In a memorandum dated January 24, 2012, approval was requested for the following:

#### Course Addition:

**MSCI 1020 First-Year Connections.** Recitation 2. Credit 1.

This course is intended as a bridge course for those students entering TTU from high school and majoring in mathematics and the various science disciplines within the College of Arts and Sciences. The course is designed to strengthen the student's connection to TTU, enhance skills needed for academic success, and foster appreciation for the multidisciplinary nature of addressing real-world problems. This course emphasizes critical thinking in both academic and non-academic contexts by including significant elements of group work in problem-based learning activities.

**Motion.** Dr. Robinson moved to approve the addition effective Fall 2012. The motion was seconded by Dr. Mills and carried.

### **15. Approval of Course Addition from the Department of Mathematics**

In a memorandum dated January 20, 2012, approval was requested for the following:

#### Course Addition:

MATH 1845 Technical Calculus Lec. 3. Cr 3.

Prerequisite: ACT mathematics score of at least 25 and four years of high school mathematics, including algebra, geometry, trigonometry, and advanced or pre-calculus mathematics; or, special permission of the Mathematics Department; or, C or better in MATH 1730; or, C or better in MATH 1710 and 1720 or equivalent.

**Motion.** Dr. Mills moved to approve the addition effective Fall 2012. The motion was seconded by Dr. Elsayy and carried.

### **16. Approval of Catalog Statement for the English B.A. from the Department of English and Communications**

In a memorandum dated January 26, 2012, approval was requested for the following:

#### Catalog Addition Emphasizing Concentration Options

Add the following statement after the list of courses in blocks for the English B.A. in the undergraduate catalog:

Students in the writing, literature, or drama concentrations can also have a concentration in Professional Communication by taking 21 elective hours in the following courses:

#### **Professional Communication**

2500 Commin the Prof	3
3250 Prof Communication I	3
3700 Tech Doc in the Prof	3
3750 Ethics in the Prof	3
4850 Internship	3
4970 Prof Communication II	3
4990 Seminar in Prof Comm	3

Students may minor in Professional Communication by taking 15 hours of Professional Communication courses, as described at the beginning of the College of Arts and Sciences section of the undergraduate catalog.

**Motion.** Dr. Pickering moved to approve the catalog statement. The motion was seconded by Dr. Talbert and carried.

### **17. Approval of Curriculum Change from the Department of English & Communications**

In a memorandum dated January 24, 2012, approval was requested for the following:

#### Curriculum Change:

Add CSC 2101 (Credit 1) to the Web Design curriculum under the Computer Science courses listed.

Change the number of elective hours from 15 credit hours to 14 credit hours.

**Motion.** Dr. Pickering moved to approve the changes effective Summer 2012. The motion was seconded by Dr. Talbert and carried.

### **18. Approval of Course changes from the Department of English & Communications**

In a memorandum dated January 26, 2012, approval was requested for the following:

#### Course Change:

From:

PC 3700 Technical Documents in the Professions Lec. 3, Cr. 3

Prerequisite: ENGL 3250 or PC 3250. Practical experience in developing various technical documents required of persons working in professional communications. Students will focus in depth of these documents and in the technologies used to develop and publish such documents.

To:

PC (WEBD) 3700 Information Design in the Professions Lec. 3, Cr. 3

Prerequisite: ENGL 3250 or PC 3250. Practical experience in the field of information design: a specialized field in which complex information is presented clearly and efficiently to its intended audience. Students will study the design principles used to develop both print and web documents and learn about the technologies used to develop and publish such documents.

**Motion.** Dr. Pickering moved to approve the changes effective Summer 2012. The motion was seconded by Dr. Elsway and carried.

### **19. Approval of Catalog Revisions and Curriculum Changes for Journalism from the Department of English & Communications**

In a memorandum dated January 19, 2012, approval was requested for the following:

#### Catalog Revisions:

Remove from the catalog the listing of JOUR classes as PC classes for the following courses:

PC 4230 (5230) Free Lance Writing

PC 4360 (5360) Magazine Production and Design

PC 4460 (5460) Public Relations and Practices

PC 4830 (5830) Free Lance Writing (a duplicate/typo)

PC 4840 (5840) Special Problems

These courses with the JOUR prefix will remain in the catalog as listed below:

JOUR 4360 (5360) Magazine Production and Design

JOUR 4460 (5460) Public Relations Cases and Practices

JOUR 4830 (5830) Feature Writing

JOUR 4840 (5340) Special Problems

**Motion.** Dr. Pickering moved to approve the changes effective immediately. The motion was seconded by Dr. Elsayy and carried.

**20. Approval of Course Addition from the Department of English & Communications**

In a memorandum dated January 25, 2012, approval was requested for the following:

Course Addition:

THEA 4600 Theatre Internship Credit 3

Prerequisite: Junior/Senior Status and consent of instructor

Part-time or full-time employment in a business or institution setting related to a student's academic and career goals. Cannot be taken in place of required or elective theatre courses, undergraduate or graduate. Course can be taken twice, so long as the student interns in a different business or institution for each internship

**Motion.** Dr. Pickering moved to approve the addition effective Fall 2012. The motion was seconded by Dr. Roberts.

**21. Approval of Course Change from the Department of Chemistry**

In a memorandum dated January 24, 2012, approval was requested for the following:

Course Change:

From:

CHEM 3710 Chemistry and Environment. Spring. Lec. 2, Lab. 3. Cr. 3

Prerequisite: CHEM 1120 or consent of instructor. Basic concepts of environmental chemistry. Not for chemistry majors.

To:

CHEM 3710 Chemistry and the Environment. Spring. Lec. 3, Cr. 3

Prerequisite: CHEM 1010. Concepts of environmental chemistry that include organic chemistry, polymer chemistry, the chemistry of the earth, water and air, biochemistry, and energy. Not for chemistry majors.

**Motion.** Dr. Boles moved to approve the change effective Fall 2012. The motion was seconded by Dr. Elsayy and carried.

**22. Approval of Course Addition from the Department of Curriculum & Instruction**

In a memorandum dated November 2, 2011, approval was requested for the following:

Course Addition:

SEED 4322 (5322) Teaching Algebra in Middle/High School. Cr. 3

Topics in Algebra, philosophy, new trends, and methods of teaching algebra in Grades 5-12.

**Curriculum:**

Replace any upper-division math elective in the senior year with SEED 4322 in the secondary education math curriculum.

**Motion.** Dr. Gore moved to approve the addition. The motion was seconded by Dr. Talbert and carried.

**23. Approval of Course Additions from Basic Engineering**

In a memorandum dated January 30, 2012, approval was requested for the following:

Course Additions:

ENGR 3851, 3852, 3853. Internships for Exchange Students in the College of Engineering.

Credit 1, 2, 3. Maximum 6.

Prerequisite: Consent of instructor. Directed study and research on selected areas for international students while participating in an exchange program at Tennessee Tech.

ENGR 4851, 4852, 4853. International Experiences for College of Engineering Students.

Credit 1, 2, 3. Maximum 6.

Prerequisite: Consent of instructor. Directed study and research on selected areas while participating in international experience as a Tennessee Tech College of Engineering student.

**Motion.** Dr. Loutzenheiser moved to approve the additions effective Summer 2012. The motion was seconded by Dr. Elsayy and carried.

**24. Approval of Course Additions, Deletions, and Changes from the Department of Electrical & Computer Engineering**

In a memorandum dated January 24, 2012, approval was requested for the following:

Course Deletions:

- |  |                           |
|--|---------------------------|
| 1. ECE 2000 – Intro to Electrical and Computer Engineering | Lec. 1. Lab 3. Credit 2   |
| 2. ECE 2060 – Measurements laboratory                      | Lab 3. Credit 1.          |
| 3. ECE 4030 –Analog Signal processing                      | Lec. 3. Credit 3.         |
| 4. ECE 4310 (5310) - Analog VLSI Design                    | Lec. 3. Credit 3.         |
| 5. ECE 4960 – Senior Capstone Design I.                    | Lec. 1. Lab 3. Credit 2.  |
| 6. ECE 4970 - Capstone Design II.                          | Lec. 1. Lab. 3. Credit 2. |

Course Additions:

ECE 2001. Computer Aided Engineering in ECE.

Lec. 1. Credit 1.

Prerequisites: CSC 2100, ECE 2010 and MATH 2010 (ECE 2010 and/or MATH 2010 may be taken concurrently). Engineering problem formulation for computer calculations. Computer aided engineering software with applications in electrical and computer engineering.

ECE 4971. Capstone Design II.

Lec. 2. Lab 4. Credit 3.

Prerequisite: ECE 4961. The second in a sequence of two senior capstone design project courses. Student teams will complete an industry client-driven system design project. Teamwork, leadership, project planning and management, specification, budgeting, design review, implementation, testing, weekly reporting, documentation, and oral presentation.

ECE 2060 was replaced by ECE 3060 during last year.

ECE 4030, ECE 4310 are no longer being offered due to faculty shortage.



ECE 4960 and ECE 4970 are being replaced by 3 credit courses ECE 4961 and ECE 4971 in the BSEE and BSCmpE curricula. ECE 4961 was approved last year.

ECE 4971 is the revised form of ECE 4970 with an additional hour added to provide strong design experience.

Course Changes:

From:

ECE 2010 Electric Circuits I

Lec. 3. Credit 3.

Prerequisite: MATH 1920, MATH 2120 (MATH 2120 may be taken concurrently). Introduction to electric circuit quantities and components, systematic application of Ohm's and Kirchhoff's laws, superposition, Thévenin and Norton theorems, operational amplifiers, RL and RC transients, and circuit simulation with SPICE.

To:

ECE 2010 Electric Circuits I

Lec. 3. Credit 3.

Prerequisites: MATH 1920, MATH 2010 and MATH 2120 (MATH 2010 and/or MATH 2120 may be taken concurrently). Introduction to electric circuit quantities and components, systematic application of Ohm's and Kirchhoff's laws, superposition, Thévenin and Norton theorems, operational amplifiers, RL and RC transients, and circuit simulation with SPICE.

From:

ECE 2020 Electric Circuits II.

Lec. 3. Credit 3.

Prerequisite: ECE 2010 and MATH 2120. Laplace transform methods for electric circuit analysis. Sinusoidal steady-state and power, mutual inductance, 3-phase circuits, frequency response, Bode plots, resonance, and filters. Circuit simulation with SPICE.

To:

ECE 2020 Electric Circuits II.

Lec. 3. Credit 3.

Prerequisites: ECE 2001, ECE 2010, ECE 2011, MATH 2010 and MATH 2120 (ECE 2001 may be taken concurrently). Laplace transform methods for electric circuit analysis. Sinusoidal steady-state and power, mutual inductance, 3-phase circuits, frequency response, Bode plots, resonance, and filters. Circuit simulation with SPICE.

From:

ECE 3010 Signals and Systems

Lec. 3. Credit 3.

Prerequisite: ECE 2010 and MATH 2120. Time-domain and frequency-domain analysis of signals and systems, applications of Fourier series, Fourier transform, and Laplace transform in circuits and systems; Analog filters.

To:

ECE 3010 Signals and Systems.

Lec. 3. Credit 3.

Prerequisites: ECE 2001, ECE 2010, ECE 2020 and MATH 2120 (ECE 2001 and/or ECE 2020 may be taken concurrently). Time-domain and frequency-domain analysis of signals and systems, applications of Fourier series, Fourier transform, and Laplace transform in circuits and systems; Analog filters.

From:

ECE 3020 Discrete-Time Signals and Systems.

Lec. 3. Credit 3.

Prerequisite: ECE 3010. Signal sampling and reconstruction. Difference equations, Z-transforms, and the discrete Fourier transform. Fundamentals of digital filters.

To:

ECE 3020 Discrete-Time Signals and Systems. Lec. 3. Credit 3.

Prerequisites: ECE 2001, ECE 2020 and ECE 3010. Signal sampling and reconstruction. Difference equations, Z-transforms, and the discrete Fourier transform. Fundamentals of digital filters.

From:

ECE 3210 Control System Analysis. Lec. 3. Credit 3.

Prerequisite: ECE 3010 and PHYS 2110. Modern and classical methods of control system analysis of continuous-time systems. Introduction to design tools.

To:

ECE 3210 Control System Analysis. Lec. 3. Credit 3.

Prerequisite: ECE 2020, ECE 3010 and PHYS 2110. Modern and classical methods of control system analysis of continuous-time systems. Introduction to design tools.

From:

ECE 3710 Introduction to Telecommunications. Lec. 3. Credit 3.

Prerequisites: ECE 3010 and ECE 3910 (ECE 3910 may be taken concurrently). Introduction to digital telecommunications, including coding, communication networks, spectral analysis, and digital modulation and demodulation.

To:

ECE 3710 Introduction to Telecommunications. Lec. 3. Credit 3.

Prerequisites: ECE 2020, ECE 3010 and either ECE 3910 or MATH 3470 (ECE 3910 or MATH 3470 may be taken concurrently). Introduction to digital telecommunications, including coding, communication networks, spectral analysis, and digital modulation and demodulation.

From:

ECE 4110(5110) Sequential Logic Design. Lec. 3. Credit 3.

Prerequisite: ECE 2110 and ECE 3160. Introduction to sequential digital logic analysis, design and applications, utilizing both standard digital components and programmable logic devices.

To:

ECE 4110 (5110) Digital System Design. Lec.3. Credit 3.

Prerequisites: ECE 2110 and ECE 3160. Computer aided combinational and sequential digital logic analysis, design, and applications, utilizing both standard digital components and programmable logic devices.

From:

ECE 4130 (5130) Introduction to Digital VLSI. Lec. 2. Lab. 3. Credit 3.

Prerequisites: ECE 3320 and ECE 4110. Analysis, design and layout of complex digital integrated circuits in MOS technology. The course emphasizes design through projects and requires extensive use of simulation and layout VLSI CAD tools.

To:

ECE 4130 (5130) Introduction to Digital VLSI. Lec. 3. Credit 3.

Prerequisites: ECE 2110 and ECE 3300. Analysis, design and layout of complex digital integrated circuits in MOS technology. The course emphasizes design through projects and requires extensive use of simulation and layout VLSI CAD tools.

From:

ECE 4710 (5710) Principles of Telecommunications. Lec. 3. Credit 3.

Prerequisites: ECE 3710 and ECE 3910. Performance of analog and digital communication systems in the presence of noise.

To:

ECE 4710 (5710) Principles of Telecommunications. Lec. 3. Credit 3.

Prerequisites: ECE 3710 and either ECE 3910 or MATH 3470. Performance of analog and digital communication systems in the presence of noise.

From:

ECE 4961 - Capstone Design I. Lec. 1. Lab. 6. Credit 3.

Prerequisite: ECE 3060, ECE 2110, ECE 3010, and ECE 3300, and ECE 4910. (ECE 4910 may be taken concurrently). The first is a sequence of two capstone design project courses. Student teams will complete an industry client-driven system design project. Teamwork, leadership, project planning and management, specification, budgeting, design review, implementation, testing, weekly reporting, documentation, and oral presentation.

To:

ECE 4961. Capstone Design I. Lec. 2. Lab 4. Credit 3.

Prerequisites: ECE 2110, ECE 3010, ECE 3060, ECE 3300 and ECE 4910 (ECE 4910 may be taken concurrently). The first in a sequence of two senior capstone design project courses. Student teams will complete an industry client-driven system design project. Teamwork, leadership, project planning and management, specification, budgeting, design review, subsystem development, testing, weekly reporting, documentation, and oral presentation.

## Curriculum Changes:

### Changes to BSCmpE Curriculum

1. Delete MATH 2011 and change the Credit for MATH 2010 to 3 credits (no change in credits)
2. Add ECE 2001 (+1 cr.)
3. Remove MATH Elective (-3 cr.)
4. Replace ECE 4970 by ECE 4971 (+1 cr.)
5. Replace ECE 3910 by MATH 3470 (no change in credits)

The total credit hours without taking into account the Connections course ENGR 1020 is reduced from 128 to 127.

Rename some of the electives as follows:

- ECE Elective to EE Elective
- ECE Lab Elective to EE Lab Elective

- CSC Elective to CS Elective

Rearrange some courses to balance the load during certain semesters as shown in the attached curriculum sheet.

BSCmpE Curriculum (Proposed) Effective Fall 2012

Fall	Freshman	Spring	
ENGL 1010 Writing I	3 ENGL 1020 Writing II		3
MATH 1910 Calculus I	4 MATH 1920 Calculus II		4
CHEM 1110 General Chemistry I	4 PHYS 2110 Calculus-based Physics I		3
CSC 2100 Intro. to Problem Solving & Computer Programming	3 PHYS 2111 Calculus-based Physics Lab. I		1
CSC 2101 Problem Solving & Computer Programming Lab.	CSC 2110 Data Structures & Algorithms		3
ENGR 1020 Connections to Engineering & Technology <sup>1</sup>	1 CSC 2111 Data Structures & Algorithms Lab.		1
<b>Total</b>	<b>Total</b>		<b>15</b>
	<b>16</b>		
Fall	Sophomore	Spring	
ENGL 2130, 2230 or 2330 Literature	3 MATH 2110 Calculus III		4
MATH 2010 Elementary Matrix Algebra	3 CSC 2400 Design of Algorithms		3
MATH 2120 Differential Equations	3 ECE 2001 Computer Aided Engr. in ECE		1
PHYS 2120 Calculus-based Physics II	3 ECE 2020 Electric Circuits II		3
PHYS 2121 Calculus-based Physics Lab. II	1 ECE 2110 Intro. to Digital Systems		3
ECE 2010 Electric Circuits I	3 Soc/Beh Sci Elec <sup>2</sup>		3
ECE 2011 Electrical Engineering Lab. I	1 <b>Total</b>		<b>17</b>
<b>Total</b>	<b>Total</b>		<b>17</b>
	<b>17</b>		
Fall	Junior	Spring	
SPCH 2410 or PC 2500 Communication	3 ECE 3020 Discrete-Time Signals & Systems		3
ECE 3010 Signals & Systems	3 ECE 3120 Microcomputer Systems		3
ECE 3060 Electrical Engineering Lab. II	1 ECE 4910 Professional Issues in ECE		1
ECE 3160 Digital Systems Lab.	1 MATH 3470 Intro. Probability & Statistics		3
ECE 3300 Electronics I	3 CSC 3030 Practical and Professional Issues in		1
CSC 2500 Unix Lab.	1 Computer Science		
Hum/Fine Arts Elec <sup>2</sup>	3 CSC 4200 Computer Networks		3
<b>Total</b>	15 EE Elective <sup>3</sup>		3
	<b>Total</b>		<b>17</b>
	<b>17</b>		
Fall	Senior	Spring	
ECE 4961 Capstone Design I	3 ECE 4971 Capstone Design II		3
ECE 4110 Digital System Design	3 ECE 4120 Fundamentals of Computer Design		3
ECE 4140 Embedded System Design	3 CSC 4100 Operating Systems		3
CS Elective <sup>3</sup>	3 CmpE Elective <sup>3</sup>		3
EE Lab. Elective <sup>3</sup>	1 Hum/Fine Arts Elective <sup>2</sup>		3
Soc/Beh Sci Elective <sup>2</sup>	3 <b>Total</b>		<b>15</b>
<b>Total</b>	<b>Total</b>		<b>16</b>
	<b>16</b>		
	<b>Grand Total: 128 Hours</b>		

**NOTES**

- (1) This course is not included in 127-hour curriculum.
- (2) Select from [University approved list](#).
- (3) Select from [ECE Department approved list](#).

**Changes to BSEE Curriculum:**

1. Delete MATH 2011 and change the Credit for MATH 2010 to 3 credits ( no change in credits)
2. Add ECE 2001 (+1 cr.)
3. Delete MATH Elective (-3 cr.)
4. Add EE Focus Lab Elective (+1 cr.)
5. Replace ECE 4970 by ECE 4971 (+1 cr.)
6. Replace ECE 3910 by MATH 3470 (no change in credits)

The total credit hours required for BSEE degree remains unchanged at 128 (This does not include the Connections course ENGR 1020.)

Rename some of the electives as follows:

- ECE Junior Elective → EE Junior Elective
- ECE Lab Elective → EE lab Elective
- ECE Senior Elective → EE Senior Elective
- ECE Senior Sequence courses → EE Focus Senior courses

BSEE Curriculum (Proposed Effective Fall 2012)

Fall	Freshman	Spring	
<a href="#">ENGL 1010</a> Writing I	3 <a href="#">ENGL 1020</a> Writing II		3
<a href="#">MATH 1910</a> Calculus I	4 <a href="#">MATH 1920</a> Calculus II		4
<a href="#">CHEM 1110</a> General Chemistry I	4 <a href="#">PHYS 2110</a> Calculus-based Physics I		3
<a href="#">GR 1020</a> Connections to Engineering & Technology <sup>1</sup>	1 <a href="#">PHYS 2111</a> Calculus-based Physics Lab. I		1
<a href="#">Soc/Beh Sci Elec</a> <sup>2</sup> _____	3 <a href="#">C 2100</a> Intro. to Problem Solving & Computer Programming		3
<b>Total</b>	15 <a href="#">C 2101</a> Problem Solving & Computer Programming Lab.		1
	<a href="#">Hum/Fine Arts Elec</a> <sup>2</sup> _____		3
	<b>Total</b>		<b>18</b>

Fall	Sophomore	Spring	
<a href="#">ENGL 2130, 2230 or 2330</a> Literature	3 <a href="#">SPCH 2410</a> or <a href="#">PC 2500</a> Communication		3
<a href="#">MATH 2010</a> Elementary Matrix Algebra	3 <a href="#">MATH 2110</a> Calculus III		4
<a href="#">MATH 2120</a> Differential Equations	3 <a href="#">ECE 2001</a> Computer Aided Engr. in ECE		1
<a href="#">PHYS 2120</a> Calculus-based Physics II	3 <a href="#">ECE 2020</a> Electric Circuits II		3
<a href="#">PHYS 2121</a> Calculus-based Physics Lab. II	1 <a href="#">ECE 2110</a> Intro. to Digital Systems		3
<a href="#">ECE 2010</a> Electric Circuits I	3 <a href="#">Soc/Beh Sci Elec</a> <sup>2</sup> _____		3
<a href="#">ECE 2011</a> Electrical Engineering Lab. I	1 <b>Total</b>		<b>17</b>
<b>Total</b>	<b>17</b>		

Fall	Junior	Spring	
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<a href="#">ECE 3010</a> Signals & Systems	3	<a href="#">E 3020</a> Discrete-Time Signals & Systems	3
<a href="#">ECE 3060</a> Electrical Engineering Lab. II	1	<a href="#">MATH 3470</a> Intro. Probability & Statistics	3
<a href="#">ECE 3300</a> Electronics I	3	<a href="#">ECE 4910</a> Professional Issues in ECE	1
<a href="#">ECE 3510</a> Electromagnetic Fields I	3	<a href="#">EE Junior Elec</a> <sup>3</sup> _____	3
<a href="#">Engineering Fund Elec</a> <sup>3</sup> _____	3	<a href="#">EE Junior Elec</a> <sup>3</sup> _____	3
<a href="#">Hum/Fine Arts Elec</a> <sup>2</sup> _____	3	<a href="#">EE Junior Elec</a> <sup>3</sup> _____	3
<b>Total</b>	<b>16</b>	<a href="#">EE Focus Lab. Elec</a> <sup>3</sup> _____	1
	<b>Total</b>		<b>17</b>

Fall	Senior	Spring	
<a href="#">ECE 4961</a> Capstone Design I	3	<a href="#">ECE 4971</a> Capstone Design II	3
<a href="#">EE Focus Senior Elec</a> <sup>3</sup> _____	3	<a href="#">EE Focus Senior Elec</a> <sup>3</sup> _____	3
<a href="#">EE Senior Elec</a> <sup>3</sup> _____	3	<a href="#">EE Junior Elec</a> <sup>3</sup> _____	3
<a href="#">EE Junior Elec</a> <sup>3</sup> _____	3	<a href="#">EE Lab. Elec</a> <sup>3</sup> _____	1
<a href="#">EE Lab. Elec</a> <sup>3</sup> _____	1	<a href="#">E/M/S/B Elec</a> <sup>3</sup> _____	3
<a href="#">E/M/S/B Elec</a> <sup>3</sup> _____	3	<b>Total</b>	<b>13</b>
<b>Total</b>	<b>16</b>		

**Grand Total: 129 Hours**

**NOTES**

- (1) This course is not included in the 128-hour curriculum.
- (2) Select from [University approved list](#).
- (3) Select from [ECE Department](#)

**Curriculum Changes to BSEE Mechatronics Concentration**

1. Move ENGR 1110 from Sophomore-Spring to Freshman-Spring
2. Move Humanities/Fine Art elective from Freshman Spring to Senior Fall
3. Replace MATH 2010 (2) and MATH 2011 (1) with the new MATH 2010 (3)
4. Add ECE 2001 (+1) in Sophomore-Spring
5. Delete MATH elective ( 3)
6. Replace ECE 4970 (2) with ECE 4971 (3)
7. Replace ECE 3910 (3) with MATH 3470 (3) and move it to Junior Fall
8. Rename ECE Senior Elective to EE Senior Elective

Net reduction for the degree: one credit. Total credit hours become 127 for the degree without counting Connections course.

The revised curriculum will be as follows:

**BSEE Mechatronics Concentration Curriculum (Proposed Effective Fall 2012)**

	Fall	Freshman	Spring	
<a href="#">ENGL 1010</a> Writing I		3	<a href="#">ENGL 1020</a> Writing II	3
<a href="#">MATH 1910</a> Calculus I		4	<a href="#">MATH 1920</a> Calculus II	4
<a href="#">CHEM 1110</a> General Chemistry I		4	<a href="#">PHYS 2110</a> Calculus-based Physics I	3
<a href="#">GR 1020</a> Connections to Engineering &		1	<a href="#">PHYS 2111</a> Calculus-based Physics Lab. I	1

Technology <sup>1</sup>		<u>C 2100</u> Intro. to Problem Solving & Computer	3
<u>Soc/Beh Sci Elec</u> <sup>2</sup> _____		3 Programming	
<b>Total</b>	<b>15</b>	<u>C 2101</u> Problem Solving & Computer Programming Lab.	1
		<u>ENGR 1110</u> Engineering Graphics	2
		<b>Total</b>	<b>17</b>

Fall	Sophomore	Spring	
<u>ENGL 2130, 2230 or 2330</u> Literature	3	<u>SPCH 2410</u> or <u>PC 2500</u> Communication	3
<u>MATH 2010</u> Elementary Matrix Algebra	3	<u>MATH 2110</u> Calculus III	4
<u>MATH 2120</u> Differential Equations	3	<u>ECE 2001</u> Computer Aided Engr. in ECE	1
<u>PHYS 2120</u> Calculus-based Physics II	3	<u>ECE 2020</u> Electric Circuits II	3
<u>PHYS 2121</u> Calculus-based Physics Lab. II	1	<u>ECE 2110</u> Intro. to Digital Systems	3
<u>ECE 2010</u> Electric Circuits I	3	<u>CEE 2110</u> Engineering Mechanics - Statics	3
<u>ECE 2011</u> Electrical Engineering Lab. I	1	<b>Total</b>	<b>17</b>
<b>Total</b>	<b>17</b>		

Fall	Junior	Spring	
<u>ECE 3010</u> Signals & Systems	3	<u>ECE 3020</u> Discrete-Time Signals & Systems	3
<u>ECE 3060</u> Electrical Engineering Lab. II	1	<u>ECE 3120</u> Microcomputer Systems	3
<u>ECE 3300</u> Electronics I	3	<u>ECE 3210</u> Control System Analysis	3
<u>ECE 3510</u> Electromagnetic Fields I	3	<u>ECE 3260</u> Control System Lab.	1
<u>ECE 3160</u> Digital Systems Lab.	1	<u>ECE 3270</u> Prog. Logic Controller Lab.	1
<u>MATH 3470</u> Intro. Probability & Statistics	3	<u>ECE 3610</u> Intro. to Power Systems	3
<u>E 2330</u> Engineering Mechanics - Dynamics	3	<u>ECE 4910</u> Professional Issues in ECE	1
<b>Total</b>	<b>17</b>	<u>ME 3610</u> Dynamics of Machinery	3
		<b>Total</b>	<b>18</b>

Fall	Senior	Spring	
<u>ECE 4961</u> Capstone Design I	3	<u>ECE 4971</u> Capstone Design II	3
<u>ECE 4140</u> Embedded System Design	3	<u>ME 4140</u> Intro. to Robotics and Intelligent	3
<u>ECE 4210</u> Control System Design I	3	Machines Engineering	
<u>Hum/Fine Arts Elec</u> <sup>2</sup> _____	3	<u>EE Senior Elec</u> <sup>3</sup> _____	3
<b>Total</b>	<b>12</b>	<u>Hum/Fine Arts Elec</u> <sup>2</sup> _____	3
		<u>Soc/Beh Sci Elec</u> <sup>2</sup> _____	3
		<b>Total</b>	<b>15</b>
<b>Grand Total: 128 Hours</b>			

### NOTES

- (1) This course is not included in 127-hour curriculum.
- (2) Select from [University approved list](#).
- (3) Select from [ECE Department approved list](#).

**Motion.** Dr. Rajan moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Talbert and carried.

### **25. Approval of Course Changes from the Department of Civil & Environmental Engineering**

In a memorandum dated February 10, 2012, approval was requested for the following:

Course Changes:

From:

ISE 3110 Principles of Engineering Economy Lec. 2. Credit 2.

Prerequisite: MATH 1920. An abbreviated version of ISE 3100.

To:

CEE 3710 Principles of Engineering Economy Lec. 2. Credit 2.

Prerequisite: MATH 1920. Concepts and techniques useful in the economic evaluation of engineering alternatives.

From:

ISE 3210 Engineering Statistics Lec. 2. Credit 2.

Prerequisite: MATH 1920 and junior standing. Engineering applications of probability, hypothesis testing, and confidence intervals.

To:

CEE 3720 Engineering Statistics Lec. 2. Credit 2.

Prerequisite: MATH 1920 and junior standing. Engineering applications of probability, hypothesis testing, and confidence intervals.

From:

CEE 4450 (5450) - Water Quality Modeling Lec. 3. Cr. 3.

Prerequisite: CEE 3410 or consent of instructor. Mathematical modeling of chemical and biological processes occurring in streams, lakes, and estuaries, emphasizing oxygen demand and nutrient processes.

To:

CEE 4450 (5450) - Water Quality Modeling Lec. 3. Cr. 3.

Prerequisite: CEE 3413 or consent of instructor. Mathematical modeling of chemical and biological processes occurring in streams, lakes, and estuaries, emphasizing oxygen demand and nutrient processes. Students enrolled in the 5000-level course will be required to complete additional work as stated in the syllabus.

From:

CEE 4430 (5430) - Water and Wastewater Engineering Lec. 3. Credit 3.

Prerequisite: CEE 3410 or consent of instructor. Analytical methods for use in water quality management of streams, lakes, reservoirs, and groundwater systems. Project design of water and wastewater treatment plants.

To:

CEE 4430 (5430) - Water and Wastewater Engineering Lec. 3. Credit 3.

Prerequisite: CEE 3413 or consent of instructor. Analytical methods for use in water quality management of streams, lakes, reservoirs, and groundwater systems. Project design of water and wastewater treatment plants. Students enrolled in the 5000-level course will be required to complete additional work as stated in the syllabus.

From:



CEE 4410 (5410) - Solid and Hazardous Waste Management Lec. 3. Cr. 3.

Prerequisite: CEE 3413 or consent of instructor. The collection and disposal of solid wastes. Treatment and disposal technologies of hazardous wastes.

To:

CEE 4410 (5410) - Solid and Hazardous Waste Management Lec. 3. Cr. 3.

Prerequisite: CEE 3413 or consent of instructor. The collection and disposal of solid wastes. Treatment and disposal technologies of hazardous wastes. Students enrolled in the 5000-level course will be required to complete additional work as stated in the syllabus.

**Motion.** Dr. Loutzenheiser moved to approve the changes effective Fall 2012. The motion was seconded by Dr. Talbert and carried.

### **26. Approval of Degree Title Change from the Department of Manufacturing & Technology**

In a memorandum dated January 30, 2012, approval was requested for the following:

Change degree title:

From:

Bachelor of Science in Industrial Technology

To: Bachelor of Science in Engineering Technology

**Motion.** Dr. Elsayy moved to approve the title change effective Fall 2012. The motion was seconded by Dr. Semmes and carried.

This change requires TBR approval.

### **27. Appointment of Nominating Committee for 2012-13 Chairperson**

Dr. Laurila appointed Dr. Barnes, Dr. Armstrong and Dr. Mills to serve as the 2012-13 chairperson nominating committee.

### **28. Other such matters**

Ms. Winningham shared screenshots of the Curriculum, Advising, Planning, and Programming (CAPP) program which will be used for advising. The plan is for the link to be added later this semester for those who have access to self-service Banner as an advisor in order to view a student's progress toward his or degree. Final changes are being made and the programs were built based on the 2010-2011 Undergraduate Catalog.

Dr. Hodum acknowledged Ms. Winningham and Ms. Burgess's hard work toward this endeavor.

The meeting adjourned at 4:12 p.m.