

**AGENDA**  
**Faculty Senate Meeting**  
**October 29, 2024 – 3:45 pm, Lowrimore Auditorium**

- I. Call to order**
- II. Approval of Minutes from the September 24, 2024 meeting**
- III. Report from the Executive Committee**
- IV. Report from the Academic Affairs Committee (*See the attachment for complete proposals. See the appendix for supporting materials.*)**
  - 1. Proposals from the Program of African and African American Studies**
    - A. Add AAAS 300
    - B. Add AAAS 301
    - C. Modify AAAS Minor requirements
    - D. Modify AAAS Collateral requirements
  - 2. Proposals from the Department of Biology**
    - A. Modify BIOL 413 course number and prerequisites
    - B. Modify BIOL 308 prerequisites
    - C. Modify BIOL 400 prerequisites
    - D. Modify BIOL 411 prerequisites
    - E. Modify BIOL 412 prerequisites
    - F. Modify BIOL 440 prerequisites
    - G. Modify BIOL 491 prerequisites
    - H. Add BIOL 299
    - I. Modify BIOL 499
    - J. Modify Biology Major requirements
    - K. Modify Environmental Science Major course listings
    - L. Modify BIOL 413 course number for Environmental Science Major
    - M. Modify BIOL 413 course number in course options for Environmental Science Major
    - N. Modify Biology Major: Secondary Education Option requirements and course listings
    - O. Modify Biology Veterinary Studies Option course listings
    - P. Modify Biology Major four-year plan
    - Q. Modify Biology Major: Secondary Education Option four-year plan
    - R. Modify Biology Major: Veterinary Studies Option four-year plan
  - 3. Proposals from the Department of Fine Arts, Visual Arts Program and Theatre Program**
    - A. Modify Teacher Licensure Option B.A. in Art Education
    - B. Delete B.A. option for Art Education

- C. Modify THEA 320 course title and description
- D. Delete THEA 321
- E. Modify THEA 405 course credits and description
- F. Modify Specialty Tracks in Theatre Arts course requirements

**4. Proposals from the Department of Mathematics**

- A. Modify Other Information paragraph regarding MATH 170, 270, and 370
- B. Modify Other Information paragraph regarding MATH 134
- C. Modify Statistics Minor description

**5. Proposals from Modern Languages**

- A. Modify French Track offerings
- B. Modify Spanish Track offerings
- C. Modify Modern Languages Mission Statement
- D. Delete French and Spanish four year plans
- E. Modify upper-level French courses prerequisites
- F. Modify upper-level Spanish courses prerequisites
- G. Delete Spanish 210 or Spanish 220 substitute NOTE
- H. Delete French 497 Special Studies NOTE
- I. Modify AP scores French course list
- J. Modify AP scores Spanish course list
- K. Modify AP scores CLEP Program course list
- L. Modify IB scores course list

**6. Proposals from the Department of Physics and Engineering**

- A. MODIFY prerequisites for PHYS 320
- B. MODIFY prerequisites for PHYS 406
- C. MODIFY course number for ASTR 201
- D. MODIFY course description and course number for ASTR 202
- E. MODIFY prerequisites for ASTR 203
- F. MODIFY requirements for collateral in astronomy
- G. MODIFY course description and credit hours for PHYS 312
- H. ADD PHYS 212
- I. ADD PHYS 330
- J. ADD PHYS 331
- K. ADD PHYS 332
- L. MODIFY major requirements for the computational physics concentration in the physics major

**7. Proposals from the Department of Psychology**

- A. Modify Psychology Major requirements
- B. Modify PYSC 304 prerequisites

**V. Report from the Graduate Council (*See the attachment for complete proposals. See the appendix for supporting materials*).**

There were no proposals sent forward from GC this cycle.

VI. Old Business

VII. New Business

VIII. Announcements

IX. Adjournment

## Attachment to the Faculty Senate Agenda – October 29, 2024

### IV. Report from the Academic Affairs Committee

#### 1. Proposals from the Program of African and African American Studies

A. **ADD** on page 179 of the current catalog the new course

**300 Applied African and African American Studies** (3) (Prerequisite: AAAS 200). This course provides an exploration of the practical application of the African American Studies theoretical and methodological framework in the workplace. Drawing on the applied Black studies framework developed, students will examine how the African and African American Studies program provides them with a unique perspective that is valuable to not only to their community, but also to employers. Students will discuss how Black studies may aid in creating, maintaining, and reproducing cultural competencies within organizations. Special attention will be given to the creation and maintenance of an equitable organizational culture. After completing this course, students will better understand the value of their skillset to employers and be able to clearly articulate said value.

B. **ADD** on page 179 of the current catalog the new course

**301 African and African Studies Internship** (3) (Prerequisite: AAAS 200). The internship provides an opportunity for the practical application of skills and cultural competencies learned through the AAAS program through a supervised work experience. Students will work for a public agency, non-profit organization, or private company in their field of study. At least 35% of the work completed during the internship will be specific to African and African American Studies. A student must have approval from a director of African and African American Studies at two weeks before the start of the semester in which the credit is to be received. The African and African American Studies Internship cannot be repeated.

#### **RATIONALE FOR A-B:**

Adding AAAS 300 and 301 will provide students with a capstone experience and align with the focus on the practical application of skills learned in the AAAS program.

- C. **MODIFY** under MINOR, the list of elective courses on page 178 - 179 of the current catalog:

**FROM:**

**MINOR**

Complete 18 semester hours including the following:

- I. Complete the following **3** requirements:
  - A. Complete the following course:  
AAAS 200: Introduction to African and African American Studies
  - B. Complete 1 course from the following:  
~~HIST 311: History of Black America to 1865~~  
~~HIST 312: History of Black America since 1865~~  
~~HIST 370: African History~~
  - C. Complete the following course:  
~~ENGL 348: African American Literature~~
- II. Complete **9**-semester hours from the following (no more than **one course** from any one discipline)
  - ARTH 360: Islamic and African Art
  - ECON 323: Urban and Regional Economics
  - ECON 410: Labor Economics
  - ENG 384: African American Film History
  - ENG 448: Advanced Study in African-American Literature
  - GEOG 205: Geography of South Carolina
  - GEOG 303: Geography of Latin America
  - GEOG 306: Geography of Sub-Saharan Africa
  - GEOG 307: Geography of the Middle East and North Africa
  - HIST 310: Representations of Race
  - HIST 311: History of Black America to 1865
  - HIST 312: History of Black America since 1865
  - HIST 313: The American Civil Rights Movement
  - HIST 316: South Carolina History
  - HIST 339: The Atlantic World
  - HIST 344: The Old South, 1660 to 1865
  - HIST 345: The New South, 1865 to the present

HIST 346: Civil War America  
 HIST 370: African History  
 HIST 420: Archaeology in  
 South Carolina  
 POLI 311: Southern Politics  
 POLI 322: Civil Rights and  
 Civil Liberties  
 PSYC 319: Social Psychology  
 SOCI 306: Social Problems  
 SOCI 310: Race and Society  
 SOCI 331: Environment and Society  
 SOCI 333: Urban Sociology  
 SOCI 334: Population and Society  
 SOCI 349: Hate Crimes and  
 Terrorism  
 SOCI 382: Families Public  
 and Private

**TO:**

**MINOR**

Complete 18 semester hours including the following:

- I. Complete the following 2 requirements:
  - A. Complete the following course:  
 AAAS 200: Introduction to African and African American  
 Studies
  - B. Complete 1 of the following:  
 AAAS 300: Applied African and African American Studies  
 AAAS 301: African and African Studies Internship
- II. Complete 12 semester hours from the following (no more than 9 credit  
 hours from any discipline, with the exception of AAAS courses)  
 AAAS 201: Special Topics in African and African American Studies  
 AAAS 497: African American Studies: Special Studies  
 ARTH 360: Islamic and African Art  
 ECON 323: Urban and Regional  
 Economics  
 ECON 410: Labor Economics  
 ENG 384: African American  
 Film History  
 ENG 448: Advanced Study in African-  
 American Literature GEOG 205: Geography of  
 South Carolina  
 GEOG 303: Geography of Latin America  
 GEOG 306: Geography of

## Subsaharan Africa

GEOG 307:	Geography of the Middle East and North Africa
HIST 310:	Representations of Race
HIST 311:	History of Black America to 1865
HIST 312:	History of Black America since 1865
HIST 313:	The American Civil Rights Movement
HIST 316:	South Carolina History
HIST 339:	The Atlantic World
HIST 344:	The Old South, 1660 to 1865
HIST 345:	The New South, 1865 to the present
HIST 346:	Civil War America
HIST 370:	African History
HIST 420:	Archaeology in South Carolina
POLI 311:	Southern Politics
POLI 322:	Civil Rights and Civil Liberties
PSYC 319:	Social Psychology
SOCI 306:	Social Problems
SOCI 310:	Race and Society
SOCI 331:	Environment and Society
SOCI 333:	Urban Sociology
SOCI 334:	Population and Society
SOCI 349:	Hate Crimes and Terrorism
SOCI 382:	Families Public and Private

D. **MODIFY:** under COLLATERAL, the list of elective courses on page 179 of the current catalog:

**FROM:**

**COLLATERAL**

Complete 12 semester hours, including the following:

- I. Complete the following **3-requirements:**
  - A. Complete the following course:  
AAAS 200: Introduction to African and African American Studies
  - B. **Complete 1 course from the following:**  
**HIST 311: History of Black America to 1865**

~~HIST 312: History of Black America since 1865~~

~~HIST 370: African History~~

~~C. Complete the following course:~~

~~ENGL 348: African American Literature~~

II. Complete 6-semester hours from the following (no more than one course from any one discipline)

AAAS 201: Special Topics in African and African American Studies

ARTH 360: Islamic and African Art

ECON 323: Urban and Regional

Economics ECON 410:

Labor Economics

ENG 348: African-American  
Literature

ENG 384: African-American  
Film History

ENG 448: Advanced Study in African-  
American Literature GEOG 205: Geography of  
South Carolina

GEOG 306: Geography of Sub-Saharan Africa

GEOG 307: Geography of the Middle East and  
North Africa

HIST 310: Representations of Race

HIST 311: History of Black America to 1865

HIST 312: History of Black America since 1865

HIST 313: The American Civil Rights Movement

HIST 316: South Carolina History

HIST 339: The Atlantic World

HIST 344: The Old South, 1660 to 1865

HIST 345: The New South, 1865 to  
the present

HIST 346: Civil War America

HIST 370: African History

HIST 420: Archaeology in  
South Carolina

POLI 311: Southern Politics

POLI 322: Civil Rights and  
Civil Liberties

PSYC 319: Social Psychology

SOCI 306: Social Problems

SOCI 310: Race and Society

SOCI 331: Environment and Society

SOCI 333: Urban Sociology

SOCI 334: Population and Society

SOCI 349: Hate Crimes and  
Terrorism

SOCI 382: Families Public and

Private

**TO:**

**COLLATERAL**

Complete 12 semester hours, including the following:

- I. Complete the following requirement:
  - AAAS 200: Introduction to African and African American Studies
- II. Complete 9 semester hours from the following (no more than one course from any one discipline)
  - AAAS 201: Special Topics in African and African American Studies
  - AAAS 300: Applied African and African American Studies
  - AAAS 301: African and African Studies Internship
  - AAAS 497: African American Studies: Special Studies
  - ARTH 360: Islamic and African Art
  - ECON 323: Urban and Regional Economics
  - ECON 410: Labor Economics
  - ENG 348: African-American Literature
  - ENG 384: African-American Film History
  - ENG 448: Advanced Study in African-American Literature
  - GEOG 205: Geography of South Carolina
  - GEOG 303: Geography of Latin America
  - GEOG 306: Geography of Sub-Saharan Africa
  - GEOG 307: Geography of the Middle East and North Africa
  - HIST 310: Representations of Race
  - HIST 311: History of Black America to 1865
  - HIST 312: History of Black America since 1865
  - HIST 313: The American Civil Rights Movement
  - HIST 316: South Carolina History
  - HIST 339: The Atlantic World
  - HIST 344: The Old South, 1660 to 1865
  - HIST 345: The New South, 1865 to the present
  - HIST 346: Civil War America
  - HIST 370: African History



HIST 420:	Archaeology in South Carolina
POLI 311:	Southern Politics
POLI 322:	Civil Rights and Civil Liberties
PSYC 319:	Social Psychology
SOCI 306:	Social Problems
SOCI 310:	Race and Society
SOCI 331:	Environment and Society
SOCI 333:	Urban Sociology
SOCI 334:	Population and Society
SOCI 349:	Hate Crimes and Terrorism
SOCI 382:	Families Public and Private

### **RATIONALE FOR C-D:**

The proposed changes will update the list of required and elective courses that count toward the minor or collateral for the African and African American Studies (AAAS) program. It includes two AAAS courses all in the catalog that have been left off previous lists (AAAS 201 and AAAS 497). Reducing the number of required courses and increasing the number of electives will ensure that students are more easily able to complete the minor or collateral.

## **2. Proposals from the Department of Biology**

- A. **MODIFY** on page 69-70 of the current catalog to change the course number and prerequisites

### **FROM:**

**413 Biostatistics and Research Methods** (3) (Prerequisite: 105/115 or 107 and 106 or 108 and **Math 132** or higher, or permission of the department). Experimental design and analysis for the biological sciences. Covers considerations in designing experiments as well as appropriate statistical analysis for each design. Designs and analysis from a variety of biological fields will be covered.

### **TO:**

**218 Biostatistics and Research Methods** (3) (Prerequisite: 105/115 or 107 and 106 or 108 and **Math 111** or higher, or permission of the department). Experimental design and analysis for the biological sciences. Covers considerations in designing experiments as well as appropriate statistical analysis for each design. Designs and analysis from a variety of biological fields will be covered.

### **RATIONALE FOR A:**

Quantitative reasoning skills have become a necessity for students graduating with a BS in Biology. Many graduate schools, Medical Schools, and Veterinary Schools now require or recommend a biostatistics class. Additionally, quantitative skills are increasingly needed by new graduates as they enter the job market. This course provides essential tools that biology majors need to analyze and interpret biological data. The 413 course was added in 2012-2013 and has been offered as a biology elective since that time. Moving forward, we will be making biostatistics a requirement for the biology major and we want students to be able to start taking as early as the sophomore year. These proposals are to change the number of “Biostatistics and Research Methods” from 413 to 218 and reduce the pre-requisites to reflect the change in level.

This proposal will bring the Biology Degrees on par with other degrees at FMU which already require a statistics course (e.g., Biology Secondary Education, Psychology, Sociology, Industrial Engineering, and Mechanical Engineering). In addition, the FMU BS in Biology is only one of two BS degrees at state institutions (The Citadel being the other) that does not currently require a statistics course. This proposal will elevate the FMU BS in Biology to the same standards that are shared by nearly all other SC state institutions of higher education.

This course number change will also impact the Statistics Minor in the Mathematics Department. The proposed change has been discussed with the Mathematics Department and they are submitting the appropriate forms to change their Statistics Minor elective to include BIOL 218 instead of BIOL 413.

- B. MODIFY** on page 69 of the current catalog to add BIOL 218 as a prerequisite for BIOL 308 Aquatic Ecology

**FROM:**

**308 Aquatic Ecology** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 or permission of the department and Chemistry 112 and 112L)

**TO:**

**308 Aquatic Ecology** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 **and 218** or permission of the department and Chemistry 112 and 112L)

- C. MODIFY** on page 69 of the current catalog to add BIOL 218 as a prerequisite for BIOL 400 Fisheries Science and Management

**FROM:**

**400 Fisheries Science and Management** (4) (Prerequisite: 106 or 108 and Math 132 or higher or permission of department)

**TO:**

**400 Fisheries Science and Management** (4) (Prerequisite: 106 or 108 **and 218** and Math 132 or higher or permission of department)

- D. **MODIFY** on page 70 of the current catalog to add BIOL 218 as a prerequisite for BIOL 411 Ecology

**FROM:**

**411 Ecology** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 and Chemistry 112 and 112L). F, S General principles

**TO:**

**411 Ecology** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 **and 218** and Chemistry 112 and 112L). F, S General principles

- E. **MODIFY** on page 70 of the current catalog to add BIOL 218 as a prerequisite for BIOL 412 Animal Behavior

**FROM:**

**412 Animal Behavior** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 and junior status or permission of the department)

**TO:**

**412 Animal Behavior** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 **and 218** and junior status or permission of the department)

- F. **MODIFY** on page 70 of the current catalog to add BIOL 218 as a prerequisite for BIOL 440 Ecotoxicology

**FROM:**

**440 Ecotoxicology** (4:3-3) (Prerequisites: 105/115 or 107 and 106 or 108 and Chemistry 201 or CHEM 203 or permission by department)

**TO:**

**440 Ecotoxicology** (4:3-3) (Prerequisites: 105/115 or 107, and 106 or 108, **and 218**, and Chemistry 201 or CHEM 203 or permission by department)

- G. **MODIFY** on page 70 of the current catalog to add BIOL 218 as a prerequisite for BIOL 491 Research for the Secondary Educator

**FROM:**

**491 Research for the Secondary Educator** (1). (1:3) (Prerequisite: 105/115 or 107 and 106 or 108 or permission of the department)

**TO:**

**491 Research for the Secondary Educator** (1). (1:3) (Prerequisite: 105/115 or 107 and 106 or 108 **and 218** or permission of the department)

### **RATIONALE FOR B-G:**

Moving biostatistics to a sophomore level allows us to make it a pre-requisite for courses that lean heavily into the application of those methods. These changes add 218 to the catalog descriptions for those courses.

#### **H. ADD** on page 69 of the current catalog the new BIOL 299 course

**299 Sophomore Seminar** (1) (Prerequisite: 8 hours in biology or permission of the department). F, S. Seminar class for Biology majors. Topics will focus on scientific literature review, preparation for careers after graduation in the biological sciences, including the job application process, finding and applying for internships, MCAT, GRE, faculty mentored research, and how to find and apply for graduate school.

#### **I. MODIFY** on page 71 of the current catalog to update the course description for 499 Biology Capstone Seminar

#### **FROM:**

**499 Biology Capstone Seminar** (1) (Prerequisite: 16 hours in biology or permission of the department). F, S. Capstone class for Biology majors. Topics will focus on preparation for careers after graduation in the biological sciences, including science jobs, professional schools, and graduate school. Students will gain proficiency in professional communication, resume building, and interview skills.

#### **TO:**

**499 Biology Capstone Seminar** (1) (Prerequisite: 16 hours in biology or permission of the department). F, S. Capstone class for Biology majors. Topics will focus on the job application process, developing a resume, interview skills, and communicating with the public. Students will gain proficiency in professional communication, resume building, and interview skills.

### **RATIONALE FOR H- I:**

Students take 499 in their junior or senior year. However, many of the topics discussed are needed during their junior or senior year. This proposal is to expand the information and skills relevant to career and graduate school preparedness and split that information into two courses. The first is a sophomore seminar (BIOL 299) that will focus on biological sciences careers, internships, faculty mentored research, building a resume, and preparing for MCATS and GRE. These topics will help students get the most out of their time at FMU. The second course (BIOL 499) will now focus on information and skills needed to acquire the job or acceptance into graduate school. For example, this course will focus on professional communication, developing a resume, and interviewing skills. Both courses will give students the additional knowledge and skills needed to increase their chances of employment after graduating FMU.

- J. MODIFY** on page 64 of the current catalog to add BIOL 218-Biostatistics and Research Methods and BIOL 299-Sophomore Seminar courses. Change the elective credits from 11-12 to 8. And add BIOL 440-Ecotoxicology to the ecology block in the Biology Major requirements list.

**FROM:**

Biology .....	<del>36</del> 37 hours
Biology 105/115L* or 107 .....	4
*Biology 103 and 104 may substitute for 105 and 115L with permission from the department	
Biology 106 or 108 .....	4
Cellular Biology Block (either 301, 302, or 407) .....	4
Organismal Biology Block (either 201, 202, 206, 207, 208, 209, 216, 303, 307, 312, 313, or 315) .....	4
Ecology Block (either 308, 317, 318, 400, 411, or 412) .....	4
Genetics Block (either 401, 403, or 409) .....	4
Biology Electives (200 level or above) .....	<del>11-12</del>
Biology Capstone Seminar (499) .....	1

**TO:**

Biology .....	37 hours
Biology 105/115L* or 107 .....	4
*Biology 103 and 104 may substitute for 105 and 115L with permission from the department	
Biology 106 or 108 .....	4
Biostatistics and Research Methods (218) .....	3
Sophomore Seminar (299) .....	1
Cellular Biology Block (either 301, 302, or 407) .....	4
Organismal Biology Block (either 201, 202, 206, 207, 208, 209, 216, 303, 307, 312, 313, or 315) .....	4
Ecology Block (either 308, 317, 318, 400, 411, 412, or 440) .....	4
Genetics Block (either 401, 403, or 409) .....	4
Biology Electives (200 level or above) .....	8
Biology Capstone Seminar (499) .....	1

**RATIONALE FOR J:**

These changes update the list requirements for the Biology Major to include the new courses, update the elective credits to make room, and add ecotoxicology to the ecology courses. Ecotoxicology covers the effects of environmental contaminants on individuals, populations, communities, and ecosystems. Most of the topics in this course will include basic ecological concepts that are also covered in other ecology courses.

- K. MODIFY** on page 65 of the current catalog to change the course number as an option for Environmental Science Majors to reflect the change in course number

**FROM:**

BIOL 201, BIOL 202, BIOL 206, BIOL 207,  
 BIOL 208, BIOL 209, BIOL 212, BIOL 307,  
 BIOL 308, BIOL 312, BIOL 313, BIOL 317,  
 BIOL 318, BIOL 320, BIOL 400, BIOL 411,  
 BIOL 412, **BIOL 413**, BIOL 440, BIOL 442

**TO:**

BIOL 201, BIOL 202, BIOL 206, BIOL 207,  
 BIOL 208, BIOL 209, BIOL 212, **BIOL 218**,  
 BIOL 307, BIOL 308, BIOL 312, BIOL 313,  
 BIOL 317, BIOL 318, BIOL 320, BIOL 400,  
 BIOL 411, BIOL 412, BIOL 440, BIOL 442

- L. **MODIFY** on page 65 of the current catalog to change the course number of the Biostatistics and Research Methods class as an option for Environmental Science Majors.

**FROM:**

Recommendations: Biology **413**: Biostatistics and Research Methods is strongly recommended.

**TO:**

Recommendations: Biology **218**: Biostatistics and Research Methods is strongly recommended.

- M. **MODIFY** on page 65 of the current catalog to change the course number of the Biostatistics and Research Methods class as an option for Environmental Science Majors.

**FROM:**

Recommendations: Biology **413**: Biostatistics and Research Methods is strongly recommended.

**TO:**

Recommendations: Biology **218**: Biostatistics and Research Methods is strongly recommended.

**RATIONALE FOR K-M:**

These changes switch the number for the biostatistics course from 413 to 218 in the Environmental Science Majors list.

- N. **MODIFY** on page 67 of the current catalog to add BIOL 218-Biostatistics and Research Methods, add BIOL 403-Plant Breeding and Genetics to the genetics block, add BIOL 440-Ecotoxicology to the ecology block, and move Education 310, 311, 322, and 420 to the “Pre-Professional Education” block in the Biology: Secondary Education Option course list.

**FROM:**

<b>Biology Course Requirements .....</b>	<b>49 hours</b>
Introductory Biology	
Biology 105/115 or 107 AND 106 or 108 .....	8
Cell & Molecular Biology: one course from Biology 220, 301 .....	4
Organismal Biology: One course from	
Biology 201, 202, 206, 207, 208, 209, 303, 307, 312, 313, 315, or 320.	4
Ecology: One course from Biology 308, 317, 318, 400, 411, 412 .....	4
Genetics: One course from Biology 401, 409 .....	4
Biological Research Methods Biology 413 and 491 .....	4
Biology Electives: Four semester hours of 200 level or above	
Biology courses.....	4
<b>Senior Seminar</b>	
Biology 499 .....	1
<b>Chemistry .....</b>	<b>12</b>
Chemistry 111, 111L, 112, 112L, and 201	
<b>Physics</b>	
Physics 215*.....	4
<b>Education Requirements.....</b>	<b>42 hours</b>
<b>Pre-Professional Education.....</b>	<b>7 hours</b>
Education 190.....	3
Education 192.....	3
<b>Professional Education .....</b>	<b>20 hours</b>
Education 310.....	3
Education 311.....	3
Education 313.....	1
Education 322.....	3
Education 393 and 437 (concurrent).....	5
Education 411.....	3
Education 420.....	3
<b>Student Teaching Block.....</b>	<b>15 hours</b>
Education 487.....	3
Education 490.....	12
*In addition, students are strongly encouraged to take Physics 216.	
<b>Total hours required for graduation .....</b>	<b>128-129</b>

**TO:**

<b>Biology Course Requirements .....</b>	<b>49 hours</b>
Introductory Biology	

Biology 105/115 or 107 AND 106 or 108 .....	8
<b>Biostatistics and Research Methods 218 .....</b>	<b>3</b>
Cell & Molecular Biology: one course from Biology 220, 301 .....	4
Organismal Biology: One course from Biology 201, 202, 206, 207, 208, 209, 303, 307, 312, 313, 315, or 320.	4
Ecology: One course from Biology 308, 317, 318, 400, 411, 412, or 440...	4
Genetics: One course from Biology 401, 403, or 409 .....	4
Biology Electives: Four semester hours of 200 level or above Biology courses.....	4
<b>Research for the Secondary Educator 491 .....</b>	<b>1</b>
<b>Biology Capstone Seminar 499 .....</b>	<b>1</b>
<b>Chemistry .....</b>	<b>12</b>
Chemistry 111, 111L, 112, 112L, and 201	
<b>Physics</b>	
Physics 215*.....	4
<b>Education Requirements.....</b>	<b>42 hours</b>
<b>Pre-Professional Education.....</b>	<b>18 hours</b>
Education 190.....	3
Education 192.....	3
<b>Education 310.....</b>	<b>3</b>
Education 311.....	3
Education 322.....	3
<b>Education 420.....</b>	<b>3</b>
<b>Professional Education .....</b>	<b>9 hours</b>
Education 313.....	1
Education 393 and 437 (concurrent).....	5
Education 411.....	3
<b>Student Teaching Block.....</b>	<b>15 hours</b>
Education 487.....	3
Education 490.....	12
*In addition, students are strongly encouraged to take Physics 216.	
<b>Total hours required for graduation .....</b>	<b>129-130</b>

### **RATIONALE FOR N:**

This change updates the number for the biostatistics course in the list of requirements for the Secondary Education option of the Biology major. It also adds ecotoxicology to the ecology list and plant breeding to the genetics list as options for those blocks. These two courses fulfill those respective requirements for the main biology major. It also updates the education requirements as Education 310, 311, 322, and 420 are now considered “pre-professional” courses.

- O. MODIFY** on page 67 of the current catalog to change the number for BIOL 218-Biostatistics and Research Methods, add the BIOL 299-Sophomore Seminar course, and add BIOL 440-Ecotoxicology to the ecology block in the Biology: Veterinary Studies Option course list.



**FROM:**

<b>Biology</b> .....	<b>33 hours</b>
BIOL 105/115 or 107 .....	4
BIOL 106 or 108 .....	4
Organismal Block: (201, 202, 209, 216, 311, 312, 315) .....	4
Cellular Block: (301, 302, or 407) .....	4
Ecology Block: (308, 317, 318, 400, 411, or 412) .....	4
Genetics Block: (401 or 409) .....	4
Biology Electives (200 level or above) .....	8
Biology Capstone (499) .....	1
<b>Statistics*</b>	
MATH 134 or BIOL 413 .....	3

**TO:**

<b>Biology</b> .....	<b>34 hours</b>
BIOL 105/115 or 107 .....	4
BIOL 106 or 108 .....	4
<b>Sophomore Seminar (299)</b> .....	<b>1</b>
Organismal Block: (201, 202, 209, 216, 311, 312, 315) .....	4
Cellular Block: (301, 302, or 407) .....	4
Ecology Block: (308, 317, 318, 400, 411, 412, or 440) .....	4
Genetics Block: (401 or 409) .....	4
Biology Electives (200 level or above) .....	8
Biology Capstone <b>Seminar</b> (499) .....	1
<b>Statistics*</b>	
MATH 134 or BIOL 218 .....	3

**RATIONALE FOR O:**

These changes update the list requirements for the Biology Veterinary Science Options to include the new courses and update the lists where necessary. It also adds ecotoxicology to the ecology list.

**P. MODIFY** the four-year plan for biology majors on page 73.

**FROM:**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3-4	English 102	3
Mathematics 111 (or 111E) or higher	3	Mathematics 132	3
Biology 105 and 115, 106, 107, or 108	4	Biology 105 and 115, 106, 107, or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>14</b>

Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Organismal) or Biology Elective(s)	4	Biology (Organismal) or Biology Elective(s)	4
Chemistry 201	4	Chemistry minor or 2nd Collateral	3-4
Literature	3	History	3
Political Science 101, 103 or other Social Science	3	Speech Communication	3
Elective	3		
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>13-14</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology Elective(s)	4	Biology (Cell, Developmental or Immunology)	4
Physics 215	4	Physics 216	4
Art 101, Music 101, or Theatre 101	3	Social Science	4
Political Science 101, 103 or other Social Science	3	2nd Collateral or Elective	3
Elective	3	Biology 499	1
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>15</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Ecology) or Biology (Genetics or Evolution)	4	Biology (Ecology) or Biology (Genetics or Evolution)	4
Chemistry minor or 2nd Collateral	3-4	2nd Collateral or Elective	3-4
Humanities Elective	3	Elective	3
Elective	3	Elective	3
Elective	3	Elective	3
<b>Total Credits</b>	<b>16-17</b>	<b>Total Credits</b>	<b>16-17</b>
<b>Total Hours Required for Degree – 122</b>			

**TO:**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3-4	English 102	3
Mathematics 111 (or 111E) or higher	3	Mathematics 132	3
Biology 105 and 115, 106, 107, or 108	4	Biology 105 and 115, 106, 107, or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>14</b>

Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biostatistics and Research Methods	3	Biology Elective	4
Chemistry 201	4	Chemistry minor or 2nd Collateral	3-4
Literature	3	History	3
Political Science 101 or 103	3	Speech Communication	3
Humanities Elective	3	Sophomore Seminar	1
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>14-15</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Cell, Developmental or Immunology) or Biology (Organismal)	4	Biology (Cell, Developmental or Immunology) or Biology (Organismal)	4
Physics 215	4	Physics 216	4
Art 101, Music 101, or Theatre 101	3	Social Science	3
Social Science	3	2nd Collateral or Elective	3
		Biology 499	1
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>15</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Ecology) or Biology (Genetics or Evolution)	4	Biology (Ecology) or Biology (Genetics or Evolution)	4
Chemistry minor or 2nd Collateral	3-4	Biology Elective	4
Elective	3	2nd Collateral or Elective	3
Elective	3	Elective	3
Elective	3	Elective	3
<b>Total Credits</b>	<b>16-17</b>	<b>Total Credits</b>	<b>17</b>
<b>Total Hours Required for Degree – 120</b>			

Q. **MODIFY** the four-year plan for biology: secondary education option on page 74.

**FROM:**

**FOUR YEAR PLAN FOR BIOLOGY MAJORS:  
BIOLOGY SECONDARY EDUCATION OPTION**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3-4	English 102	3
Mathematics 111 (or 111E) or higher	3	Mathematics 132	3
Biology 105 and 115, or 107	4	Biology 106 or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
		Art 101, Music 101, or Theatre 101	3
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>17</b>

Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
History	3	Speech 101	3
Social Science Elective	3	Political Science 101 or 103	3
Literature	3	Education 192	3
Education 190	3	Biology (Organismal)	4
Chemistry 201	4	<del>Biology (Cell)</del>	<del>4</del>
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>17</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Humanities Elective	4	Education 313	1
Education 311	3	Education 322	3
Education 310	3	Education 411	3
Biology (Genetics)	4	Biology (Ecology)	4
Physics 215	4	<del>Biology 413 and 497</del>	<del>4</del>
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>15</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Social Science Elective	3	Education 487	3
Education 420	3	Education 490	12
Education 393	2		
Education 437	3		
Biology Elective	4		
Biology 499	1		
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>15</b>
<b>Total Hours Required for Degree – <del>125-127</del></b>			

**TO:**

**FOUR YEAR PLAN FOR BIOLOGY MAJORS:  
BIOLOGY SECONDARY EDUCATION OPTION**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3-4	English 102	3
Mathematics 111 (or 111E) or higher	3	Mathematics 132	3
Biology 105 and 115, or 107	4	Biology 106 or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
		Art 101, Music 101, or Theatre 101	3
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>17</b>

Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
History	3	Speech 101	3
Social Science Elective	3	Political Science 101 or 103	3
Literature	3	Education 192	3
Education 190	3	Biology (Organismal)	4
Chemistry 201	4	Biology 218	3
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>16</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Humanities Elective	4	Education 313	1
Education 311	3	Education 322	3
Education 310	3	Education 411	3
Biology (Genetics)	4	Biology (Cell)	4
Physics 215	4	Biology (Ecology)	4
		Biology 491	1
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>16</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Social Science Elective	3	Education 487	3
Education 420	3	Education 490	12
Education 393	2		
Education 437	3		
Biology Elective	4		
Biology 499	1		
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>15</b>
<b>Total Hours Required for Degree – 128</b>			

R. **MODIFY** the four-year plan for biology: veterinary studies option on page 76.

**FROM:**

**FOUR YEAR PLAN FOR BIOLOGY MAJORS: VETERINARY STUDIES OPTION  
WITH A CHEMISTRY MINOR OR TWO COLLATERALS**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (English 101E)	3-4	English 102	3
Mathematics 132	3	Speech Communication	3
Biology 105/115, or 107	4	Biology 106 or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>14</b>

Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Organismal)	4	Biology (Elective)	4
Chemistry 201: Organic Chemistry I	4	Chemistry 202 or 2nd Collateral	3-4
Social Science Elective	3	Literature	3
Art 101, Music 101, or Theatre 101	3	Political Science 101 or 103	3
Elective	3	Elective	3
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>16-17</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Physics 215: General Physics I	4	Physics 216: General Physics II	4
Chemistry 404 or 2nd Collateral	3	Biology (Elective)	4
Biology 490: Veterinary Studies	1-2	2 <sup>nd</sup> Collateral or Elective	3
Internship			
History	3	Biology 490: Veterinary Studies	1-2
		Internship	
Social Science Elective	3	Humanities Elective	3
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>15-16</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Ecology)	4	Biology (Genetics or Evolution)	4
Biology (Cell, Developmental, or Immunology)	4	Statistics (MATH 134 or BIOL 218)	3
Biology 499: Biology Capstone Seminar	1	Elective	3
2nd Collateral or Elective	3	Elective	3
Elective	3	Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>16</b>
<b>Total Hours Required for Degree – 120</b>			

**TO:**

**FOUR YEAR PLAN FOR BIOLOGY MAJORS: VETERINARY STUDIES OPTION  
WITH A CHEMISTRY MINOR OR TWO COLLATERALS**

Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (English 101E)	3-4	English 102	3
Mathematics 132	3	Speech 101	3
Biology 105/115, or 107	4	Biology 106 or 108	4
Chemistry 111 and 111L	4	Chemistry 112 and 112L	4
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>14</b>
Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Biology (Organismal)	4	Statistics (MATH 134 or BIOL 218)	3
Chemistry 201: Organic Chemistry I	4	Chemistry 202 or 2nd Collateral	3-4

Social Science Elective	3	Literature	3
Art 101, Music 101, or Theatre 101	3	Political Science 101 or 103	3
Elective	3	Sophomore Seminar	1
<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>	<b>13-14</b>
<b>Junior Year</b>			
<b>Course</b>	<b>Fall Sem. Hrs.</b>	<b>Course</b>	<b>Spring Sem. Hrs.</b>
Physics 215: General Physics I	4	Physics 216: General Physics II	4
Chemistry 404 or 2nd Collateral	3	Biology (Elective)	4
Biology 490: Veterinary Studies	1-2	2nd Collateral or Elective	3
Internship			
History	3	Humanities Elective	3
Social Science Elective	3	Elective	3
<b>Total Credits</b>	<b>14-15</b>	<b>Total Credits</b>	<b>17</b>
<b>Senior Year</b>			
<b>Course</b>	<b>Fall Sem. Hrs.</b>	<b>Course</b>	<b>Spring Sem. Hrs.</b>
Biology (Ecology)	4	Biology (Genetics or Evolution)	4
Biology (Cell, Developmental, or Immunology)	4	Biology (Elective)	4
Biology 499: Biology Capstone Seminar	1	Elective	3
2nd Collateral or Elective	3	Elective	3
Elective	3	Elective	2-3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>16-17</b>
<b>Total Hours Required for Degree – 120</b>			

### **RATIONALE FOR P-R:**

These changes update the four-year plans for majors and options affected by the above modifications. Changing 497 to 491 in item V and changing the totals in items V and W are fixing artifact errors from previous additions that were made to the catalog.

### **3. Proposals from the Department of Fine Arts: Visual Arts Program**

#### **A. MODIFY on approx. page 99-100 of the current catalog under DEPARTMENT OF FINE ARTS, VISUAL ARTS, TEACHER LICENSURE OPTION IN ART EDUCATION**

#### **FROM:**

#### **TEACHER LICENSURE OPTION IN ART EDUCATION**

Coordinator: Dr. Eunjung Chang

Students in the art education program receive an education equivalent to a B.A. or B.S. in Art Education.

#### **TO:**

## TEACHER LICENSURE OPTION IN ART EDUCATION

Coordinator: Dr. Eunjung Chang

Students in the art education program receive an education equivalent to a **B.A. or B.S.** in Art Education.

- B. DELETE all references to the “B.A” under ART EDUCATION section on approx. page 100 of the current catalog under DEPARTMENT OF FINE ARTS, VISUAL ARTS, TEACHER LICENSURE OPTION IN ART EDUCATION.**

<b>General Education (B.A.)</b> .....	<b>48-49 hours</b>	<b>NOTE:</b>
<b>The B. A. is no longer an option for Teacher Certification in Visual Arts. Art Education students must meet the General Education requirements for the B. S.</b>		
Communications.....	21-22 hours	
English 101 (or English 101E/L).....	3 or 4	
English 102.....	3	
Speech Communication 101.....	3	
Foreign Language.....	12	
<b>Social Sciences</b> .....	<b>9 hours</b>	
Anthropology 200 or Geography 101.....	3	
Political Science 101 or 103.....	3	
Additional three hours to be chosen from economics, geography, political science, sociology, or Honors 250-259.....	3	
<b>Humanities</b> .....		
Literature (in any language).....	3	
History.....	3	
Art History 220.....	3	
Art History 221.....	3	
Art 203.....	3	
<b>Mathematics</b> .....	<b>6 hours</b>	
Mathematics 121 or higher.....		
<b>Natural Sciences</b> .....	<b>8 hours</b>	
Biological Science with lab.....	4	
Physical Science with lab.....	4	
<b>Professional Education</b> .....	<b>34 hours</b>	
Education 190.....	3	
Education 192.....	3	
Education 311.....	3	
Education 313.....	2	
(taken with Education 311)		
Education 420.....	3	
Education 391, 392, or 393.....	2	
Education 411.....	3	
Education 487.....	3	
Education 490.....	12	



(487 and 490 must be taken in the same semester)

<b>Teaching Area</b> .....	<b>51 hours</b>
Design/Technology Courses .....	12 hours
Art 203.....	3
Art 204.....	3
Art 205.....	3
Art 206.....	3
Studio Courses.....	15 hours
Select nine hours from Art 207, 208, 210, 215, 218, 230, 231.....	9
Select six hours above the 299 level.....	6
Art History Courses.....	12 hours
Art History 220*.....	3
Art History 221*.....	3
Select three hours from Art History 350, 360, 370.....	3
Select three hours from Art History 340, 380, 390, 400.....	3
Art Education Courses.....	12 hours
Art Education 312.....	3
Art Education 415.....	3
Art Education 416.....	3
Art Education 501.....	3
*Art History 220 and 221 fulfill 6 of the 12 General Education Humanities requirements	
No minor/collateral requirements.	

**RATIONALE FOR A-B:**

The B.A. option for Art Education students is not approved by our accrediting agency (NASAD-National Association for Schools of Art and Design) and is being removed. No students have ever been enrolled in the B.A. option.

**3. Proposals from the Department of Fine Arts: Theatre Program**

**C. MODIFY on approx. page 98 of the current catalog under THEATRE COURSES the course title and description**

**FROM:**

**320 Theatre History I: Beginning to 1700** (3) **Prerequisite: English 102) AF.** Study of the Western theatre, both its physical form and literature, from the beginning to **1700.**

**TO:**

**320 Theatre History:** (3) Study of the Western theatre, both its physical form and literature, from the beginning to **the present.**

**D. DELETE: On approx. page 98 of the current catalog under THEATRE COURSES**

**321 Theatre History II: 1700 to the present** (3) Prerequisite: English 102) AF. Study of the Western theatre, both its physical form and literature, from 1700 to the present. I.

**RATIONALE FOR C-D:**

In an attempt to reduce the number of hours for the major and with the retirement of one of our faculty, combining these two courses into one course will benefit both the students and the program. In general, only a BFA program would require more than one theatre history course.

**E. MODIFY on approx.. page 98 of the current catalog under THEATRE COURSES the number of credits and description of 405**

**FROM:**

**405 Advanced Acting** (2) (Prerequisite: 205) AS. Emphasis on the practical application of Stanislavski's principles of psycho-technique and their subsequent interpretations.

**TO:**

**405 Advanced Acting** (3) (Prerequisite: 205 or permission of the department) Emphasis on the practical application of Stanislavski's principles of psycho-technique and their subsequent interpretations. Also covers professional audition techniques and preparation.

**RATIONALE FOR E:**

This accomplishes two things. 1) It more accurately reflects the content and rigor of the course as we started including audition/resume/presentation several years ago. 2) Since we reduced the no. of hours in the required THEA 201: Theatrical Makeup course from 3 to 1, the added hour now allows the total hours for the Performance Specialty to work out to the stated 12 hours [rather than 11].)

**F. MODIFY on approx. page 97 of the current catalog under THEATRE COURSES the course title and description under "THEATRE ARTS"**

**FROM:**

**SPECIALTY TRACKS IN THEATRE ARTS**

A major in Performing Arts with a degree with a theatre arts specialty track requires the following:

1. Theatre 210 (three one-semester hour courses), 200 or 203, 202, 204, 209, 291, 301, 320, 321 and English 361.
2. Three semester hours above the 299 level in any English literature or creative writing course approved by the theatre advisor.

3. Twelve semester hours from one specialty area
  - a) Design specialty: Theatre 302, 303, 402, and either 304, 309 or 397 three semester hours from the performance specialty
  - b) Performance specialty: Theatre 201, 205, 401, 405, and either Speech Communication 203, Theatre 397 or 497, or three semester hours from the design specialty
4. Minor/collateral requirements (two options)
  - a) Two 12-hour collaterals approved by the faculty adviser
  - b) An 18-hour minor approved by the faculty adviser

**TO:**

**SPECIALTY TRACKS IN THEATRE ARTS**

A major in Performing Arts with a degree with a theatre arts specialty track requires the following:

1. Theatre 210 (three one-semester hour courses), 200 or 203, 202, 204, 209, 291, 301, 320, and English 361.
2. Three semester hours above the 299 level in any English literature or creative writing course approved by the theatre advisor.
3. Twelve semester hours from one specialty area
  - a) Design specialty: Theatre 302, 303, 402, and either 304, 309 or 397 three semester hours from the performance specialty
  - b) Performance specialty: Theatre 201, 205, 405, and six semester hours selected from Speech Communication 203, or any Theatre courses above the 299 level.
4. Minor/collateral requirements (two options)
  - a) Two 12-hour collaterals approved by the faculty adviser
  - b) An 18-hour minor approved by the faculty adviser

**RATIONALE FOR F:**

This accomplishes the following:

- 1) Reflects the combination of THEA 320 and 321 into just the THEA 310 course.
- 2) Removes THEA 401: Directing II from a required course but still allows us to teach it as a theatre elective that will count toward the overall requirement.
- 3) Reduces the number of credit hours for major courses from 45 to 42 which is closer to the goal of 40 suggested by our accreditation agency—National Association for the schools of theatre.

#### 4. Proposals from the Department of Mathematics

- A. **MODIFY** the third paragraph under OTHER INFORMATION on page 111 of the current catalog in the paragraph regarding Math 170, 270 and 370

**FROM:**

Mathematics 170, 270, and 370 are designed for students seeking South Carolina Teacher Licensure in early childhood education or in elementary education or a B.G.S. in Educational Studies. It should be noted that a grade of C or higher in Mathematics 111 (or 111E) or a score of 540 or more on the Quantitative Section of the SAT is the prerequisite for Mathematics 170.

**TO:**

Mathematics 170, 270, and 370 are designed for students seeking South Carolina Teacher Licensure in early childhood education or in elementary education or a B.G.S. in Educational Studies. It should be noted that a grade of C or higher in Mathematics 111 (or 111E) or department placement is required to take Mathematics 170.

**RATIONALE FOR A:**

In the last academic year, the faculty approved removing the SAT/ACT scores from the catalog because placement practices have changed. This section was inadvertently missed in that modification. For consistency throughout, this sentence should be modified.

- B. **MODIFY** on page 111 of the current catalog in the paragraph regarding Math 134

**FROM:**

Mathematics 134 is required for majors in business, nursing, middle level education, and medical technology and is recommended for majors in sociology, history, and psychology.

**TO:**

Mathematics 134 is required for majors in business, nursing, and medical technology and is recommended for majors in sociology, history, and psychology.

**RATIONALE FOR B:**

The University no longer offers a degree in Middle Level Education.

- C. **MODIFY** on page 115 of the current catalog in the paragraph describing the Statistics minor

**FROM:**

**MINOR**

A minor in statistics consist of Mathematics 134 or 312, Statistics 220, 221, and 240 plus six additional semester hours of approved statistics courses above the 200 level. Students may also use one of the following courses for three of the six additional hours of statistics courses: Biology 413, Business 305, Engineering 320, Psychology 302 or Sociology 303.

**TO:****MINOR**

A minor in statistics consists of Mathematics 134 or 312, Statistics 220, 221, and 240 plus six additional semester hours of approved statistics courses above the 200 level. Students may also use one of the following courses for three of the six additional hours of statistics courses: Biology 218, Business 305, Engineering 320, Psychology 302 or Sociology 303.

**RATIONALE FOR C:**

Biology is changing the course number from BIOL413 to BIOL218. The content and mode of instruction will not change.

**5. Proposals from Modern Languages**

A. **MODIFY** French offerings on p. 117 of the current catalog

**FROM:**

**MODERN LANGUAGES,  
FRENCH TRACK**

Coordinator: Dr. Elizabeth A. Zahnd

**MAJOR**

~~A major in Modern Languages – French Track requires the following:~~

1. Twenty four hours, including French 301 and 302
2. Minor/collateral requirements (two options)
  - a) two 12-hour collaterals approved by the faculty adviser
  - b) an 18-hour minor approved by the faculty adviser

~~The minimum number of semester hours required in major courses for a major in Modern Languages – French Track is 30. The minimum number of semester hours in all courses (major and non-major) for the major in Modern Languages – French Track is 120.~~

**MINOR**

A minor in French requires 18 semester hours.

**COLLATERAL**

A collateral in French requires 12 semester hours.

**TO:**

**MODERN LANGUAGES,  
FRENCH**

Coordinator: Dr. Elizabeth A. Zahnd

**MAJOR**

No major in French is offered.

**MINOR**

A minor in French requires 18 semester hours.

**COLLATERAL**

A collateral in French requires 12 semester hours.

**RATIONALE FOR A:**

With an inadequate number of faculty to offer the necessary courses, the French major is not sustainable. The department will continue to offer the French minor and collateral, supporting the General Education requirements for the Bachelor of Arts degree and the exchange program to France.

B. **MODIFY** Spanish Track on p. 118 of the current catalog

**FROM:**

**MODERN LANGUAGES,  
SPANISH TRACK**

Coordinator: Dr. Kristin Kiely

**MAJOR**

A major in Modern Languages - Spanish **Track** requires the following:

1. Twenty-seven semester hours, including SPAN 301 and 302
2. Minor/collateral requirements (two options)
  - a) two 12-hour collaterals approved by the faculty adviser

b) an 18-hour minor approved by the faculty adviser

The minimum number of semester hours required in major courses for a major in Modern Languages - Spanish **Track** is 33. The minimum number of semester hours in all courses (major and non-major) required for the major in Modern Languages - Spanish **Track** is 120.

**TO:**

**MODERN LANGUAGES,  
SPANISH**

Coordinator: Dr. Kristin Kiely

**MAJOR**

A major in Modern Languages - Spanish requires the following:

1. Twenty-seven semester hours, including SPAN 301 and 302
2. Minor/collateral requirements (two options)
  - a) two 12-hour collaterals approved by the faculty adviser
  - b) an 18-hour minor approved by the faculty adviser

The minimum number of semester hours required in major courses for a major in Modern Languages - Spanish is 33. The minimum number of semester hours in all courses (major and non-major) required for the major in Modern Languages - Spanish is 120.

**RATIONALE FOR B:**

The “track” terminology is redundant and confusing.

C. **MODIFY** Modern Languages Mission Statement on p. 117 of the current catalog

**FROM:**

MISSION STATEMENT MODERN LANGUAGES – ~~The Department of Modern Languages offers a major with tracks in French and Spanish. Minors and collaterals are also offered in these languages.~~ The department provides the resources for students to acquire proficiency in the four language skills (listening, speaking, reading, and writing) in French and Spanish to gain knowledge of the culture, the literature, and the civilization of countries where these languages are spoken. Career opportunities for foreign language majors include 1) teaching, 2) international business, 3) translation/interpretation, and 4) professions

requiring a University degree with a background in the liberal arts. Modern language majors also frequently seek graduate degrees in foreign languages or related fields.

### TO:

**MISSION STATEMENT MODERN LANGUAGES** – The Department of Modern Languages offers a major in Spanish. Minors and collaterals are also offered in French and Spanish. The department provides the resources for students to acquire proficiency in the four language skills (listening, speaking, reading, and writing) in French and Spanish to gain knowledge of the culture, the literature, and the civilization of countries where these languages are spoken. Career opportunities for foreign language majors include 1) teaching, 2) international business, 3) translation/interpretation, and 4) professions requiring a University degree with a background in the liberal arts. Modern Languages majors also frequently seek graduate degrees in foreign languages or related fields.

### RATIONALE FOR C:

If the French major is deleted, then the current mission statement is not accurate. This modification reflects that change.

- D. **DELETE** on p. 120 - 121 of the current catalog the Four Year Plans for French and Spanish.

FOUR YEAR PLAN FOR MODERN LANGUAGE MAJOR, FRENCH OPTION			
Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3 or 4	English 102	3
Mathematics	3	Mathematics	3
History	3	Political Science 101 or 103	3
French 101	3	French Elective	3
Science and lab	4	Social Science	3
<b>Total Credits</b>	<b>16-17</b>	<b>Total Credits</b>	<b>15</b>
Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
French 201	3	French 202	3
Science with lab	4	Art 101, Music 101, or Theatre 101	3
Computer Science 150	3	Social Science	3
Speech Communication 101	3	Minor Elective	3
Minor Elective	3	Minor Elective	3
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>15</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
French 301	3	French 302	3
Minor Elective	3	French Elective	3
Free Elective	3	Minor Elective	3
Free Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>15</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
French 401	3	French 402	3
French Elective	3	Minor Elective	1
Minor Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
Minor Elective	3	Free Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>13</b>
<b>Total Hours Required for Degree 120</b>			



Freshman Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
English 101 (or English 101E/101L)	3 or 4	English 102	3
Mathematics	3	Mathematics	3
History	3	Political Science 101 or 103	3
Spanish 101	3	Spanish Elective	3
Science and lab	4	Social Science	3
<b>Total Credits</b>	<b>16-17</b>	<b>Total Credits</b>	<b>15</b>
Sophomore Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Spanish 201	3	Spanish 202	3
Science with lab	4	Art 101, Music 101, or Theatre 101	3
Computer Science 150	3	Social Science	3
Speech Communication 101	3	Minor Elective	3
Minor Elective	3	Free Elective	3
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>15</b>
Junior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Spanish 301	3	Spanish 302	3
Spanish Elective	3	Spanish Elective	3
Minor Elective	3	Minor Elective	3
Free Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>15</b>
Senior Year			
Course	Fall Sem. Hrs.	Course	Spring Sem. Hrs.
Spanish Elective	3	Spanish Elective	3
Spanish Elective	3	Minor Elective	1
Minor Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
Free Elective	3	Free Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>13</b>
<b>Total Hours Required for Degree 120</b>			

### **RATIONALE FOR D:**

If the French major is deleted, then this plan is not needed. Courses are not offered regularly enough to make such a plan feasible for French and Spanish. The descriptions of the majors and minors are sufficient.

**E. MODIFY** upper-level French course prerequisites on pages 117 and 118 of the current catalog

### **FROM:**

**300 Introduction to Reading Literature in French** (3) (Prerequisite: **202** or equivalent on the placement test).

**301 Grammar and Composition** (3) (Prerequisite: **202** or equivalent on the placement test)

I

**302 Conversation** (3) (Prerequisite: **202** or equivalent on the placement test)

**303 Francophone Literature and Culture** (3) (Prerequisite: **202** or equivalent on the placement test)

**304 Masterpieces of French Literature** (3) (Prerequisite: **202** or equivalent on the placement test)

**305 French Civilization** (3) (Prerequisite: **202** or equivalent on the placement test or permission of department)

**401 Survey of French Literature to 1800** (3) (Prerequisite: **202** or equivalent on the placement test)

**402 Survey of French Literature from 1800** (3) (Prerequisite: **202** or equivalent on the placement test)

**TO:**

**300 Introduction to Reading Literature in French** (3) (Prerequisite: **102** or equivalent on the placement test).

**301 Grammar and Composition** (3) (Prerequisite: **102** or equivalent on the placement test)

I

**302 Conversation** (3) (Prerequisite: **102** or equivalent on the placement test)

**303 Francophone Literature and Culture** (3) (Prerequisite: **102** or equivalent on the placement test)

**304 Masterpieces of French Literature** (3) (Prerequisite: **102** or equivalent on the placement test)

**305 French Civilization** (3) (Prerequisite: **102** or equivalent on the placement test or permission of department)

**401 Survey of French Literature to 1800** (3) (Prerequisite: **102** or equivalent on the placement test)

**402 Survey of French Literature from 1800** (3) (Prerequisite: **102** or equivalent on the placement test)

### RATIONALE FOR E:

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted French 202. Therefore, these upper-level courses need a different prerequisite. Without an adequate number of French faculty to staff French 201 frequently, it would be difficult to offer upper-level courses with that prerequisite. French 101 and 102 now cover more material, sufficient for reading basic French.

F. **MODIFY** prerequisites for upper-level Spanish courses on pages 118-119 of the catalog

#### FROM:

- 301 Grammar and Composition** (3) (Prerequisite: **202**) F.
- 302 Conversation** (3) (Prerequisite: **202**) S.
- 303 Introduction to the Study of Hispanic Literature** (3) (Prerequisite: **202**)
- 304 Masterpieces of Hispanic Literature** (3) (Prerequisite: **202**)
- 308 Civilization and Culture of Spain** (3) (Prerequisite: **202**)
- 309 Civilization and Culture of Spanish America** (3) (Prerequisite: **202**)
- 401 Survey of Peninsular Literature to 1700** (3) (Prerequisite: **202**) F.
- 402 Survey of Peninsular Literature from 1700** (3) (Prerequisite: **202**) S.
- 403 Survey of Hispanic American Literature I** (3) (Prerequisite: **202**)
- 404 Survey of Hispanic American Literature II** (3) (Prerequisite: **202**)

#### TO:

- 301 Grammar and Composition** (3) (Prerequisite: **201**) F.
- 302 Conversation** (3) (Prerequisite: **201**) S.
- 303 Introduction to the Study of Hispanic Literature** (3) (Prerequisite: **201**)
- 304 Masterpieces of Hispanic Literature** (3) (Prerequisite: **201**)
- 308 Civilization and Culture of Spain** (3) (Prerequisite: **201**)

**309 Civilization and Culture of Spanish America** (3) (Prerequisite: 201)

**401 Survey of Peninsular Literature to 1700** (3) (Prerequisite: 201) F.

**402 Survey of Peninsular Literature from 1700** (3) (Prerequisite: 201) S.

**403 Survey of Hispanic American Literature I** (3) (Prerequisite: 201)

**404 Survey of Hispanic American Literature II** (3) (Prerequisite: 201)

#### **RATIONALE FOR F:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted Spanish 202. Therefore, these upper-level courses need a different prerequisite. Spanish 101 through 201 now covers what had been covered through Spanish 202.

**G. DELETE** on page 119 of the current catalogue under Spanish 220:

~~NOTE: SPANISH 210 or SPANISH 220 may substitute for 202 in only one of the following situations: a) 202 for the General Education Requirement OR b) a course in the Spanish major or minor. A student cannot take both SPANISH 210 and SPANISH 220 as substitutes in either situation.~~

#### **RATIONALE FOR G:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted Spanish 202. Therefore, this restriction is no longer relevant.

**H. DELETE** on page 118 of the current catalog after French 497 Special Studies

~~\*NOTE: Native speakers or students who have already achieved a high level of oral proficiency (to be determined by members of the Modern Languages Program) will not be given credit for this course.~~

#### **RATIONALE FOR H:**

This restriction impedes native and heritage speakers from studying French and Spanish. Not every native and heritage speaker has studied these languages formally, so that a basic grounding in fundamentals is often helpful.

**I. MODIFY** on page 52 of the current catalog under “Scores required to receive credit in the AP program:”, in the left column

**FROM:**

French Language	3, 4, 5	French 101, 102	6
French Literature	3, 4, 5	French 201, <del>202</del>	<del>6</del>

**TO:**

French Language	3, 4, 5	French 101, 102	6
French Literature	3, 4, 5	French 201	<b>3</b>

**RATIONALE FOR I:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted French and Spanish 202. Therefore, we cannot offer credit for this course.

- J. MODIFY** On page 52 of the current catalogue under “Scores required to receive credit in the AP program:”, in the left column

**FROM:**

Spanish Language	3, 4, 5	Spanish 101, 102	6
Spanish Literature	3, 4, 5	Spanish 201, <del>202</del>	<del>6</del>

**TO:**

Spanish Language	3, 4, 5	Spanish 101, 102	6
Spanish Literature	3, 4, 5	Spanish 201	<b>3</b>

**RATIONALE FOR J:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted French and Spanish 202. Therefore, we cannot offer credit for this course.

- K. MODIFY** On page 53 of the current catalogue under “Scores required for credit in the CLEP Program:”, in the left column

**FROM:**

French	50-61	French 101 & 102	6
	59+	French 201 & <del>202</del>	<del>6</del>

**TO:**

French	50-61	French 101 & 102	6
	59+	French 201	3

**FROM:**

Spanish 50-61		Spanish 101 & 102	6
59+		Spanish 201 & 202	6

**TO:**

Spanish 50-61		Spanish 101 & 102	6
59+		Spanish 201	3

**RATIONALE FOR K:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted French and Spanish 202. Therefore, we cannot offer credit for this course.

- L. **MODIFY** on page 53 of the current catalogue under the International Baccalaureate banner, in the left column and then the right column

**FROM:**

French	7	French 101, 102, 201, 202	12
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**TO:**

French	7	French 101, 102, 201	9
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**FROM:**

Spanish	7	Spanish 101, 102, 201, 202	12
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**TO:**

Spanish	7	Spanish 101, 102, 201	9
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**RATIONALE FOR L:**

Last year as we transitioned from a four course to a three course General Education sequence for the language requirement, Modern Languages deleted French and Spanish 202. Therefore, we cannot offer credit for this course.

## 6. Proposals from the Department of Physics and Engineering

- A. **MODIFY** prerequisites for PHYS 320 Computational Statistical and Thermal Physics on page 124 of current catalog

### **FROM:**

**320 Computational Statistical and Thermal Physics** (3) (Prerequisites: 220, **301**, 314, MATH 203, and a programming course [CS 190 or 226 or **Math** 213] or permission of the department) S. Analysis of the properties of many-particle systems at finite temperature using both analytical and numerical methods. Topics include heat, work, temperature, pressure, entropy, the laws of thermodynamics, engines, refrigerators, phases of matter, and phase transitions. These macroscopic phenomena will be described from a microscopic perspective using basic probability concepts, Monte Carlo and Molecular Dynamics methods, statistical ensembles, classical and quantum distribution functions, the partition function, and free energy.

### **TO:**

**320 Computational Statistical and Thermal Physics** (3) (Prerequisites: 220, 314, MATH 203, and a programming course [CS 190 or 226 or **MATH** 213] or permission of the department) S. Analysis of the properties of many-particle systems at finite temperature using both analytical and numerical methods. Topics include heat, work, temperature, pressure, entropy, the laws of thermodynamics, engines, refrigerators, phases of matter, and phase transitions. These macroscopic phenomena will be described from a microscopic perspective using basic probability concepts, Monte Carlo and Molecular Dynamics methods, statistical ensembles, classical and quantum distribution functions, the partition function, and free energy.

### **RATIONALE FOR A:**

Modern Physics (PHYS 314) and the introductory physics sequence (200 - 202) cover the content needed to successfully complete the course. Removing PHYS 301 as a prerequisite will give upper-level Physics students the ability to schedule PHYS 320 more flexibly as well as allowing interested students in the Health Physics concentration to take the course.

We also modify the capitalization of MATH 213 to be consistent with the convention used throughout the catalog.

- B. **MODIFY** prerequisites for PHYS 406 Advanced Computational Physics on page 124 of current catalog

### **FROM:**

**406 Advanced Computational Physics** (3) (Prerequisites: 220, **301, 302**, 314, MATH 301, and a programming course [CS 190 or 226 or **Math** 213] or permission of the department) F. A survey of advanced topics in computational physics including chaotic motion, mechanical

and electromagnetic waves, diffusion, and fluid dynamics. Problems are solved using numerical methods involving ordinary and partial differential equations, linear algebra, and fast Fourier transforms. High-performance computing techniques are introduced to solve problems using multi-core and many-core computer architectures.

**TO:**

**406 Advanced Computational Physics** (3) (Prerequisites: 220, 314, MATH 301, and a programming course [CS 190 or 226 or **MATH** 213] or permission of the department) F. A survey of advanced topics in computational physics including chaotic motion, mechanical and electromagnetic waves, diffusion, and fluid dynamics. Problems are solved using numerical methods involving ordinary and partial differential equations, linear algebra, and fast Fourier transforms. High-performance computing techniques are introduced to solve problems using multi-core and many-core computer architectures.

**RATIONALE FOR B:**

Any necessary content from PHYS 301 or PHYS 302 is covered in sufficient detail in PHYS 406 to allow students to successfully learn and use the numerical methods employed in the course. Additionally, removing these requirements allows interested students in the Health Physics concentration to take the course.

We also modify the capitalization of MATH 213 to be consistent with the convention used throughout the catalog.

- C. **MODIFY** course numbers for ASTR 201 and ASTR 202 on page 122 of the current catalog

**FROM:**

**201 Introduction to Astronomy** (4:3-3) (Prerequisite: Eligibility to take **Mathematics**-111 (or 111E) or **Mathematics** 121) F, SU. A survey of astronomy, including historical observations and star maps; celestial motions of the sun, moon, planets and stars; electromagnetic radiation, including radiation laws and spectral classification; astronomical instruments and methods; the stars, including formation, evolution, properties, and types of stars; the universe, including the Milky Way Galaxy, other galaxies, theories of formation and evolution. The laboratory section for the class will include work at night in the FMU Observatory.

**TO:**

**101 Introduction to Astronomy** (4:3-3) (Prerequisite: Eligibility to take **MATH** 111 (or 111E) or **MATH** 121) F, SU. A survey of astronomy, including historical observations and star maps; celestial motions of the sun, moon, planets, and stars; electromagnetic radiation, including radiation laws and spectral classification; astronomical instruments and methods; the stars, including formation, evolution, properties, and types of stars; the universe, including the Milky Way Galaxy, other galaxies, theories of formation and evolution. The laboratory section for the class will include work at night in the FMU Observatory.



D. **MODIFY** course description and number for ASTR 202 on page 122 of the current catalog

**FROM:**

**202 Voyage through the Solar System** (4:3-3) (Prerequisite: Eligibility to take **Mathematics** 111 (or 111E) or **Mathematics** 121) **AS, SU**. A survey of our Solar System, including formation models, orbital properties, and motions of its members; planetary features; asteroids, comets and meteors; comparisons of terrestrial to **jovian** planets; and planetary atmospheres. The laboratory section for the class will include work at night in the FMU Observatory.

**TO:**

**102 Voyage through the Solar System** (4:3-3) (Prerequisite: Eligibility to take **MATH** 111 (or 111E) or **MATH** 121) **S, SU**. A survey of our Solar System, including formation models, orbital properties, and motions of its members; planetary features; asteroids, **dwarf planets**, comets, and meteors; comparisons of terrestrial to **Jovian** planets; **exoplanets**; and planetary atmospheres. The laboratory section for the class will include work at night in the FMU Observatory.

**RATIONALE FOR C-D:**

The numbering of ASTR 201 and 202 gives the impression that these classes are for sophomores and not available to incoming freshmen. These two ASTR courses require only the eligibility to take MATH 111 or MATH 121, and this change should eliminate any confusion a student may have about their ability to take these courses.

Additional topics are added to the description of ASTR 102 to better reflect common terminology now used by the astronomy community.

ASTR 202 has generally been offered every Spring, so we have updated the semester indicator to better match department practice.

E. **MODIFY** prerequisites for ASTR 203 on page 122 of the current catalog

**FROM:**

**203 Observational Astronomy** (4:2-6) (Prerequisite: **201**) **AS**. Introduction to observational astronomy, including telescope design and usage; star maps; constellation figures, bright members and deep sky objects. Attendance will be required each week for at least one night observing session in the FMU Observatory.

**TO:**

**203 Observational Astronomy** (4:2-6) (Prerequisite: **101 or 102 or permission of department**) Introduction to observational astronomy, including telescope design and usage;

star maps; constellation figures, bright members, and deep sky objects. Attendance will be required each week for at least one night observing session in the FMU Observatory.

### **RATIONALE FOR E:**

This changes the prerequisite for ASTR 203 to reflect the new numbering. It also allows a student who has completed ASTR 102 to take this course. In past semesters we have given permission to a few students to take ASTR 203 without an Introduction course. Adding the permission of the department statement clarifies that this is a possibility for a student. This change does not affect the clause that the course cannot be used to complete part c of the Natural Sciences section in General Education.

Removing the alternating spring designation allows the course to be taught in either fall or spring as needed.

- F. **MODIFY** description of the Astronomy Collateral on page 122 of the current catalog

### **FROM:**

#### **COLLATERAL**

A collateral in astronomy requires 12 hours, including Astronomy ~~201, 202~~, and 203. Astronomy 203, while earning credit toward graduation, will not satisfy any of the four hours of Natural Sciences in the General Education Requirements.

### **TO:**

#### **COLLATERAL**

A collateral in astronomy requires 12 hours, including Astronomy ~~101, 102~~, and 203.

Astronomy 203, while earning credit toward graduation, will not satisfy any of the four hours of Natural Sciences in the General Education Requirements.

### **RATIONALE FOR F:**

This changes the course numbers in the collateral statement to reflect the new numbering. Page 61 of the catalog gives no direction as to the numbering of courses that can be used in the collateral and allows departments/schools to set the specific course requirements. The line break is also added back in to make the ASTR 203 statement its own line item and not attached to the collateral statement.

- G. **MODIFY**, on page 124 of the current catalog, the course description and credit hours of Physics 312 as follows:

### **FROM:**

**312 Lasers and Optics** (~~4:3-3~~) (Prerequisite: 202 or 216. Corequisite: ~~Mathematics~~ 201 or permission of the department) ~~AS~~. Introduction to lasers and optics. Laser topics include laser emission, holography, fiber optics, laser spectroscopy, and laser applications. Optics topics include geometrical ~~and physical~~ optics with an emphasis on ~~the wave properties of light, such as diffraction, interference, and polarization.~~ Students will operate many type of

lasers, including a diode laser, helium-neon laser, nitrogen laser, Nd:YAG laser, and dye laser.

### TO:

**312 Lasers and Optics (3)** (Prerequisite: 202 or 216. Pre/Corequisite: MATH 201, or permission of the department). Introduction to lasers and optics. Laser topics include laser emission, holography, fiber optics, laser spectroscopy, and laser applications. Optics topics include geometrical optics with an emphasis on reflection and refraction, as well as wave optics with an emphasis on diffraction, interference, and polarization. Additional topics may include optical spatial cloaking, optical microscopy, spatial light modulation, and other optics applications. The course will include both lab and lecture activities.

### RATIONALE for G:

We propose to change PHYS 312 to a 3-credit course which will allow for the course to be offered more frequently and fit within the accompanying change to the Computational Physics concentration physics elective requirements. Given the importance of lasers and optics in science, society, business, and the military, this course meets an important need in the education of scientists. This is the primary motivation for the proposed change in course credit. One sentence is worded differently, and one sentence is deleted to reflect a reduction in material consistent with the reduced number of credit and contact hours. The course will combine hands-on activities with traditional lectures in a way that is appropriate for a 3-hour course.

- H. **ADD** on page 123 of the current catalog, a new course to “PHYSICS COURSES” after PHYS 210 Introduction to Radiation Protection

**212 Survey of Physics Research (1)** (Prerequisite: 200 or Pre/Corequisite: 201, or permission of the department) S. An introduction to current areas of active physics research, both in the department and in the broader community. Topics will vary but may include current research in Astronomy, Astrophysics, Atomic/Molecular/Optical Physics, Condensed Matter Physics, and High-Energy/Particle Physics as well as developments in the tools used to conduct this research. Students will hear research presentations by FMU students and faculty and will gain experience in finding and reading scientific articles. The course may include opportunities for off-campus experiential learning.

### RATIONALE for H:

Inspired by other concentrations and majors in the department as well as other universities in South Carolina (e.g., “Introduction to Research” at Clemson University), we see the need for a new 1-hour course designed to help Physics majors in the Computational Physics Concentration begin to develop their identity as physicists and to help other students with interest in physics learn about what the concentration has to offer. The prerequisite / corequisite and timing of the course are intended to encourage students to take the course in

their second semester, during the introductory sequence.

- I. **ADD** on page 124 of the current catalog, new courses to “PHYSICS COURSES” after PHYS 320 Computational Statistical and Thermal Physics

**330 Introduction to Astrophysics (3)** (Prerequisite: 200, 202). This course examines phenomena in the universe using the application of physics principles. Topics will be selected from: celestial mechanics, properties of light and particles, mathematical modeling of a stellar interior, stellar formation and evolution, degenerate remnants, black holes, galactic structure, interstellar and intergalactic medium, dark matter, the cosmic microwave background, the large-scale structure of the universe, dark energy, cosmology, and the fate of the universe.

#### **RATIONALE for I:**

This course is being created to increase the elective options open to our physics majors. This course is geared towards the computational physics track but would be open to any interested student who has completed the calculus-based introductory physics sequence. This course material was previously taught as a PHYS 497 – special topics course in Spring 2024 and received strong student interest and enrollment. If the proposal to require an elective for the computational physics concentration passes, this course would satisfy that requirement. In addition to preparing students for potential graduate study, this course exposes students to high-profile developments from the past and present and shows how the theory they have encountered in other courses applies to these more advanced topics.

- J. **ADD** on page 124 of the current catalog, new courses to “PHYSICS COURSES” after PHYS 330 Introduction to Astrophysics

**331 Introduction to Condensed Matter Physics (3)** (Prerequisite: 314). Introduction to the basic concepts of condensed matter physics. Topics include but are not limited to crystal structure; diffraction and reciprocal lattices; electronic, magnetic, and optical properties; energy band structure; superconductivity; phonons; and the relationship between microscopic structure and bulk properties in different materials. Concepts related to common experimental apparatus as well as analytical and/or computational tools will also be discussed.

#### **RATIONALE for J:**

This course is being created to increase the elective options open to our physics majors. With the addition of an elective requirement (assuming the proposal passes), this course would be one that is offered to fit the need for an elective. This course is geared towards the Computational Physics concentration but would be open to Health Physics students as well. This would be taken by junior/seniors that have taken Modern Physics (PHYS 314). In addition to preparing students for potential graduate study, this course exposes students to the largest field in physics (in terms of number of researchers and research output).

- K. **ADD** on page 124 of the current catalog, new courses to “PHYSICS COURSES” after PHYS 331 Introduction to Condensed Matter Physics

**332 Introduction to High Energy Physics (3)** (Prerequisite: 314) An introduction to the Standard Model of particle physics, including the properties of the fundamental particles. The strong, weak, and electromagnetic interactions will be studied, including QED and QCD. Topics will include relativistic kinematics, conservation laws, and symmetries; and how these relate to particle decays and scattering processes. Techniques used for calculating experimental observables will be emphasized, including the use of Feynman diagrams. The physics of particle accelerators and detectors will also be introduced.

**RATIONALE for K:**

This course is also intended to increase our students’ ability to enrich their physics education through elective courses and will support the proposed elective requirement. High-energy physics is among the most prominent areas of physics (encompassing research being performed at institutions such as Fermilab and CERN). In addition to preparing students for potential graduate study, this course exposes students to high-profile developments from the past and present and shows how the theory they have encountered in other courses applies to these more advanced topics.

- L. **MODIFY** on page 123 of the current catalog, the major requirements for the Computational Physics Concentration

**FROM:**

A concentration in computational physics requires completion of:

1. Physics 200, 201, 202, 220, 301, 302, 314, 320, 401, 406, 410, and 419
2. Mathematics 201, 202, 203, 301, and 306
3. Chemistry 111, 111L, 112, and 112L
4. Computer Science 190 or 226 or Mathematics 213

In addition to these courses, Mathematics 304, Engineering 310, Mathematics 312, Physics 316, and Mathematics / Computer Science 425 are highly recommended.

No additional minor or collateral is required.

The minimum number of semester hours required in physics courses for the computational physics concentration is 36. The minimum number of semester hours in all courses (major and non-major) required for the computational physics concentration is 120. Students desiring to take additional hours in physics are strongly encouraged to do so.

**TO:**

A concentration in computational physics requires completion of:

1. Physics 200, 201, 202, 212, 220, 301, 302, 314, 320, 401, 406, 410, and 419
2. At least one course among Physics 312, Physics 330 – 339, or Physics 430 – 439
3. Mathematics 201, 202, 203, 301, and 306

4. Chemistry 111, 111L, 112, and 112L
5. Computer Science 190 or 226 or Mathematics 213

In addition to these courses, Mathematics 304, Engineering 310, Mathematics 312, Physics 316, and Mathematics / Computer Science 425 are highly recommended.

No additional minor or collateral is required.

The minimum number of semester hours required in physics courses for the computational physics concentration is 40. The minimum number of semester hours in all courses (major and non-major) required for the computational physics concentration is 120. Students desiring to take additional hours in physics are strongly encouraged to do so.

### **RATIONALE FOR L:**

In recent years, we have found that our students often run out of courses in their major before obtaining sufficient credits for graduation. All other public universities in South Carolina with a major in Physics both offer and require Physics electives in order to satisfy students' curiosity and to ensure that students have sufficient exposure to advanced topics.

Adding four hours in PHYS coursework to the Concentration does not significantly reduce students' ability to take courses of interest in other departments and/or to seek minors, collaterals, or double majors. If these changes are approved, students will retain 24 hours of free electives. Requiring 40 hours in physics is consistent with other undergraduate physics degrees in South Carolina.

No additional faculty load is needed, besides the 1-contact hour offering of the new PHYS 212 which will be handled as an overload. Additional load will be avoided due to the new courses not being offered on an annual basis and existing PHYS 301 and 302 courses moving to an alternate year format.

## **7. Proposals from the Department of Psychology**

- A. **MODIFY** on pages 134 & 135 of the current catalog the course options under **Major** for a Psychology Major

### **FROM:**

#### **MAJOR**

A major in psychology requires 38 semester hours to include the following:

1. Psychology 206, 216, 220, 302, 303, 304, 336, and 499
2. At least one course from the Psychology of Individuals and Groups Core courses of Psychology 319, 325, 326
3. At least one course from the Developmental Core courses of Psychology 315, 316, 334
4. One course from the Integrative Experiences courses of Psychology 470 and 498

5. Nine hours of psychology electives, with a minimum of eight hours at the 300-level or higher

**6. Biology 105/115 or 104**

7. Minor/collateral requirements (two options)

- a. Two 12-hour collaterals approved by the faculty adviser
- b. An 18-hour minor approved by the faculty adviser

**TO:**

**MAJOR**

A major in psychology requires 38 semester hours to include the following:

1. Psychology 206, 216, 220, 302, 303, 304, 336, and 499
2. At least one course from the Psychology of Individuals and Groups Core courses of Psychology 319, 325, 326
3. At least one course from the Developmental Core courses of Psychology 315, 316, 334
4. One course from the Integrative Experiences courses of Psychology 470 and 498
5. Nine hours of psychology electives, with a minimum of eight hours at the 300-level or higher

**6. Biology 104, 105/115, or 107.**

7. Minor/collateral requirements (two options)

- a. Two 12-hour collaterals approved by the faculty adviser
- b. An 18-hour minor approved by the faculty adviser

**RATIONALE FOR A:**

As detailed by the Biology department's description of BIOL-107 and Lab, the material covered in the class is similar to BIOL-105 (which is already an option for completing the Psychology Major requirements), but "increases the amount of critical analysis of data and teaches the skills necessary to critically think about biological problems" (page 68). This makes it a good option for our Psychology Majors, as data analysis and critical thinking are important to both fields. The Biology Department designed this class for Biology Majors, Biology Minors, and other Science Majors, which includes Psychology. The requirements for BIOL-107 are the same as BIOL-105/115, which is an eligibility to take MATH-111. Finally, the Biology Department also allows its Majors to take either 105/115 OR 107 to fulfill their requirements, and the Psychology Department wants to follow their lead by offering our Majors the same flexibility.

This change does not alter the minimum hour requirements for the major.

**B. MODIFY** on page 134 of the current catalog the Prerequisite courses for PSYC-304

**FROM:**

**304 Brain and Behavior** (3) (Prerequisite: 206, **Biology 104 or 105 and 115**) F, S. Study of the role of the nervous system in the generation of behavior, feelings, and thoughts. Attention will be given to methodologies used by neuroscientists-particularly physiological psychologists-to study the nervous system and behavior. Primary emphasis will be on the role of neuronal activity in “normal” behavior; however, problems (e.g. addiction, amnesia, mental illness) will be studied as examples of some products of a malfunctioning nervous system.

**TO:**

**304 Brain and Behavior** (3) (Prerequisite: 206, **Completion of the Psychology Major Biology Requirement**) F, S. Study of the role of the nervous system in the generation of behavior, feelings, and thoughts. Attention will be given to methodologies used by neuroscientists-particularly physiological psychologists-to study the nervous system and behavior. Primary emphasis will be on the role of neuronal activity in “normal” behavior; however, problems (e.g. addiction, amnesia, mental illness) will be studied as examples of some products of a malfunctioning nervous system.

**RATIONALE FOR B:**

This update will bring the pre-requisite courses for PSYC-304 into alignment with our updated options for the Psychology Major Biology Requirement.