



## MEMORANDUM

**TO:** Debra Jackson, Institutional Effectiveness and Assessment  
Robert Jones, Vice President for Academic Affairs and Provost

**FROM:** John D. Griffin, Chair, Undergraduate Curriculum Committee

**DATE:** May 30, 2016

**SUBJECT:** Administrative Approval of Curriculum Items

**DEAN  
UNDERGRADUATE  
STUDIES**

Clemson University  
E101 Martin Hall  
Clemson, SC  
29634

P 864-656-3492  
F 864-656-1363

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The Undergraduate Curriculum Committee met on April 1, 2016 to approve the attached curriculum/course changes received in the Office of the Provost, May 30, 2016. The purpose of this memorandum is to respectfully request that you review this information and concur by giving final signature approval.

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**APPROVED:**

Debra B Jackson DATE 6/10/16  
DR. DEBRA JACKSON, INSTITUTIONAL EFFECTIVENESS AND ASSESSMENT

Robert K Jones DATE 6/17/16  
DR. ROBERT JONES, VICE PRESIDENT FOR ACADEMIC AFFAIRS & PROVOST

/rft

C: File

Attachments

AGENDA  
University Undergraduate Curriculum Committee Meeting  
Friday—April 1, 2016 —1:30 PM  
E304 Martin Hall

- I. **Call to order**
- II. **Introductions**
- III. **Consideration of March meeting minutes**
- IV. **New Business**
  - A. Curriculog - Griffin
  - B. May Meeting (?) – Griffin
  - C. Classical Languages – IB Scores - Appling
- V. **Old Business**
  - A. Curriculum Cleanup – Griffin
    - 1. Bioengineering
    - 2. Chemistry
    - 3. Electrical and Computer Engineering
    - 4. Physics
    - 5. Materials Science and Engineering
    - 6. Mechanical Engineering
  - B. Double/Triple Counting Policy - Appling
- VI. **Committee reports**
  - A. Arts & Humanities – Bruce Whisler
  - B. Mathematical & Natural Sciences – Bob Kosinski
  - C. Social Science – Laura Olson -
  - D. Cross Cultural Awareness – Mike Coggeshall
  - E. Science & Technology in Society – Pam Mack – Subcommittee recommends ENGR 2210 for STS credit (attached).
  - F. Ethical Judgment – Dan Wueste
  - G. Critical Thinking – Sarah Winslow
  - H. Communication – Cameron Bushnell
- VI. **Curricula/course approvals - attached**
- VII. **Other business**
- VIII. **Adjourn**

## Rhonda Todd

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**From:** Jeffrey Appling  
**Sent:** Monday, March 28, 2016 3:57 PM  
**To:** Rhonda Todd  
**Subject:** FW: IB exam - Latin credit

Rhonda:  
Please print for Friday. A late addition.  
Thanks.  
- Jeff

Jeffrey R. Appling, PhD  
Associate Dean  
Undergraduate Studies  
Clemson University  
864-656-3022

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**From:** Kelly Peebles [mailto:kpeeble@clemson.edu]  
**Sent:** Monday, March 28, 2016 3:54 PM  
**To:** Jeffrey Appling  
**Cc:** Joseph P Mazer; Salvador A Oropesa  
**Subject:** IB exam - Latin credit

Dear Jeff,

I apologize for the delay about the IB exam scores for Classical Languages. We had to run it through our curriculum committee and confirm with a departmental vote, the results of which just came back. We recommend the following, which is in keeping with Salvador's assessment.

4 hours in LATN 1010 for score of 4  
8 hours in LATN 1010, 1020 for score of 5  
11 hours in LATN 1010, 1020, 2010 for scores of 6, 7

Best wishes,  
Kelly

Kelly D. Peebles, Ph.D.  
Assistant Professor of French  
Clemson University - Dept. of Languages  
mail: 717 Strode Tower  
Clemson, SC 29634  
office: 504 Strode Tower

[kpeeble@clemson.edu](mailto:kpeeble@clemson.edu)  
(864) 221-7292

Memorandum

To: Brian Dominy, Chair, CoES Curriculum Committee

From: Ken Webb, Bioengineering

Re: List of departmentally-approved technical requirement courses

Dear Brian,

Please find attached our current list of courses that may be used to fulfill 12 credits of BioE Tech Requirement in both bioengineering curricula. This list is already on file with the Registrar's office and reflected in our students degree works transcripts.

Thanks,

Ken.

## BioE Technical requirements effective Fall 2015 curriculum and later

BioE Technical Electives. All students ***must*** take at least 6 credits from the following list with Lecture designation. Students ***may*** take all 12 credits with Lecture designation or may take up to 6 credits of non-lecture electives.

| Course          |  | Credits   | Lecture |
|-----------------|--|-----------|---------|
| BIOE 3210       | Biofluid Mechanics (for Bioelectrical Conc only) | 3         | Yes     |
| BIOE 4020       | Biocompatibility                                 | 3         | Yes     |
| BIOE 4120/6120  | Orthopaedic Engr and Path                        | 3         | Yes     |
| BIOE 4150/H4150 | Research Principles                              | 1         | Yes     |
| BIOE 4200/6200  | Sports Engineering                               | 3         | Yes     |
| BIOE 4230/6230  | Cardiovascular Engr and Path                     | 3         | Yes     |
| BIOE 4310/6310  | Medical Imaging                                  | 3         | Yes     |
| BIOE 4350/6350  | Modeling Multiphysics Problems                   | 3         | Yes     |
| BIOE 4400/6400  | Biopharmaceutical Engineering                    | 3         | Yes     |
| BIOE 4490       | Drug Delivery                                    | 3         | Yes     |
| BIOE 4500       | Special Topics in Bioengineering                 | 3         | Yes     |
| BIOE 4510       | Creative Inquiry (Variable)                      | (1 – 3)   | No      |
| BIOE 4600       | International Special Research Topics Variable   | (1 – 6)   | No      |
| BIOE 4610       | International Study in Bioengineering            | 3         | Yes     |
| BIOE 4690       | International Internship Variable                | (1 – 6)   | No      |
| BIOE 4710/6710  | Biomedical Imaging in Biophotonics               | 3         | Yes     |
| BIOE 4760       | Biosurface Engineering                           | 3         | Yes     |
| BIOE 4820/6820  | Biomaterial Implantology                         | 3         | Yes     |
| BIOE 4900       | Internships                                      | 1         | No      |
| BIOE 4910/H4910 | Research in Bioengineering Variable              | (1 – 6)   | No      |
| BMOL 4250/6250  | Biomolecular Engineering                         | 3         | Yes     |
| BMOL 4260/6260  | Biosensors and Bioelectronic Devices             | 3         | Yes     |
| ECE 2720 & 2730 | Computer Organization and laboratory             | 4 (3 & 1) | Yes     |
| ECE 3210/3120   | Electronics II                                   | 4 (3 & 1) | Yes     |
| ECE 3810        | Fields waves and circuits                        | 3         | Yes     |
| ECE 3170        | Random signal analysis                           | 3         | Yes     |
| ECE 3710 & 3720 | Microcontroller interfacing and laboratory       | 4 (3 & 1) | Yes     |
| ECE 4090        | Cont and Discrete Syst Design                    | 3         | Yes     |
| ECE 4100/6100   | Modern Control Theory                            | 3         | Yes     |
| ECE 4320        | Instrumentation                                  | 3         | Yes     |
| ECE 4270/6270   | Microelectromechanical Systems                   | 3         | Yes     |
| ECE 4670        | Intro to DSP                                     | 3         | Yes     |
| MATH 3650       | Numerical Methods for Engineers                  | 3         | Yes     |
| MSE 4580        | Surface Phenomena in Materials Science           | 3         | Yes     |
| PHYS 4170       | Introduction to Biophysics I                     | 3         | Yes     |

Prof. Brian N. Dominy  
Hunter Chemistry Laboratories  
Clemson University  
Clemson, SC 29634  
(864) 656-7702

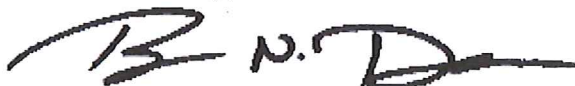
March 11, 2016

To whom it may concern,

In the undergraduate announcements, there are two instances indicating a need for students to consult the Department of Chemistry before choosing courses to meet specific curricular requirements. In order to make this process more transparent in these two instances, please find attached two documents that list:

- 1) The courses that can be used to satisfy the chemistry minor.
- 2) The courses that can be used to satisfy the "Chemistry Requirement" associated with BOTH the BA and BS degrees in chemistry.

Sincerely,



Brian N. Dominy, Ph.D.  
Associate Professor of Chemistry  
Undergraduate Program Director of Chemistry



DEPARTMENT OF CHEMISTRY

College of Engineering & Science 223 Howard L. Hunter Chemistry Laboratory Box 340973 Clemson, SC 29634-0973

864.656.3065 FAX 864.656.6613

Department of Chemistry: Acceptable Courses for the Chemistry Minor  
 Clemson University  
 Updated 3/7/2016

The chemistry minor requires students take 1010 and 1020, as well as 15 additional credits of chemistry courses, of which at least 9 MUST be at the 3000 or 4000 level.

| Chemistry Course | Course Title                          |
|------------------|---------------------------------------|
| 1***             | Any 1000 level course w/ exceptions*  |
| 2***             | Any 2000 level course w/ exceptions*  |
| 3***             | Any 3000 level course w/ exceptions** |
| 4***             | Any 4000 level course w/ exceptions*  |

\* While nearly every CH (chemistry) course is acceptable to meet the 15 credit hour requirement for the minor, a small number of courses are NOT considered acceptable: CH 1520 (Chemistry Communications), CH 1040 (Concepts in Chemistry), CH 1050 (Chemistry in Context I), CH 1060 (Chemistry in Context II), CH 1410 (Introduction to Research), CH 4710 (Teaching Chemistry), CH 4520 (Chemistry Communications II), and CH 4500 (Chemistry Capstone).

\*\* The following restrictions, consistent with the BS/BA major, are also to be followed: 1) Credit will only be given for CH 3300 **OR** CH 3310. 2) Credit will only be given for CH 3150 **OR** CH 3170. 3) Credit will only be given for CH 2010 **OR** CH 2230. 4) Credit will only be given for CH 2020 **OR** CH 2270 **OR** CH 2290.

| Courses Outside of Chemistry that are Accepted | Course Title                                       |
|--|--|
| BCHM 3010                                      | Molecular Biochemistry                             |
| BCHM 3050*                                     | Essential Elements of Biochemistry                 |
| BCHM 4060                                      | Physiological Chemistry                            |
| BCHM 4230                                      | Principles of Biochemistry                         |
| CHE 3070                                       | Unit Operations Laboratory                         |
| MSE 4020                                       | Solid State Materials                              |
| MSE 4150                                       | Introduction to Polymer Science and Engineering    |
| ENTOX 4210                                     | Chemical Sources and Fate in Environmental Systems |
| ENTOX 4300                                     | Toxicology   |
| EES 4110                                       | Ionizing Radiation Detection and Measurement       |
| EES 4850                                       | Hazardous Waste Management                         |
| FD SC 4010                                     | Food Chemistry I                                   |
| FD SC 4020                                     | Food Chemistry II                                  |
| FD SC 4030                                     | Food Chemistry and Analysis                        |
| GEOL 3180                                      | Introduction to Geochemistry                       |
| PHYS 4520                                      | Nuclear and Particle Physics                       |
| PHYS 4810                                      | Physics of Surfaces                                |

\*Credit can only be given for CH 3600 or BCHM 3050 or BCHM 3010. Only one of these courses can count toward the minor.

Department of Chemistry:  
 Acceptable 3000-4000 level Courses for the Chemistry Major "Chemistry Requirement"  
 Updated 4/13/2015

| Chemistry Requirement | Course Title                   | Semester Offered |
|-----------------------|--------------------------------|------------------|
| 3390 (BA only*)       | Physical Chemistry Lab         |                  |
| 3400 (BA only*)       | Physical Chemistry Lab         |                  |
| 3600 (BA only*)       | Chemical Biology               |                  |
| 4020 (BA only*)       | Inorganic Chemistry            |                  |
| 4030 (BA only*)       | Advanced Synthetic Techniques  |                  |
| 4110 (BA only*)       | Instrumental Analysis          |                  |
| 4120 (BA only*)       | Instrumental Analysis Lab      |                  |
| 4000                  | Selected Topics                | infrequent       |
| 4010                  | Organometallic Chemistry       | fall             |
| 4040                  | Bioinorganic Chemistry         | infrequent       |
| 4130                  | Chemistry of Aqueous Systems   | spring           |
| 4140                  | Bioanalytical Chemistry        | infrequent       |
| 4210                  | Advanced Organic Chemistry     | fall             |
| 4250                  | Medicinal Chemistry            | spring           |
| 4270                  | Organic Spectroscopy           | spring           |
| 4350                  | Atomic and Molecular Structure | fall             |
| 4360                  | Comp. Quantum Chemistry        | infrequent       |
| 4430                  | Research Problems              | Fall/spring      |
| 4400                  | Research Problems              | Fall/spring      |
| 3990                  | Creative Inquiry               | Fall/spring      |
| 4990                  | Creative Inquiry               | Fall/spring      |
| 4710                  | Teaching Chemistry             | infrequent       |

\* Courses listed as "BA only" refer to courses that are specifically required for the BS major but not specifically required for the BA major. Consequently, they are acceptable courses for meeting the "Chemistry Requirement" for BA majors only.



Department of Chemistry:  
 Acceptable 3000-4000 level Courses for the Chemistry Major "Chemistry Requirement"  
 Updated 4/13/2015

In addition to 3000/4000 level chemistry courses, some 3000/4000 level courses outside of chemistry have also been determined to be suitable to meet the "Chemistry Requirement" for chemistry BS and BA majors.

| Courses Outside of Chemistry that are Accepted | Course Title                                       |
|--|--|
| BCHM 3010                                      | Molecular Biochemistry                             |
| BCHM 3050*                                     | Essential Elements of Biochemistry                 |
| BCHM 4060                                      | Physiological Chemistry                            |
| BCHM 4230                                      | Principles of Biochemistry                         |
| CHE 3070                                       | Unit Operations Laboratory                         |
| MSE 4020                                       | Solid State Materials                              |
| MSE 4150                                       | Introduction to Polymer Science and Engineering    |
| ENTOX 4210                                     | Chemical Sources and Fate in Environmental Systems |
| ENTOX 4300                                     | Toxicology   |
| EES 4110                                       | Ionizing Radiation Detection and Measurement       |
| EES 4850                                       | Hazardous Waste Management                         |
| FD SC 4010                                     | Food Chemistry I                                   |
| FD SC 4020                                     | Food Chemistry II                                  |
| FD SC 4030                                     | Food Chemistry and Analysis                        |
| GEOL 3180                                      | Introduction to Geochemistry                       |
| PHYS 4520                                      | Nuclear and Particle Physics                       |
| PHYS 4810                                      | Physics of Surfaces                                |

# CLEMSON UNIVERSITY

Prof. Carl Baum  
Dept. Electrical and Computer Engineering  
Clemson University  
Clemson, SC 29634  
(864) 656-5928

March 9, 2016

To whom it may concern,

In the undergraduate announcements, there are NO instances indicating a need for students to consult the Department of Electrical and Computer Engineering before choosing courses to meet specific curricular requirements. This applies to both the Electrical Engineering major and the Computer Engineering major.

Sincerely,



Dr. Carl W. Baum  
Associate Professor  
Undergraduate Program Coordinator  
Dept. Electrical and Computer Engineering



DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING

College of Engineering & Science 105 Riggs Hall Box 340915 Clemson, SC 29634-0915

864.656.3190 FAX 864.656.5917



May 10, 2016

Subj: Undergraduate Announcements

To Whom It May Concern:

Department of Physics and Astronomy

118 Kinard Lab  
Clemson University  
Clemson, SC  
29634-0978

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fax (864) 656-0805  
physics.clemson.edu

We identified the instances in the undergraduate announcements concerning Physics and Astronomy curricula where the student is referred to her advisor for the selection of Physics and Astronomy courses or where the courses choices are broadly defined.

(1) "A **minor** in Physics requires PHYS 1220, 2210, 2220, and nine additional credits in physics courses at the 3000 level or higher." The courses currently offered and that qualify are listed in the attachment marked with 1.

(2) The **Physics BA** has 6 hours of "Physics Requirement" that are specified as "Any 3000- or 4000-level course". The courses currently offered and that qualify are listed in the attachment marked with 2.

(3) The **Physics BS** requires picking an emphasis area with several choices. It states "Twelve credit hours in one of these areas, with at least six at the 3000-4000 level, are required." The courses currently offered and that qualify are listed in the attachment marked with 3.

(4) The Physics BS **Interdisciplinary** Emphasis is fulfilled by choosing "Twenty-one credit hours, with at least nine at the 3000-4000 level, are required. Courses and emphasis area must be approved by the department." For Physics and Astronomy courses, students can choose from the same list, excluding the required courses. This program is very new, and the departmental advisors are actively working with students on their course plans. Specific course lists are not prescribed, since it would counter the purpose of this program; however, examples for Computer Science and Mechanical Engineering Interdisciplinary Emphasis are attached. The department will maintain a repository of course lists as chosen and approved.

Sincerely,

Gerald Lehmacher  
Curriculum Committee, Dept. of Physics and Astronomy

## Course list for

(1) Minor in Physics 3000-4000, (2) Physics BA Physics Requirement 3000-4000,  
 (3) Physics BS Physics and Astronomy Emphasis Area 2000-4000

Updated: 3/10/16

| <i>Course</i> | <i>offered</i> | <i>acceptable for</i> |
|---------------|----------------|-----------------------|
| ASTR 2200     | irregularly    | 3                     |
| ASTR 3020     | yearly         | 1,2,3                 |
| ASTR 3030     | yearly         | 1,2,3                 |
| ASTR 4750     | irregularly    | 3                     |
| PHYS 2400     | spring         | 3                     |
| PHYS 2450     | fall           | 3                     |
| PHYS 2800     | irregularly    | 3                     |
| PHYS 2900     | irregularly    | 3                     |
| PHYS 3110     | spring         | 1                     |
| PHYS 3120     | spring         | 1,2                   |
| PHYS 3150     | fall           | 1                     |
| PHYS 3210     | fall           | 1                     |
| PHYS 3220     | spring         | 1                     |
| PHYS 3250/1   | spring         | 1,2                   |
| PHYS 3260/1   | spring         | 1,2                   |
| PHYS 3990     | irregularly    | 3                     |
| PHYS 4170     | yearly         | 1,2,3                 |
| PHYS 4200     | irregularly    | 1,2,3                 |
| PHYS 4320     | irregularly    | 1,2,3                 |
| PHYS 4410     | fall           | 1                     |
| PHYS 4420     | spring         | 1,2                   |
| PHYS 4450     | yearly         | 1,2,3                 |
| PHYS 4460     | yearly         | 1,2,3                 |
| PHYS 4520     | irregularly    | 1,2,3                 |
| PHYS 4550     | fall           | 1                     |
| PHYS 4560     | spring         | 1,2                   |
| PHYS 4650     | spring         | 1                     |
| PHYS 4750     | irregularly    | 1,2,3                 |
| PHYS 4810     | irregularly    | 3                     |
| PHYS 4820/1   | irregularly    | 3                     |
| PHYS 4990     | irregularly    | 3                     |

# PHYSICS

Bachelor of Science  
Emphasis Area Interdisciplinary

Example Plan: Mechanical Engineering  
Note: Most Mechanical Engineering courses are also taught during the Summer Sessions.

## Freshman Year

First Semester  
4 - CH 1010 General Chemistry<sup>1</sup>  
4 - MTHSC 1060 Calculus of One Variable I  
3 - PHYS 1220 Physics with Calculus I  
1 - PHYS 1240 Physics Lab. I  
3 - ENGL 1030 Accelerated Composition  
15

Second Semester  
4 - CH 1020 General Chemistry  
4 - MTHSC 1080 Calculus of One Variable II  
3 - PHYS 2210 Physics with Calculus II  
1 - PHYS 2230 Physics Lab. II  
3 - Arts and Humanities (Non-Lit.) Requirement<sup>2</sup>  
15

## Sophomore Year

First Semester  
4 - MTHSC 2060 Calculus of Several Variables  
3 - PHYS 2220 Physics with Calculus III  
3 - PHYS 3250 Experimental Physics I  
2 - PHYS 3000 Introduction to Research  
5 - ME 2010 Statics and Dynamics for Mech Engr  
17

Second Semester  
4 - MTHSC 2080 Intr. to Ordinary Diff. Equations  
3 - PHYS 3110 Intro. Meth. Theor. Phys. I  
3 - PHYS 3260 Experimental Physics II  
4 - Foreign Language Requirement<sup>3</sup>  
3 - ME 2040 Mechanics of Materials  
17

## Junior Year

First Semester  
3 - PHYS 3210 Mechanics I  
3 - PHYS 3150 Intro. Computational Physics  
3 - Oral Communication Requirement<sup>2</sup>  
4 - Foreign Language Requirement<sup>4</sup>  
3 - ME 3070 Foundations of Mechanical Systems  
16

Second Semester  
3 - PHYS 3220 Mechanics II  
3 - PHYS 4650 Thermodynamics and Statistical Mechanics  
3 - Physics Writing Requirement<sup>4</sup>  
3 - Science Requirement<sup>5</sup>  
3 - ME 3050 Modeling and Analysis of Dynamic Systems  
15

## Senior Year

First Semester  
3 - ME 3120 Mfg Processes and Their Applications  
3 - PHYS 4410 Electromagnetics I  
3 - PHYS 4550 Quantum Physics I  
3 - Arts and Humanities (Lit.) Requirement<sup>1</sup>  
3 - ME 3060 Fundamentals of Machine Design  
15

Second Semester  
3 - HIST 1720 The West and the World I or  
3 - HIST 1730 The West and the World II  
3 - Social Science Requirement<sup>2</sup>  
3 - ME 4010 Mechanical Engineering Design  
3 - Emphasis Area Requirement<sup>6</sup>  
12

122 Total Semester Hours<sup>1</sup>

<sup>1</sup> Students are encouraged to take additional General Engineering courses (ME 1070, 1080, 1090) as needed in preparation for emphasis area.

<sup>2</sup> See General Education Requirements. Three of these credit hours must also satisfy the Science and Technology in Society Requirement.

<sup>3</sup> Two semesters (through 1020) in same modern foreign language are required.

<sup>4</sup> ENGL 3040, 3120, 3140, 3150, 3160, 3450, 3460, 3480, M L 4020, or THEA (ENGL) 3470

<sup>5</sup> Any 2000-4000-level science course

<sup>6</sup> 4000-level ME or PHYS elective or other approved course

# PHYSICS

## Bachelor of Science

### Emphasis Area Interdisciplinary

#### Example Plan: Computer Science

Note: Other required Courses for the BS Physics are omitted.

#### Freshman Year

##### First Semester

4 - CPSC 1010 (1011) Computer Science I

##### Second Semester

4 - CPSC 1020 (1021) Computer Science II

#### Sophomore Year

##### First Semester

4 - CPSC 2120 (2121) Algorithms and Data Structures

##### Second Semester

3 - CPSC 2150 Software Development Foundations

#### Junior Year

##### First Semester

3 - MATH 3110 Linear Algebra

##### Second Semester

3 - Emphasis Area Requirement<sup>1</sup>

#### Senior Year

##### First Semester

3 - PHYS 4010 Senior Thesis<sup>2</sup>

3 - Emphasis Area Requirement<sup>3</sup>

##### Second Semester

3 - Emphasis Area Requirement<sup>1</sup>

3 - Emphasis Area Requirement<sup>1</sup>

<sup>1</sup> See advisor. Choose from MATH 4190, CPSC 3520, 4050, 3600, 3620, DPA 4000, PHYS 3120, 4420, 4560 or other courses with department approval. A minor in Computer Science may be obtained.

<sup>2</sup> Non-honors students may select an approved synthesis, directed research, or capstone course at the 4000-level in their emphasis area.



March 11, 2016

To whom it may concern,

In the undergraduate announcements, there are two instances indicating a need for students to consult the Department of Materials Science and Engineering before choosing courses to meet specific curricular requirements. In order to make this process more transparent in these two instances, please find two lists of approved coursework to meet the requirements on the subsequent page:

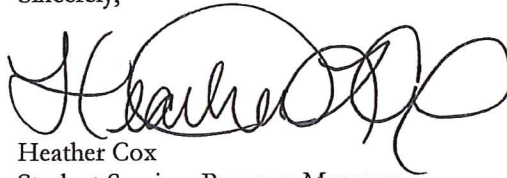
**MATERIALS SCIENCE &  
ENGINEERING**

Clemson University  
161 Surrine Hall  
515 Calhoun Drive  
Clemson, SC  
29634-0971

P 864-656-3187  
F 864-656-5973

- 1) The courses that can be used to satisfy the “Technical Requirement” associated with the polymeric materials concentration.
- 2) The courses that can be used to satisfy the “Technical Engineering Requirement” associated with the polymeric materials concentration.

Sincerely,



Heather Cox  
Student Services Program Manager  
Department of Materials Science & Engineering  
162B Surrine Hall  
[hlcox@clemson.edu](mailto:hlcox@clemson.edu)  
864.656.1512

- 1) Courses accepted by Materials Science and Engineering for the “Technical Requirement” include Engineering, Science and Business courses at the 3000 or 4000 level listed in the table below. The student must have 3 credit hours of satisfactory coursework to fulfill the requirement.

|                |
|----------------|
| BCHM 3000:4999 |
| BE 3000:4999   |
| BIOE 3000:4999 |
| BIOL 3000:4999 |
| BMOL 3000:4999 |
| CE 3000:4999   |
| CH 3000:4999   |
| CHE 3000:4999  |
| ECE 3000:4999  |
| EES 3000:4999  |
| FIN 3000:4999  |
| GEOL 3000:4999 |
| IE 3000:4999   |
| LAW 3000:4999  |
| MATH 3000:4999 |
| ME 3000:4999   |
| MGT 3000:4999  |
| MICR 3000:4999 |
| MKT 3000:4999  |
| MSE 3000:4999  |
| PHYS 3000:4999 |
| PKSC 3000:4999 |

- 2) Courses accepted by Materials Science and Engineering for the “Technical Engineering Requirement” include engineering courses at the 3000 or 4000 level listed in the table below. The student must have 3 credit hours of satisfactory coursework to fulfill the requirement.

|                |
|----------------|
| BE 3000:4999   |
| BIOE 3000:4999 |
| BMOL 3000:4999 |
| CE 3000:4999   |
| CHE 3000:4999  |
| ECE 3000:4999  |
| EES 3000:4999  |
| IE 3000:4999   |
| ME 3000:4999   |
| MSE 3000:4999  |





March 11, 2016

To: Brian Dominy, Chair, CES Curriculum Committee

From: Donald Beasley, Department of Mechanical Engineering

RE: List of departmentally approved courses

To whom it may concern,

In the undergraduate announcements, there are two instances indicating a need for students to consult the Department of Mechanical Engineering before choosing courses to meet specific curricular requirements. In order to make this process more transparent in these two instances, please find attached two documents that list:

**DEPARTMENT OF  
MECHANICAL ENGINEERING**  
College of Engineering & Science


Clemson University  
102 Fluor Daniel EIB  
Box 340921  
Clemson, SC  
29634-0921

- 1) The courses that can be used to satisfy the "5<sup>th</sup>" general education course requirement for mechanical engineering students.
- 2) The courses that can be used to satisfy the technical elective requirements for mechanical engineering students.

P 864-656-3470  
F 864-656-4435

Both of these lists are listed with the Registrar and are reflected in a student's degree works report.

Sincerely,



Donald E. Beasley  
Professor and Associate Chair  
106D Fluor-Daniel Building  
Department of Mechanical Engineering  
Clemson University  
[debsl@clermson.edu](mailto:debsl@clermson.edu)  
864-656-5622

6

DEPARTMENT OF MECHANICAL ENGINEERING  
BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING  
(2014 Curriculum)

**FRESHMAN YEAR**

| First Semester                                 | Crs | Second Semester                                     | Crs |
|--|-----|---|-----|
| ENGR 1050 Engineering Discipline and Skills I  | 1   | ENGR 2080 Engr. Graphics with Computer Applications | 2   |
| ENGR 1060 Engineering Discipline and Skills II | 1   | ENGR 1070 Programming and Problem Solving I         | 1   |
| CH 1010 General Chemistry                      | 4   | ENGR 1080 Programming and Problem Solving II        | 1   |
| ENGL 1030 Accelerated Composition              | 3   | ENGR 1090 Programming and Problem Applications      | 1   |
| MATH 1060 Calculus of One Variable I           | 4   | MATH 1080 Calculus of One Variable II               | 4   |
| Arts/Hum/SS Requirement <sup>1</sup> (NLH)     | 3   | PHYS 1220 Physics with Calculus I                   | 3   |
|  |     | PHYS 1240 Physics Laboratory I                      | 1   |
|  |     | Arts/Hum/SS Requirement <sup>1</sup> (Lit)          | 3   |
|  | 16  |   | 16  |

**SOPHOMORE YEAR**

| First Semester                                | Crs    | Second Semester                            | Crs    |
|---|--------|--|--------|
| ME 2000 Sophomore Seminar                     | 1      | ME 2040 Mechanics of Materials             | 3      |
| ME 2010 Statics & Dynamics for Mech. Engr     | 5      | ME 2030 Foundations of Therm & Fluid Sys   | 3      |
| MATH 2060 Calculus of Several Variables       | 4      | MATH 2080 Intro to Ord Differential Eqns.  | 4      |
| PHYS 2210 Physics with Calculus II            | 3      | ECE 2070 Basic Electrical Engineering      | 2      |
| Option: <sup>2</sup>                          |        | ECE 2080 Electrical Engineering Lab. I     | 1      |
| MSE 2100 Introduction to Materials Science or | 3 or 2 | Option: <sup>2</sup>                       |        |
| ME 2220 Mechanical Engineering Lab            |        | ME 2220 Mechanical Engineering Lab 1 or    | 2 or 3 |
|   |        | MSE 2100 Introduction to Materials Science |        |
|   | 16/15  |  | 15/16  |

**JUNIOR YEAR**

| First Semester                            | Crs    | Second Semester                                | Crs    |
|---|--------|--|--------|
| ME 3070 Foundations of Mechanical Systems | 3      | ME 3040 Heat Transfer                          | 3      |
| ME 3080 Fluid Mechanics                   | 3      | ME 3050 Model. and Analysis of Dynamic Systems | 3      |
| ME 3030 Thermodynamics                    | 3      | ME 3060 Fundamentals of Machine Design         | 3      |
| MATH 3650 Intro to Numerical Analysis     | 3      | ME 3120 Mfg Processes and Their Application    | 3      |
| ENGL 3140 Technical Writing <sup>5</sup>  | 3      | Option: <sup>2</sup>                           |        |
| Option: <sup>2</sup>                      |        | Statistics Requirement <sup>3</sup> or         | 3 or 2 |
| ME 3330 Mechanical Engineering Lab. II or | 2 or 3 | ME 3330 Mechanical Engineering Lab. II         |        |
| Statistics Requirement <sup>3</sup>       |        |  |        |
|   | 17/18  |  | 15/14  |

**SENIOR YEAR**

| First Semester                                | Crs    | Second Semester  | Crs    |
|---|--------|--|--------|
| ME 4010 Mechanical Engineering Design         | 3      | ME 4000 Senior Seminar                                   | 1      |
| ME Technical Requirement 1 <sup>4</sup>       | 3      | ME 4020 Internship in Engineering Design                 | 3      |
| Arts/Hum/SS Requirement <sup>1</sup> (SS)     | 3      | ME Technical Requirement 2 <sup>4</sup>                  | 3      |
| ME 4030 Control & Integr Multidomain Dyn Sys. | 3      | Arts/Hum/SS Requirement <sup>1</sup> (x2) (SS, Engr 5th) | 6      |
| Option: <sup>2</sup>                          |        | Option: <sup>2</sup>                                     |        |
| ME 4440 Mechanical Engineering Lab. III or    | 2 or 3 | Technical Requirement 3 <sup>4</sup>                     | 3 or 2 |
| Technical Requirement 3 <sup>4</sup>          |        | ME 4440 Mechanical Engineering Lab. III or               |        |
|   | 14/15  |  | 16/15  |

**TOTAL CURRICULUM HOURS 125**

<sup>1</sup> See Policy on Humanities and Social Sciences for Engineering Curricula. Six of these credit hours must also satisfy General Education Cross-Cultural Awareness and Science and Technology in Society Requirements. These requirements can be filled in any order.

<sup>2</sup> Both courses must be taken but they can be taken in either semester

<sup>3</sup> Select from Math 3020 or Exst 4110

<sup>4</sup> See Advisor. Select from Department-approved list.

<sup>5</sup> AS 4100 or ML 4020 may be substituted for ENGL 3140

Enrollment Policy (See Web Site for Complete Statement of Departmental Policy): A student is allowed to enroll in any ME course only when all prerequisites, as defined by the current official listings for that courses, have been passed with a grade of C or higher.

No student may exceed three attempts to complete successfully ME 2010, ME 2030 or ME 2040. Registration for a third attempt to complete one of these courses requires the approval of the Undergraduate Coordinator in the Department of Mechanical Engineering. A grade of W counts as an unsuccessful attempt at completing a course.

For students repeating an ME course, registration preference will be given to students in a degree-granting engineering major whose curriculum requires the course in question.

To change majors into the Mechanical Engineering degree program, students must have a minimum cumulative grade-point ratio of 2.60 or higher at Clemson and earned a C or better in each course in the General Engineering freshman curriculum, EXCLUDING the Arts and Humanities/Social Science requirements



| Requirements:  | Category V:<br>Arts & Humanities<br>Literature<br>(3 hrs)  | Category V:<br>Arts & Humanities (A&H)<br>Non-literature<br>(3 hrs)  | Category VI:<br>Social Science<br>(SS)<br>(6 hrs from<br>2 different fields)  | Category V or VI:<br>5 <sup>th</sup> A&H or SS course<br>(3 hrs)  | NO Arts & Humanities.<br>NO Social Science<br>NO 5 <sup>th</sup> course but<br>ONLY CCA or STS  |
|--|--|--|---|---|---|
| <p>No<br/>Cross-Cultural<br/>Awareness<br/>(CCA)</p> <p>No<br/>Science and<br/>Technology in<br/>Society (STS)</p> | <p>ENGL Any 2000-<br/>level ENGL<br/>literature<br/>course<br/>CHIN 4010<br/>FR 3000, 3040<br/>GER 2600, 3060,<br/>3600, 3610<br/>HON 1900, 2210<br/>ITAL 3010, 3020<br/>JAPN 4010, 4060<br/>RUSS 3600, 3610<br/>SPAN 3110, 3130</p>   | <p>AAH 1010<br/>ART 3750<br/>CAAH 2010<br/>CHIN (PHIL) 3120, (PHIL) 3130,<br/>4990, (COMM) 1800, 3030, 3080,<br/>3090, 4020,<br/>ENGL (GW) 3010, 3550, 3570,<br/>(LANG) 4540<br/>FR 3070,<br/>GW (ENGL) 3010, 4050<br/>GER 3400,<br/>HON 1910, 2030, 2100, 2220<br/>HUM 3010, 3020, 3060<br/>JAPN 3070, 3080<br/>LANG 3400, 3420, 3560, (ENGL)<br/>4540<br/>MUSC 3080, 3090, 3110, 3120,<br/>3130, 3170, 3610, 3620, 3630,<br/>3640, 3690, 3700, 3710, 3720<br/>PHIL 1010, 1020, 1030, (CHIN)<br/>3120, (CHIN) 3130, 3160, 3170,<br/>3180, 3230, 3250, 3270, 3440<br/>REL 3010, 3020, 3030, 3060, 3070,<br/>3120, 3130, 3150<br/>RUSS 3400<br/>SPAN 3070, 3080<br/>THEA 2100, 2790, 3080, 3090,<br/>3150, 3160, 3170<br/>WS 3010</p> | <p>AGRB 2020, 2570,<br/>ECON 2000, 2110,<br/>2120<br/>GEOG 1010, 1060,<br/>HIST 1010, 1020<br/>HON 1920, 2020,<br/>2200<br/>POSC 1010, 1030<br/>PSYC 2010<br/>RS 3010<br/>SOC 2010, 2020<br/><br/>(Note: AGRB and<br/>ECON are<br/>considered same<br/>field)</p> | <p>Any 1xxx, 2xxx, 3xxx, or 4xxx<br/>course in:<br/>A, A, H, ANTH, ART, COMM(excl.<br/>1500/2500), DANCE, EAS 1230,<br/>ECON, GW, GEOG, HIST, HUM,<br/>LANG, LAW, MUSC, P, A, S, P, A,<br/>PHIL, PO SC, PSYC, REL, R, S,<br/>SOC, THEA, W S<br/><br/>Any 2xxx, 3xxx, 4xxx course in:<br/>ENGL (excl. 2170, 3140, 3150)<br/><br/>Any 1xxx, 2xxx course in: AGRB<br/><br/>Any A, S, L, ARAB, CHIN, FR,<br/>GER, ITAL, JAPN, PORT, RUSS,<br/>or SPAN course, not in the<br/>student's native language.<br/><br/>Plus any course to left in this row.</p> | <p>HON 1930, 2090<br/>LANG 2500, 2540<br/>IS 1010<br/>Or through a University-approved cross-cultural experience</p>  |
| <p>Cross Cultural<br/>Awareness<br/>(CCA)<br/>(superscript in<br/>catalog)</p>                                     | <p>AAH 1010<br/>ART 3750<br/>CAAH 2010<br/>CHIN (PHIL) 3120, (PHIL) 3130,<br/>4990, (COMM) 1800, 3030, 3080,<br/>3090, 4020,<br/>ENGL (GW) 3010, 3550, 3570,<br/>(LANG) 4540<br/>FR 3070,<br/>GW (ENGL) 3010, 4050<br/>GER 3400,<br/>HON 1910, 2030, 2100, 2220<br/>HUM 3010, 3020, 3060<br/>JAPN 3070, 3080<br/>LANG 3400, 3420, 3560, (ENGL)<br/>4540<br/>MUSC 3080, 3090, 3110, 3120,<br/>3130, 3170, 3610, 3620, 3630,<br/>3640, 3690, 3700, 3710, 3720<br/>PHIL 1010, 1020, 1030, (CHIN)<br/>3120, (CHIN) 3130, 3160, 3170,<br/>3180, 3230, 3250, 3270, 3440<br/>REL 3010, 3020, 3030, 3060, 3070,<br/>3120, 3130, 3150<br/>RUSS 3400<br/>SPAN 3070, 3080<br/>THEA 2100, 2790, 3080, 3090,<br/>3150, 3160, 3170<br/>WS 3010</p> | <p>ART 2100<br/>ASL 3050<br/>COMM 1800<br/>HUM 3090<br/>MUSC 2100, 3140<br/>REL 1010, 1020</p>   | <p>ANTH 2010<br/>GEOG 1030<br/>HIST 1720, 1730,<br/>1930<br/>PAS 3010<br/>POSC 1020, 1040<br/>PSYC 2500</p>   | <p>AAH 1020<br/>AGRB 2050*<br/>CAAH 2010<br/>IS 2100<br/>LANG 2500, 2540<br/>W S 1030<br/><br/>Plus any course to left in this row.</p>   | <p>HON 1930, 2090<br/>LANG 2500, 2540<br/>IS 1010<br/>Or through a University-approved cross-cultural experience</p>  |
| <p>Science and<br/>Technology in<br/>Society<br/>(STS)<br/>(superscript in<br/>catalog)</p>                        | <p>HON 2010<br/>LARC 1160<br/>PHIL 1240, 2100, 3240, 3260, 3450<br/>STS 1010, 1020, 2150, 3010, 3030</p>   | <p>HON 2010<br/>LARC 1160<br/>PHIL 1240, 2100, 3240, 3260, 3450<br/>STS 1010, 1020, 2150, 3010, 3030</p>   | <p>HIST 1220, 1240<br/>PSYC 2750</p>  | <p>AGRB 2050* (ECON) 4570<br/>COMM 1070, 3070<br/>ECON 3190, (AGRB) 4570<br/>ENGL 3490<br/>HIST 3210, 3220, 3230, 3920,<br/>4240, 4910<br/>MUSC 3180<br/>PHIL 3280, 3400<br/>RS (SOC) 4010<br/>SOC (RS) 4010, 4030<br/>STS 1200, 1710, 2160, 4980,<br/>4990<br/><br/>Plus any course to left in this row.<br/><br/>*Satisfies both CCA and STS.</p>   | <p>AGED (EDF) 4800<br/>AVS 3150, 4150<br/>BIOL 2000, 2010, 2030,<br/>2040, 2100, 2110,<br/>2200, 4730<br/>CH 1050, 1060<br/>CTE 1150, 2210<br/>ECE 1010<br/>EDF (AGED) 4800, (FOR)<br/>4160<br/>ENGL 3490<br/>ENR 2200<br/>ENR 3120, (FOR) 4160<br/>ENSP (GEOL) 1250, 2000,<br/>(PES) 3150, 4000<br/>ENT 2000<br/>FSC 2140<br/>FOR (ENR) 4160</p> |



## **ME TECHNICAL ELECTIVE REQUIREMENTS**

All courses that have been approved as technical requirements for Mechanical Engineering students are listed below. **The Mechanical Engineering curriculum requires that nine (9) credits be taken from this list.** Of the nine (9) credits, six (6) credits must come from courses designated ME. Substitution of these courses will not be permitted without the written approval of the Undergraduate Coordinator and non-ME designated courses must be approved by an advisor – including Creative Inquiry Projects (ME or other). Graduate courses may be taken in place of undergraduate courses on this list and must be approved via the graduate school (MS/BS program) in advance.

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### **Mechanical Engineering Technical Elective Choices**

**(min 6 hours req'd):**

|          |  | <b><u>Cr. Hr.</u></b> |
|----------|--|-----------------------|
| ME 4150* | Undergraduate Research (app. of UC req.)           | Variable              |
| ME H4150 | Undergraduate Research (app. of Honors Coord. req) | Variable              |
| ME 4170  | Mechatronics System Design                         | 3                     |
| ME 4180  | Finite Element Analysis in ME Design               | 3                     |
| ME 4200  | Energy Sources and Their Utilization               | 3                     |
| ME 4210  | Introduction to Compressible Flow                  | 3                     |
| ME 4220  | Design of Gas Turbines                             | 3                     |
| ME 4230  | Introduction to Aerodynamics                       | 3                     |
| ME 4250  | Aircraft Conceptual Design                         | 3                     |
| ME 4260  | Nuclear Energy                                     | 3                     |
| ME 4280  | Thermal Hydraulics of Nuclear Reactors             | 3                     |
| ME 4290  | Thermal Environmental Control                      | 3                     |
| ME 4300  | Mechanics of Composite Materials                   | 3                     |
| ME 4310  | Applied Fluids Engineering                         | 3                     |
| ME 4320  | Advanced Strength of Materials                     | 3                     |
| ME 4400  | Materials for Aggressive Environments              | 3                     |
| ME 4530  | Dynamic Performance of Vehicles                    | 3                     |
| ME 4540  | Design of Machine Elements                         | 3                     |
| ME 4550  | Design for Manufacturing                           | 3                     |
| ME 4570  | Fundamentals of Wind Power                         | 3                     |
| ME 4710  | Computer Aided Engineering Analysis & Design       | 3                     |
| ME 4930  | Selected Topics in Mechanical Engineering          | Variable              |

Courses highlighted in

\*ME 4150 (non-honors) – 3 hours maximum for technical elective credit. It may be taken a second time for elective.

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### ***ME Creative Inquiry- (ME 2900, ME 3900, ME 4900)***

If a student wishes to use a series of ME Creative Inquiry courses as one of their 3 required technical electives, the series of courses must incorporate at least 7 credit hours, must take place over at least 3 different semesters (long summer can count as one), must be conducted by the same instructor, must be a part of a single project, and must receive written approval from the Undergraduate Coordinator based on written evidence of the project scope and outcomes. Approval will be given only when the documentation shows that sufficient technical content is incorporated in the course sequence. Such approval must come prior to the student starting the final 3 credit hours in the series or earlier.

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*Please remember: The Mechanical Engineering curriculum requires that nine (9) credits be taken from this list. Of the nine (9) credits, six (6) credits must come from courses designated ME.*

# ME TECHNICAL ELECTIVE REQUIREMENTS

## Policy Regarding Non-ME Technical Electives

Students electing to use a technical elective offered outside the ME Department shall conform to the two policy items listed below when selecting and registering for the course. The approved list of such courses is appended.

1. If a student wishes to use a non-ME course as one of their 3 required technical electives, the course must either be selected from an approved list (maintained by the Department), or must receive written approval from the Undergraduate Coordinator prior to taking the course. Detailed written description of the course content, objectives, learning outcomes, time commitment, and evaluation process will be required for approval. Courses having insufficient technical content will not be approved.
2. If a student wishes to use a series of non-ME Creative Inquiry courses as one of their 3 required technical electives, same rules for the ME creative inquiry must be followed and a student must have written approval of the undergraduate coordinator. (See ME creative inquiry requirements)

**Non-ME Technical Elective Choices (You are allowed 1 of the 3-credit courses, listed below, in any of the areas.)**

| <i>Math</i>                 | <i>Course No.</i> | <i>TITLE</i>                                       | <i>Science</i> | <i>Course No.</i> | <i>TITLE</i>                                |
|-----------------------------|-------------------|--|----------------|-------------------|---|
| MATH                        | 4000              | Theory of Probability                              | CH             | 3310              | Physical Chemistry                          |
| MATH                        | 4100              | Number Theory                                      | CH             | 3600              | Chemical Biology                            |
| MATH                        | 4120              | Introduction to Modern Algebra                     | CH             | 4040              | Bioinorganic Chemistry                      |
| MATH                        | 4190              | Discrete Mathematical Structures I                 | CH             | 4250              | Medicinal Chemistry                         |
| MATH                        | 4340              | Advanced Engineering Mathematics                   | PHYS           | 3110              | Intro to the Methods of Theoretical Physics |
| MATH                        | 4350              | Complex Variables                                  | PHYS           | 3210              | Mechanics I                                 |
| MATH                        | 4400              | Linear Programming                                 | PHYS           | 3550              | Modern Physics                              |
| MATH                        | 4530              | Advanced Calculus I                                | PHYS           | 4170              | Introduction to Biophysics I                |
| MATH                        | 4600              | Introduction to Numerical Analysis I               | PHYS           | 4200              | Atmospheric Physics                         |
| MATH                        | 4630              | Mathematical Analysis I                            | PHYS           | 4320              | Optics                                      |
|                             |                   |  | PHYS           | 4410              | Electromagnetics I                          |
|                             |                   |  | PHYS           | 4520              | Nuclear and Particle Physics                |
| <i>Engineering (Non-ME)</i> | <i>Course No.</i> | <i>TITLE</i>                                       |                |                   |   |
| BIO E                       | 4350              | Computer Modeling of Multiphysics Problems         |                |                   |   |
| BE                          | 4240              | Ecological Engineering                             |                |                   |   |
| BE                          | 4400              | Renewable Energy Resource Engineering              |                |                   |   |
| ECE                         | 4700              | Vehicle Electronics                                |                |                   |   |
| ECE                         | 4710              | Electric Vehicles and Energy Storage               |                |                   |   |
| EE&S                        | 4010              | Environmental Engineering                          |                |                   |   |
| EE&S                        | 4100              | Environmental Radiation Protection I               |                |                   |   |
| EE&S                        | 4300              | Air Pollution Engineering                          |                |                   |   |
| IE                          | 4400              | Decision Support Systems in Industrial Engineering |                |                   |   |
| IE                          | 4570              | Transportation and Logistics Engineering           |                |                   |   |
| IE                          | 4620              | Six Sigma Quality                                  |                |                   |   |
| IE                          | 4880              | Human Factors Engineering                          |                |                   |   |

\*Each course is worth 3 credits.

*Please remember: The Mechanical Engineering curriculum requires that **nine (9) credits be taken from this list.** Of the nine (9) credits, six (6) credits must come from courses designated ME.*

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## Rhonda Todd

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**From:** Pamela Mack <pammack@clermson.edu>  
**Sent:** Monday, March 28, 2016 2:54 PM  
**To:** Rhonda Todd; Jeffrey Appling  
**Cc:** Shannon Clark  
**Subject:** STS recommendation to the UUCC

I am not going to be able to be at the UUCC meeting this Friday because I am going out of town, but I do have a report from the STS subcommittee. Can you please pass on to the UUCC for approval:

The STS subcommittee--Pam Mack, Ian Walker, and Chris Minor—have examined the syllabus for ENGR 2210: Technology, Culture and Design, and recommend its approval for STS credit. I believe the course itself was approved in an UUCC meeting earlier this academic year.

Thanks, Pam

**TO:** CHAIR, UNDERGRADUATE CURRICULUM COMMITTEE  
**FROM:** CHAIR, LANGUAGES DEPT CURRICULUM COMMITTEE  
**SUBJECT:** COURSES FULFILLING "SEE ADVISOR"  
**DATE:** MARCH 4, 2016  
**VIA:** CHAIR, AAH CURRICULUM COMMITTEE

Curriculum maps for the degree programs listed below currently direct students to see their advisor to choose courses for certain major requirements. The following provides clarification where "see advisor" is indicated.

## LANGUAGE & INTERNATIONAL TRADE

### **Tourism Concentration**

*Advanced PRTM requirement (9):* PRTM 3000:4999

\* \* \*

## MODERN LANGUAGES

### **American Sign Language**

*Fine Arts Requirement (3):* AAH 1000:4999; MUSC 1420, 2100, 2950, 3140, 3180, 3290, 3620, 3630, 3640, 3690, 3700, 3710, 3720, 3730, 3980, 4150; THEA 2100, 2950, 3150, 3160, 3170, 3180, 3470, 3720, 3790, 3980, 4300

*History Requirement (3):* HIST 3000:4000

*LANG 3030 Study Abroad Transfer:* ASL 3040

*Advanced Language Requirement (3):* ASL 3010/ASL 3020

*Advanced Arts and Humanities Requirement (6):* ASL 3050, ASL 3970, ASL 4600, ASL 4970

*Methodology and Theory Requirement (9):* ASL 3150, ASL 3200, ASL 3250, ASL 4010, ASL 4020, ASL 4200, ASL 4250, ASL 4600

\* \* \*

### **Chinese Emphasis Area**

*Fine Arts Requirement (3):* AAH 1000:4999 or MUSC 1420, 2100, 2950, 3140, 3180, 3290, 3620, 3630, 3640, 3690, 3700, 3710, 3720, 3730, 3980, 4150 or THEA 2100, 2950, 3150, 3160, 3170, 3180, 3470, 3720, 3790, 3980, 4300

*History Requirement (3):* HIST 3300, 3330, 3340, 4950

*LANG 3030 Study Abroad Transfer:* Course not offered at Clemson, must be taken abroad

### Italian Emphasis Area

*Fine Arts Requirement (3):* AAH 1000:4999 or MUSC 1420, 2100, 2950, 3140, 3180, 3290, 3620, 3630, 3640, 3690, 3700, 3710, 3720, 3730, 3980, 4150 or THEA 2100, 2950, 3150, 3160, 3170, 3180, 3470, 3720, 3790, 3980, 4300

*History Requirement (3):* HIST 3550, 3700, 3720, 3750, 3770, 3780, 4200, 4700, 4710, 4950

*LANG 3030 Study Abroad Transfer:* Course not offered at Clemson, must be taken abroad

*Advanced Language Requirement (3):* ITAL 3050

*Advanced Arts and Humanities Requirement (6):* ENGL 3000:4999 or HUM 3000:4999 or ITAL 3010, 3020, 3070, 3600, 3980, 4000, 4980 or PHIL 3000:4999 or REL 3000:4999 or WS 3010, 4590; maximum of 3 credits in the target language

*Methodology and Theory Requirement (9):* ENGL 4350, 4360, 4400, 4510 or ITAL 4750, 4970, 4980 or LANG 3000, 3400, 3420, 3560, 3710, 4500, 4600, 4620; maximum of 3 credits in target language

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### Japanese Emphasis Area

*Fine Arts Requirement (3):* AAH 1000:4999 or MUSC 1420 or 1430 or 2100 or 2950 or 3140 or 3180 or 3290 or 3980 or 4150 or THEA 2100 or 2950 or 3150 or 3160 or 3170 or 3180 or 3470\* or 3720 or 3790 or 3980 or 4300 or MUSC 3620 or 3630 or 3640 or 3690 or 3700 or 3710 or 3720 or 3730

*History Requirement (3):* HIST 3300 or 3330 or 3340 or 4950 or 4960

*LANG 3030 Study Abroad Transfer:* Course not offered at Clemson, taught abroad in the target language

*Advanced Arts and Humanities Requirement (6):* ENGL 3000:4999 or HUM 3000:4999 or JAPN 4010 or PHIL 3000:4999 or REL 3000:4999 or WS 3010 or 4590 or ANTH 3010 or POSC 4720 or GEOG 1030 or 3050

*Methodology and Theory Requirement (9):* ENGL 4350\* or 4360\* or 4400\* or 4510\* or JAPN 3970 or 4170 or 4970, 4999 or LANG 3000 or 3400 or 3420 or 3560 or 3710 or 4500 or 4600 or 4620

\* \* \*

### Spanish Emphasis Area

*Fine Arts Requirement (3):* AAH 1000:4999 or MUSC 1420 or 1420 or 2100 or 2950 or 3140 or 3180 or 3290 or 3980 or 4150 or THEA 2100 or 2950 or 3150 or 3160 or 3170 or 3180 or 3470 or 3720 or 3790 or 3980 or 4300 or MUSC 3620 or 3630 or 3640 or 3690 or 3700 or 3710 or 3720 or 3730

*History Requirement (3):* HIST 3400 or 3410 or 3420 or 3700 or 3720 or 3740 or 3750 or 3770 or 3780 or 4400 or 4710

*LANG 3030 Study Abroad Transfer (3):* Course not offered at Clemson. Must be taken abroad and in Spanish.



University Undergraduate Curriculum Committee  
Minutes Meeting  
E304 Martin Hall  
March 4, 2016, 1:30 PM

**Members Present:** John Griffin, chair; Joe Mazer; Mike Coggeshall; Jack Wolf; Bob Kosinski; Michael Sehorn; Chris Kitchens; Brian Dominy; Andy Tyminski; Hugh Spitler; Jan Comfort; Shiva Mohan; Jeff Appling; Cecelia Hamby; Reagan Blondeau; Carol Pelletier; Donna Barrett; Shannon Clark; David Knox; Penny Brunner and Rhonda Todd

**Guests:** Alison Whitehouse; Kelly Peebles

Griffin convened the meeting at 1:30 PM

**Introductions**

Griffin welcomed the committee and opened the meeting with introductions.

**Approval of minutes**

The committee approved the February meeting minutes.

**New Business**

- A. Double/Triple Dipping** – Appling reported that this committee has always been against triple counting of courses between majors and minors; however, there has never been a policy established to address the issue. He stated that he would like to have a subcommittee to review and write a policy to bring back to this committee for approval. Appling stated that anyone who would like to volunteer can send him an email.

**Old Business**

- A. Curriculum Cleanup** – Griffin thanked everyone for beginning the process to clean up our curriculum so that Degree Works will work for every major. He reminded the committee that we have until April. 1) Memo – Political Science Minor; 2) Memo – History Department (memos attached).
- B. Modern Language Requirement** – Mazer stated that due to confusion concerning the changes to the Modern Language requirement, the subcommittee wanted to provide some clarification:

Modern Language Requirement for BA Majors

1. The Curriculum Committee has recently approved for the Foreign Language Requirement to be renamed the Modern Language Requirement. This change will appear in the 2016-2017 *Undergraduate Announcements*.
2. The Modern Language Placement Exam does not award a student any credit towards his or her Modern Language Requirement. It is solely used as a tool to help identify in which course a student should begin his or her language study.

3. Students will only receive exemption credit after completing a course at Clemson, with a grade of C or higher.
  - a. Just because a student has completed a 2020 language course, does not automatically mean he or she has qualified for exemption credit for courses missing in the 1010-2020 language course sequence. This affects students who transfer to Clemson and students who choose to take language courses at other institutions.
  - b. For example, if a student takes the equivalent of SPAN 2020 at another institution, and wants or needs credit for SPAN 1010, 1020, and 2010, he or she will need to take a 3000 level SPAN course at Clemson and pass that course with a grade of C or higher in order to be eligible for exemption credit.
  - c. If a student has met the Modern Language Requirement as specified by the student's degree program and that student does not want or need exemption credit for missing courses in the 1010-2020 language sequence, it is the student's responsibility to replace any missing credit hours with elective hours in order to reach the total number of credit hours required for the degree program.

#### **C. Committee Reports**

- a. Arts & Humanities – Bruce Whisler
- b. Mathematical & Natural Sciences – Bob Kosinski
- c. Social Science – Laura Olson
- d. Cross Cultural Awareness – Mike Coggeshall
- e. Science & Technology in Society – Pam Mack
- f. Ethical Judgment – Dan Wueste
- g. Critical Thinking – Sarah Winslow
- h. Communication – Cameron Bushnell

**Curriculum/course approval** – See attached

#### **Other Business**

Blondeau provided a list of emphasis areas (attached) where there are concerns about the “see advisor” statements. She will continue to review the programs and provide updates to the list. Griffin stated that the goal is to get the Undergraduate Announcements Degree Works, and Departmental Handbooks to all match.

Clark reminded the committee that any changes to curriculum or majors will not be processed until after the reorganization.

The meeting adjourned at 2:38 PM.

Minutes respectfully submitted by Rhonda Todd

## Modern Language Requirement for BA Majors

1. The Curriculum Committee has recently approved for the Foreign Language Requirement to be renamed the Modern Language Requirement. This change will appear in the 2016-2017 *Undergraduate Announcements*.
2. The Modern Language Placement Exam does not award a student any credit towards his or her Modern Language Requirement. It is solely used as a tool to help identify in which course a student should begin his or her language study.
3. Students will only receive exemption credit after completing a course at Clemson, with a grade of C or higher.
  - a. Just because a student has completed a 2020 language course, does not automatically mean he or she has qualified for exemption credit for courses missing in the 1010-2020 language course sequence. This affects students who transfer to Clemson and students who choose to take language courses at other institutions.
  - b. For example, if a student takes the equivalent of SPAN 2020 at another institution, and wants or needs credit for SPAN 1010, 1020, and 2010, he or she will need to take a 3000 level SPAN course at Clemson and pass that course with a grade of C or higher in order to be eligible for exemption credit.
  - c. If a student has met the Modern Language Requirement as specified by the student's degree program and that student does not want or need exemption credit for missing courses in the 1010-2020 language sequence, it is the student's responsibility to replace any missing credit hours with elective hours in order to reach the total number of credit hours required for the degree program.

# Public Policy Minor

## List of Approved Courses

The following is a list of courses that are acceptable for the policy domain requirements (nine credit hours) for the public policy minor.

|                       |   |                       |   |
|-----------------------|---|-----------------------|---|
| ACCT 3030             | Cost Accounting                                 | ECON 4400             | Game Theory                                       |
| ACCT 4040             | Individual Taxation                             | ENR (FOR) 4160        | Forest Policy and Administration                  |
| APEC (CRD, HLTH) 3610 | Intro. to Health Care Economics                 | ENR 4290              | Environmental Law and Policy                      |
| APEC (CRD) 4110       | Regional Impact Analysis                        | ENR 4500              | Conservation Issues                               |
| APEC (CRD) 4120       | Regional Economic Development Theory and Policy | ENSP 4000             | Studies in Environmental Science                  |
| APEC 4520             | Agricultural Policy                             | FDSC 3010             | Food Regulation and Policy                        |
| APEC 4570             | Natural Resource Use, Technology and Policy     | FOR 3040              | Forest Resource Economics                         |
| APEC (WFB) 4750       | Economics of Wildlife Management and Policy     | FOR 4000              | Public Relations in Natural Resources             |
| CRP 4010              | Intro. to City and Regional Planning            | FOR (ENR) 4160        | Forest Policy and Administration                  |
| CRP 4030              | Seminar on Planning Communication               | FOR 4250              | Forest Resource Management Plans                  |
| CRD (APEC, HLTH) 3610 | Intro. to Health Care Economics                 | FOR 4260              | Forest Resource Management Plans Seminar          |
| CRD (APEC) 4110       | Regional Impact Analysis                        | FOR 4310              | Recreation Resource Planning in Forest Management |
| CRD (APEC) 4120       | Regional Economic Development Theory and Policy | HLTH (APEC, CRD) 3610 | Intro. to Health Care Economics                   |
| ECON 3010             | Economics of Labor                              | HLTH 4310             | Public and Environmental Health                   |
| ECON 3030             | Economics and Sports                            | HLTH 4780             | Health Policy Ethics and Law                      |
| ECON 3090             | Government and Business                         | HIST 3250             | American Economic Development                     |
| ECON 3190             | Environmental Economics                         | HIST 3270             | American Business History                         |
| ECON 3400             | Behavioral Economics                            | HIST 3920             | History of the Environment of the United States   |
| ECON 3600             | Public Choice                                   | MGT 3050              | Economics of Transportation                       |
| ECON 4020             | Law and Economics                               | PRTM 3010             | Recreation and Society                            |
| ECON 4100             | Economic Development                            | PRTM 3200             | Recreation Policymaking                           |
| ECON 4110             | Economics of Education                          | PHIL 3450             | Environmental Ethics                              |
| ECON 4190             | Economics of Defense                            | PHIL 3460             | Medical Ethics                                    |
| ECON 4200             | Public Sector Economics                         | POSC 3630             | United States Foreign Policy                      |
| ECON 4220             | Monetary Economics                              | POSC 3670             | Political Risk Assessment                         |
| ECON 4230             | Economics of Health                             | POSC 4230             | Urban Politics                                    |
| ECON 4240             | Organization of Industries                      | POSC 4240             | Federalism and Intergovernmental Relations        |
| ECON 4250             | Antitrust Economics                             | RS (SOC) 4010         | Human Ecology                                     |
| ECON 4260             | Seminar in Sports Economics                     | SOC 4140              | Policy and Social Change                          |
| ECON 4270             | Development of the American Economy             | SOC 4710              | Populations Issues and Methods                    |
| ECON 4280             | Cost-Benefit Analysis                           | WFB 4300              | Wildlife Conservation Policy                      |
| ECON 4350             | Family Economics                                | WFB (APEC) 4750       | Economics of Wildlife Management and Policy       |

\*It is the student's responsibility to meet any and all prerequisites listed in the *Undergraduate Announcements* catalog for all of the classes on these lists and to keep track of the credit hours for each course (not all of these courses are three credit hours).

--Updated List, Fall 2015

**SUPPORT REQUIREMENT**  
**2008/2009 – 2015/2016**

1. **EITHER** a minor (15 hour minimum requirement)

**OR**

2. **15 hours selected from a department approved list as follows** (*confirm that you have the required prerequisites*)

- All 3xxx and 4xxx courses in ACCT, ECON, ELE, FIN, LAW, MGT and MKT
- All 2xxx and above foreign language courses (CHIN, FR, GERM, ITAL, JAP, RUSS, SPAN)
- CP SC 4620
- COMM 3610, 3640, 4640, 4800
- NPL 3000
- PHIL 3440
- POSC 3610, 3620, 4290
- PSYCH 3640, 3680, 3690, 4350, 4710
- SOC 3560, 4300
- Other courses may be acceptable, but must be approved **in advance** by the Department Chair

## Rhonda Todd

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**From:** Janis Miller  
**Sent:** Friday, February 26, 2016 1:29 PM  
**To:** Rhonda Todd  
**Cc:** John M. Coggeshall  
**Subject:** B.S. Management curriculum requirements that do not appear in the catalog

MEMO

To: Dean John Griffin via Rhonda Todd, E101 Martin Hall  
From: Janis Miller, Chair, Department of Management Curriculum Committee  
Date: February 26, 2016  
RE: B.S. Management curriculum requirements that do not appear in the catalog

B.S. Management majors must complete a 15-hour support requirement. The catalog has footnote #4 that says "Management majors must complete a support area consisting of fifteen hours beyond the coursework required by the management curriculum and the management emphasis area requirement. Students should choose ONE of the following two ways to satisfy this requirement: (1) Declare and complete a minor requiring AT LEAST 15 hours of additional coursework; or (2) Complete 15 hours of coursework selected from the approved list of management support courses."

Support courses are presently programmed into Banner and appear on students' Degree Works.

The list of support courses is posted on the departmental website at

[http://www.clemson.edu/cbbs/departments/management/files/pdfs/support-requirement\\_1516.pdf](http://www.clemson.edu/cbbs/departments/management/files/pdfs/support-requirement_1516.pdf)

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Emphasis Area of concerns:

### Chemical Engineering

- There are no codes in Banner or Degree Works for the Emphasis Areas. The Emphasis Area requirement has a footnote and the footnote reads the following:  
See advisor for details. Nine credit hours devoted to completion of an emphasis area or approved minor are required. Emphasis areas are Applied Engineering, Mathematics and Science; Biomolecular Science and Engineering; Business Management; Environmental Engineering; Polymeric Materials; Energy Studies.
- There are no courses listed in the catalog. There are courses listed in Degree Works within the major for those areas that were supplied by the department.

### Civil Engineering

- This major has codes for each of the Emphasis Areas  
E141 – Applied Fluid Mechanics  
  
E134 – Construction  
  
E090 – Environmental Engineering  
  
E162 – GeoTech/GeoEnvr Engineering  
  
E133 – Structural Engineering  
  
E142 – Transportation Engineering
- Courses are in Degree Works that were supplied by the department, however none of the emphasis areas or the courses are listed in the catalog. The Emphasis Area requirement has a footnote and the footnote reads the following:  
See advisor for approved list. Technical Requirements and electives may be used to complete an emphasis area in one or more of the following fields: Applied Fluid Mechanics, Construction, Environmental Engineering, Geotechnical/ Geoenvironmental Engineering, Structural Engineering, or Transportation Engineering.

### Physics (BS)

- The all but one of the emphasis areas have codes and are listed in the notes section in the catalog. There aren't any courses listed so the department must be diligent and submit those to Degree Works with each new catalog year.
- Interdisciplinary emphasis is without a code and without courses listed in the catalog. There are also no courses listed in Degree Works.

### Food Science (Food Science and Technology Concentration) FDST

“Emphasis Area Requirements”

- Footnote #4 – See Advisor
  - 1011-1516 Degree Works does not have the names of 7 Emphasis Areas or course lists and they are not listed in the catalog.
  - 1617 Emphasis Areas (changed from 7 to 3) and course lists provided (UCC 12/2015 p.104). Footnote advice is “See advisor” with names of emphasis areas. It does not list the courses required.

## Visual Arts

- Footnote #3 – Select an emphasis area from one of the studio disciplines included in the required core courses.
  - There aren't any emphasis area codes in the system for Visual Arts.
  - There aren't any emphasis areas listed in the catalog except a sentence in the description of the degree that reads "The department offers coursework in a number of studio disciplines, including ceramics, drawing, painting, printmaking, photography, sculpture and the new media arts."
  - Courses are given to Degree Works to add to each audit



**MEMORANDUM**

**TO:** Dean John Griffin, Chair of the University Undergraduate Curriculum Committee

**FROM:** Dr. Adam Warber, Department of Political Science *aw*

**DATE:** 16 February 2016

**SUBJECT:** Approved Course List for Public Policy Minor Requirements

**DEPARTMENT OF  
POLITICAL SCIENCE**

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Dr. Jeff Appling contacted our department requesting that we send a list to your committee of the approved public policy courses that students working on a public policy minor can select from in order to complete the nine credit hours of the policy domain requirements for that minor. We keep copies of this list in the main office of the political science department for our minors to pick-up so that they can choose the courses that they would like to enroll in to fulfill these requirements. I have enclosed a copy of our current list of approved courses for your records. If you have any questions, do not hesitate to contact me at (864) 656-1828 or you can email me at [awarber@clemson.edu](mailto:awarber@clemson.edu).

Approved Courses/Curricula  
 April 1, 2016, 1:30 PM  
 E304 Martin Hall

|             |   |                            |  |    |
|-------------|---|----------------------------|--|----|
| <b>I.</b>   | <b>College of Agriculture, Forestry and Life Sciences</b> |                            |  |    |
|             | <b>A.</b>   | <b>Biological Sciences</b> |  |    |
|             |   | BIOL 3020                  | Invertebrate Biology - change prerequisites / corequisites | 1  |
|             |   | BIOL 3060                  | Invertebrate Biology Lab - change prerequisites            | 3  |
|             |   | BIOL 3510                  | Biological Anthropology - change prerequisites             | 5  |
|             |   | BIOL 3940                  | SEL Topics in Creative Inq I - change                      | 7  |
|             |   | BIOL 4010                  | Plant Physiology - change prerequisites/ corequisites      | 10 |
|             |   | BIOL 4100                  | Limnology - change prerequisites / corequisites            | 12 |
|             |   | BIOL 4200                  | Neurobiology - change prerequisites / corequisites         | 14 |
|             |   | BIOL 4910                  | Undergrad Research in Biol Sci - change                    | 16 |
|             |   | BIOL 4930                  | Senior Seminar - change                                    | 19 |
|             |   | BIOL 4940                  | SEL Topics in Creative Inq II - change                     | 22 |
|             |   |                            | Biological Sciences - change major                         | 25 |
|             |   |                            |  |    |
|             | <b>B.</b>   | <b>Microbiology</b>        |  |    |
|             |   | MICR 2050                  | Introductory Micro - change prerequisites / corequisites   | 28 |
|             |   | MICR 3050                  | General Microbiology - change prerequisites / corequisites | 30 |
|             |   | MICR 3940                  | Creative Inquiry I - change                                | 32 |
|             |   | MICR 4910                  | Undergrad Research in Micro - change                       | 35 |
|             |   | MICR 4930                  | Senior Seminar - change                                    | 38 |
|             |   | MICR 4940                  | SEL Topics in Creative Inq II - change                     | 41 |
|             |   |                            |  |    |
|             |   |                            | Prepharmacy - change major                                 | 44 |
|             |   |                            | Prerehabilitation Sci - change major                       | 47 |
|             |   |                            |  |    |
| <b>II.</b>  | <b>College of Architecture, Arts and Humanities</b>       |                            |  |    |
|             | <b>A.</b>   | <b>English</b>             |  |    |
|             |   |                            | Writing - change minor requirements                        | 50 |
|             |   |                            |  |    |
|             | <b>B.</b>   | <b>World Cinema</b>        |  |    |
|             |   | WCIN 4570                  | Global Hollywood - change a cross reference                | 53 |
|             |   | WCIN 4580                  | Adaptations of World Classics - change a cross reference   | 56 |
|             |   | WCIN 4760                  | Filmmaking for Mobile Media - change a cross reference     | 59 |
|             |   |                            |  |    |
|             | <b>C.</b>   | <b>Theatre</b>             |  |    |
|             |   | THEA 4290                  | Dramatic Literature I - change prerequisite / corequisite  | 62 |
|             |   | THEA 4300                  | Dramatic Literature II - change prerequisite / corequisite | 64 |
|             |   |                            |  |    |
| <b>III.</b> | <b>College of Business and Behavioral Science</b>         |                            |  |    |
|             | <b>A.</b>   | <b>Accounting</b>          |  |    |
|             |   |                            | BS Accounting - change major                               | 66 |
|             |   |                            |  |    |
|             | <b>B.</b>   | <b>Justice Studies</b>     |  |    |
|             |   | JUST 4280                  | Criminal Law-change prerequisite/corequisite               | 74 |
|             |   | JUST 4290                  | Justice Administration-change prerequisite/corequisite     | 77 |
|             |   |                            |  |    |

Approved Courses/Curricula  
 April 1, 2016, 1:30 PM  
 E304 Martin Hall

|            |  |  |               |   |       |
|------------|--|--|---------------|---|-------|
|            |  |  |               |   |       |
|            | <b>C.</b>  | <b>Management</b>                              |               |   |       |
|            |  |  | MGT 4680      | Management Intl Internship-new course                       | 80    |
|            |  |  |               |   |       |
|            | <b>D.</b>  | <b>Sociology</b>                               |               |   |       |
|            |  |  | SOC 3880      | Criminal Justice-change                                     | 83    |
|            |  |  | SOC 3890      | Criminology-change  | 86    |
|            |  |  | SOC 3980      | Computer Crime-change                                       | 89    |
|            |  |  | SOC 4680      | Criminal Evidence - change                                  | 92    |
|            |  |  | SOC 4910      | Sociology of Policing - change                              | 95    |
|            |  |  | SOC 4930      | Soc of Corrections-change                                   | 98    |
|            |  |  | SOC 4940      | Organized Crimes-change                                     | 101   |
|            |  |  |               |   |       |
| <b>IV.</b> | <b>College of Engineering and Sciences</b>                 |  |               |   |       |
|            | <b>A.</b>  | <b>Computer Science</b>                        |               |   |       |
|            |  |  |               | Changes to AP Credit for CPSC Courses                       | 104   |
|            |  |  | CPSC 1060     | Intro Programming Java-new course                           | 105   |
|            |  |  | CPSC 2920     | Computing, Ethics, and Global Society                       | 108   |
|            |  |  | CPSC 2921     | Comp, Ethnics, Soc Recitation-new course                    | 108-A |
|            |  |  |               |   |       |
|            | <b>B.</b>  | <b>Automotive Engineering</b>                  |               |   |       |
|            |  |  | AUE 4010/6010 | Vehicle Dynamics - new course                               | 109-A |
|            |  |  | AUE 4011/6011 | Vehicle Dynamics Lab - new course                           | 109-B |
|            |  |  | AUE 4020      | Automobile Powertrain Systems - new course                  | 109-C |
|            |  |  | AUE 4021      | Automobile Powertrain Systems Lab - new course              | 109-D |
|            |  |  | AUE 4030      | Automotive Engineering Project -Design Tools - new          | 109-E |
|            |  |  | AUE 4040      | Automotive Engineering Project -Prototyping - new           | 109-F |
|            |  |  |               |   |       |
|            | <b>C.</b>  |  |               | <b>New Policy for All CES Minors</b>                        | 109-G |
|            |  |  |               |   |       |
|            |  |  |               | **CES items added late, so the numbering is to accommodate. |       |
| <b>V.</b>  | <b>College of Health, Education, and Human Development</b> |  |               |   |       |
|            | <b>A.</b>  | <b>Health</b>                                  |               |   |       |
|            |  |  | HLTH 3980     | Hlth Appraisal Skills-change                                | 110   |
|            |  |  |               |   |       |
|            | <b>B.</b>  | <b>Youth, Family and Communication Studies</b> |               |   |       |
|            |  |  | FCS 2010      | International Human Rights                                  | 119   |
|            |  |  |               |   |       |
| <b>VI.</b> | <b>Interdisciplinary</b>                                   |  |               |   |       |
|            | <b>A.</b>  | <b>Innovation</b>                              |               |   |       |
|            |  |  | INNO 1990     | Innovation Cross-disciplinary CI-new course                 | 122   |
|            |  |  | INNO 2990     | Cross-disciplinary CI-new course                            | 125   |
|            |  |  | INNO 3990     | Cross-disciplinary CI-new course                            | 128   |
|            |  |  | INNO 4990     | Cross-disciplinary CI-new course                            | 131   |
|            |  |  |               | Example Provided  | 137   |