



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: June 3, 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

The Undergraduate Curriculum Committee met on May 6, 2016 to approve the attached curriculum/course changes received in the Office of the Provost, June 3, 2016. The purpose of this memorandum is to respectfully request that you review this information and concur by giving final signature approval.

APPROVED:

*Please note: the Certificate in Automotive Engineering requires CTE approval.*

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

*Robert 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—May 6, 2016 —1:30 PM  
E304 Martin Hall

- I. Call to order**
- II. Introductions**
- III. Consideration of April meeting minutes**
- IV. New Business**
- V. Old Business**
  - A. 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
  - F. Ethical Judgment – Dan Wueste
  - G. Critical Thinking – Sarah Winslow
  - H. Communication – Cameron Bushnell
- VI. Curricula/course approvals - attached**
- VII. Other business**
- VIII. Adjourn**



6 May 2016

TO: Donna Barrett, Records & Registration  
Rhonda Todd, Undergraduate Studies

FROM: Pat Zungoli, Interim Chair, Agricultural &  
Environmental Sciences

A handwritten signature in cursive script that reads "Pat Zungoli".

RE: Blanket substitution for AGRB leadership requirement

**Department of  
AGRICULTURAL  
AND  
ENVIRONMENTAL  
SCIENCES**

For curriculum years 2013-14 – 2016-17 please add AGED 4160 as an option for the Leadership requirement. The intent is to add this course to the curriculum by 2017-18.

College of  
AGRICULTURE,  
FORESTRY & LIFE  
SCIENCES  
E143 P&A Bldg.  
Box 340310  
Clemson, SC  
29634-0310  
(864) 656-4964  
FAX (864) 656-4960

Thanks you.

cc: Ms. Christi Leard  
Dr. Michael Vassalos  
Dr. David Willis

University Undergraduate Curriculum Committee  
Minutes Meeting  
E304 Martin Hall  
April 1, 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; Chris Vinson; Jeff Appling; Cecelia Hamby; Donna Barrett; Shannon Clark; Dan Wueste; Penny Brunner; John Cooper; LeDon Wilson and Rhonda Todd

**Guests:** Cora Allard Keese

Griffin convened the meeting at 1:30 PM

**Introductions**

Griffin welcomed the committee and opened the meeting for introductions.

**Approval of minutes**

Wolfe recommended adding the Engineering proposals require a 2.0 minimum GPA and minors to be included. The committee agreed to approve the amended March minutes.

**New Business**

- A. **Academic Council Report** - Griffin reported that Industrial Engineering's GPA requirement of 2.6 was tabled at the Academic Council meeting yesterday. The Council was concerned about the GPA requirements are placing a barrier for many of our students. Clark reminded the committee that this will not be in the Undergraduate Announcements this year since it was tabled. Griffin stated that the Academic Council requested that he evaluate the effects of GPA restriction, since the University is planning future growth. Kosinski stated that the growth of the past few years has already pushed Biological Sciences to its enrollment limit. Griffin stated that the Student Success Collaborative and Cross Campus Advising will help us with many of these struggling students with friendly intervention to assist students with a better program fit. He promises to bring the data to this committee for discussion.
- B. **Curriculog** – Griffin reported that discussions are going on with the Provost, the Registrar and Enrollment Management about incorporating Curriculog. He stated that this will help us eliminate the difficulty of dealing with the current system, and help us get rid of all this paper.
- C. **Curriculum Without a College Home** – Griffin stated that as more interdisciplinary courses are created outside of the colleges, he asked the Provost about who should sign in the place of the dean on these forms, and the Provost requested that he sign as the dean for these courses.
- D. **May Meeting** – Griffin asked if a May meeting was necessary. The committee determined that a May meeting was necessary.
- E. **Classical Languages** – Appling stated that he received the following recommendation from Salvador Oropesa for IB exam scores for Classical Languages:  
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

## Old Business

- A. Curriculum Cleanup** – Griffin stated that he appreciated everyone’s efforts in removing the “see advisor” statements from curriculum maps and *Undergraduate Announcements*. (attached as follows)
1. Bioengineering
  2. Chemistry
  3. Electrical and Computer Engineering
  4. Physics
  5. Materials Science and Engineering
  6. Mechanical Engineering
- B. Double/Triple Dipping Policy** – Appling stated that he did not hear from any volunteers for the ad hoc committee to develop a policy to deal with tripling dipping of course credits. He suggested that he might put something together and get some feedback from committee members, and bring before the committee for a vote. The committee discussed and agreed this might be the best process nearing the end of the semester.
- 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 – The committee approved the recommendation to accept ENGR 2210 for STS credit.
  - f. Ethical Judgment – Dan Wueste
  - g. Critical Thinking – Sarah Winslow
  - h. Communication – Cameron Bushnell

**Curriculum/course approval** – See attached course list. Items in gray were tabled.

## Other Business

Wueste encouraged committee members to remind students about the Ethics Essay Competition due on Monday, April 11, 2016.

The meeting adjourned at 3:13 PM.

Minutes respectfully submitted by Rhonda Todd

## Rhonda Todd

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**From:** Pamela Mack <pammack@clemson.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

AGENDA  
**University Undergraduate Curriculum Committee Meeting**  
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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 Biophotics	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

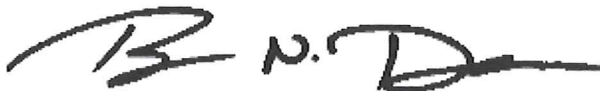
March 11, 2016

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.

<b>Courses Outside of Chemistry that are Accepted</b>	<b>Course Title</b>
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

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

ph (864) 656-3417  
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>

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<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>

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<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:

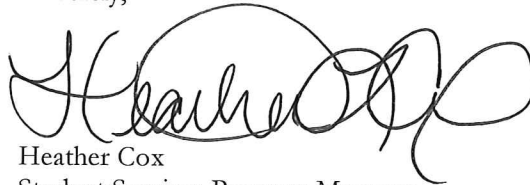
**MATERIALS SCIENCE &  
ENGINEERING**

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:

- 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.

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@clemson.edu](mailto:debsl@clemson.edu)  
 864-656-5622

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

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

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

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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: Arts & Humanities Literature (3 hrs)	Category V: Arts & Humanities (A&H) Non-Literature (3 hrs)	Category VI: Social Science (SS) (6 hrs from 2 different fields)	Category V or VI: 5 <sup>th</sup> A&H or SS course (3 hrs)	NO Arts & Humanities, NO Social Science NO 5 <sup>th</sup> course but ONLY CCA or STS
<p>No Cross-Cultural Awareness (CCA)</p> <p>No Science and Technology in Society (STS)</p>	<p>ENGL Any 2000- level ENGL literature course CHIN 4010 FR 3000, 3040 GER 2600, 3060, 3600, 3610 HON 1900, 2210 ITAL 3010, 3020 JAPN 4010, 4060 RUSS 3600, 3610 SPAN 3110, 3130</p>	<p>AAH 1010 ART 3750 CAAH 2010 CHIN (PHIL) 3120, (PHIL) 3130, 4990, COMM 1800, 3030, 3080, 3090, 4020, ENGL (GW) 3010, 3550, 3570, (LANG) 4540 FR 3070, GW (ENGL) 3010, 4050 GER 3400, HON 1910, 2030, 2100, 2220 HUM 3010, 3020, 3060 JAPN 3070, 3080 LANG 3400, 3420, 3560, (ENGL) 4540 MUSC 3080, 3090, 3110, 3120, 3130, 3170, 3610, 3620, 3630, 3640, 3690, 3700, 3710, 3720 PHIL 1010, 1020, 1030, (CHIN) 3120, (CHIN) 3130, 3160, 3170, 3180, 3230, 3250, 3270, 3440 REL 3010, 3020, 3030, 3060, 3070, 3120, 3130, 3150 RUSS 3400 SPAN 3070, 3080 THEA 2100, 2790, 3080, 3090, 3150, 3160, 3170 WS 3010</p>	<p>AGRB 2020, 2570, ECON 2000, 2110, 2120 GEOG 1010, 1060, HIST 1010, 1020 HON 1920, 2020, 2200 POSC 1010, 1030 PSYC 2010 RS 3010 SOC 2010, 2020 (Note: AGRB and ECON are considered same field)</p>	<p>Any 1xxx, 2xxx, 3xxx, or 4xxx course in: A A H, ANTH, ART, COMM(excl. 1500/2500), DANCE, EAS 1230, ECON, GW, GEOG, HIST, HUM, LANG, LAW, MUSC, P A S, P A, PHIL, POSC, PSYC, REL, R S, SOC, THEA, W S Any 2xxx, 3xxx, 4xxx course in: ENGL (excl. 2170, 3140, 3150) Any 1xxx, 2xxx course in: AGRB</p> <p>Any A S L, ARAB, CHIN, FR, GER, ITAL, JAPN, PORT, RUSS, or SPAN course, <i>not in the student's native language.</i> Plus any course to left in this row.</p>	<p>HON 1930, 2090 LANG 2500, 2540 IS 1010 Or through a University-approved cross-cultural experience</p>
<p>Cross Cultural Awareness (CCA) (superscript <sup>1</sup>in catalog)</p>		<p>ART 2100 ASL 3050 COMM 1800 HUM 3090 MUSC 2100, 3140 REL 1010, 1020</p>	<p>ANTH 2010 GEOG 1030 HIST 1720, 1730, 1930 PAS 3010 POSC 1020, 1040 PSYC 2500</p>	<p>AAH 1020 AGRB 2050* CAAH 2010 IS 2100 LANG 2500, 2540 W S 1030 Plus any course to left in this row.</p>	<p>HON 1930, 2090 LANG 2500, 2540 IS 1010 Or through a University-approved cross-cultural experience</p>
<p>Science and Technology in Society (STS) (superscript <sup>1</sup>in catalog)</p>		<p>HON 2010 LARC 1160 PHIL 1240, 2100, 3240, 3260, 3450 STS 1010, 1020, 2150, 3010, 3030</p>	<p>HIST 1220, 1240 PSYC 2750</p>	<p>AGRB 2050* (ECON) 4570 COMM 1070, 3070 ECON 3190, (AGRB) 4570 ENGL 3490 HIST 3210, 3220, 3230, 3920, 4240, 4910 MUSC 3180 PHIL 3280, 3400 RS (SOC) 4010 SOC (RS) 4010, 4030 STS 1200, 1710, 2160, 4980, 4990 Plus any course to left in this row. *Satisfies both CCA and STS</p>	<p>AGED (EDF) 4800 AVS 3150, 4150 BIOL 2000, 2010, 2030, 2040, 2100, 2110, 2200, 4730 CH 1050, 1060 CITE 1150, 2210 ECE 1010 EDF (AGED) 4800, (FOR) 4160 ENGL 3490, ENGR 2200 ENR 3120, (FOR) 4160 ENSP (GEOL) 1250, 2000, (PES) 3150, 4000 ENT 2000 FDSC 2140 FOR (ENR) 4160</p> <p>GEOL 1120, 1200, (ENSP) 1250, 2700, 3000 HCG (NURS) 3330 HLTH 4310 HON 1940, 2060 IE 4880 MKT 4450 MSE 1010 NURS 1400, (HCG) 3330 NUTR 2030, 2100 PES (ENSP) 3150 PHYS 2450 PKSC 3680 PLPA 2130 PRTM 2110 STAT 2220, STS 1200, 1710, 2150, 2160, 4980, 4990</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.

2/2

# MEMO

To: Dean John Griffin, Chair, UUCC

From: Caroline Dunn, History Dept Curriculum Committee

Date: 2/27/16

Subject: "See advisor" lists

CC: James Burns, Chair - History Department; Megan Taylor Shockley, Coordinator - Public History Emphasis Area; Joe Mazer, Chair -- AAH Curriculum Committee; Rhonda Todd - Undergraduate Studies; Jeff Appling - Undergraduate Studies

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The History Department, specifically the Public History Emphasis Area, would like to remove the phrase "or another course approved by the emphasis area coordinator" from the B.A. requirements, currently located on page 67 of the Undergraduate Announcements.

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.

**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

\* \* \*

### **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.

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	Sneior 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
			Prerehabilitatioin Sci - change major	47
<b>II.</b>	<b>College of Architecture, Arts and Humanities</b>			
	<b>A.</b>	<b>English</b>		
			Writing - change minor reuquirements	50
	<b>B.</b>	<b>World Cinema</b>		
		WCIN 4570	Global Hollywood - change a cross reference	53
		WCIN 4580	Adaptations of Wold 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 Buisness 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
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			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
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