UNIVERSITY CURRICULUM COMMITTEE
University Hall 282
Minutes, December 5, 2012

PRESENT: Myka Campbell, Suzanne Carpenter, Kathryn Craven, José da Cruz, Mirari Elcoro, Catherine Gilbert, Lynn Long, Rick McGrath (Chair), Glenda Ogletree, Jack Simmons, Phyllis Panhorst (Catalog Editor)

ABSENT: Robert Harris, Kam Fui Lau, Denene Lofland

GUESTS: Laura Barrett, James Brawner, Donna Brooks, Herbert Bruce, Mark Finlay, Delana Gajdosik-Nivens, Judy Ginter, Bob Gregerson, John Kraft, Patrice Mitchell, Jeff Secrest, Patrick Thomas, David Ward

CALL TO ORDER. The meeting was called to order at 3:03 p.m. by Dr. Rick McGrath.

APPROVAL OF MINUTES. The minutes of November 7, 2012 were approved as presented.

ITEMS

I. College of Education (no items)

II. College of Health Professions
   A. Health Sciences (no items)
   B. Medical Laboratory Science (no items)
   C. Nursing (no items)

D. Radiologic Sciences

Items 1-2 from the Department of Radiologic Sciences were discussed and approved by the committee. They are being submitted to the Faculty Senate for approval.

1. Modify the following course:
   RADS 3073 IMAGING AND RADIATION PROCEDURES III 2-2-2
   Prerequisite or Corequisite: RADS 3072

   Rationale: This course is offered in a different session, but in the same semester and banner is unable to handle this, thus the request to list as a corequisite.
Effective Term: Fall 2013

2. Modify the following program of study:

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES - (BRIDGE PROGRAM)

B. Major Field Courses  66 hours

c. Non-clinical Track
   HLPR 2000 – Research in Health Professions
   RADS 3100 – Medical Communication Skills
   RADS 3112– Intro to Computed Tomography
   RADS 3200 – Imaging Pathology
   RADS 3450 – Leadership in Healthcare
   RADS 3451 – Leadership Practicum
   RADS 4410 – Cross Sectional Anatomy
   RADS 4430 – Professional Practice Seminar
   RADS 4450 – Radiologic Sciences Management
   RADS 4800 – Research Methodologies in Radiologic Sciences

Choose **two** of the following:
   RADS 4111 – Advanced Imaging in MRI
   RADS 4112 - Advanced Imaging in CT
   RADS 4113 - Advanced Imaging in Mammography (limited to radiographers)

Choose **two** of the following:
   ENGL 3720 – Business and Technical Communication
   HSCP 2000 – Ethical Theories/Moral Issues in Health
   HSCP 3750 - Topics in Public Health
   MHSA 5800U – Comparative Healthcare Systems
   PUBH 5560U – Introduction to International Health
   PUBH 5580 U – Health and Human Development
   RADS 3455 – Introduction to Bioethics
   WBIT 3010 – Technical Communication

**Rationale:** Eliminates redundancy and clarifies the choices for the student.

Effective Term: Summer 2013

E. Rehabilitation Sciences (no items)
F. Respiratory Therapy (no items)

III. College of Liberal Arts (no items)
IV. College of Science and Technology

A. Biology

*Items 1-3 from the Department of Biology were discussed and approved by the committee. They are being submitted to the Faculty Senate for approval.*

1. **Create the following course:**
   - BIOL 3950 Human Embryology 3-0-3
   - **Prerequisite:** BIOL 2081 (minimum grade of C) or BIOL 4210 (minimum grade of C) or BIOL 4200 (minimum grade of C) or by permission of instructor
   - **Description:** Topics will include development of the male and female reproductive systems and gamete formation, the process of fertilization, implantation, and the formation of the placenta. Development of the germ cell layers and subsequent development of the major organ systems will be covered with emphasis on the cardiovascular system, respiratory system, digestive system, urogenital system, limb formation, and neurologic system. The most common pediatric congenital defects associated with these systems will also be discussed and clinical examples provided.

   **Rationale:** This course was offered in Summer 2012 with an enrollment of 39 students. In addition to Biology majors, this course would be of interest to students who plan to apply to health professions (medical, dental, pharmacy, physician's assistant, nursing and other health professions). This course is expected to be offered once every two years.

   **Effective Term:** Fall 2013

   **CURCAT:**
   - **Major Department:** Biology
   - **Can Course be repeated for additional credit?** No
   - **Maximum Number of Credit Hours:** 3
   - **Grading Mode:** Normal
   - **Instruction Type:** Lecture
   - **Course Equivalent:** None

2. **Delete the following courses:**
   - BIOL 4801 SENIOR SEMINAR IN GENERAL BIOLOGY 1-0-1
   - BIOL 4802 SENIOR SEMINAR IN MARINE BIOLOGY 1-0-1
   - BIOL 4803 SENIOR SEMINAR IN CELL AND MOLECULAR BIOLOGY 1-0-1

   **Rationale:** Many upper-level biology courses in all three tracks have been modified over the years to include oral presentations and reviews of scientific literature. Offering a required one-credit hour class that exposes students to this skill set is no longer necessary.
Effective Term: Fall 2013

3. Modify the following program of study:

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY

Track I: General Biology
B. Major Field Courses ................................................................. 32-39 35-40 hours

Required Courses (1546 hours)
  BIOL 2020 – Plant Biology
  BIOL 3000 – Cell Biology
  BIOL 3050 – General Ecology
  BIOL 3700 – Genetics
  BIOL 4801 – Senior Seminar in General Biology

Elective Courses (1748-24 hours)
  Choose one of the following:
    BIOL 4150 – Plant Physiology
    BIOL 4200 – Mammalian Physiology
    BIOL 4210 – Comparative Physiology
  Choose one of the following:
    BIOL 3250 – Limnology
    BIOL 3600 – Salt Marsh Ecology
    BIOL 4320 – Environmental Microbiology
    BIOL 4460 – Phytoplankton Ecology
    BIOL 4750 – Tropical Field Biology
  Choose two of the following:
    BIOL 3520 – Medical Microbiology
    BIOL 4000 – Cancer Biology
    BIOL 4010 – Evolution
    BIOL 4100 – Cell and Molecular Biology Laboratory
    BIOL 4220 – Endocrinology
    BIOL 4230 – Neurophysiology and Disease
    BIOL 4310 – Applied Microbiology
    BIOL 4400 – Virology
    BIOL 4500 – Bioinformatics and Biotechnology
    BIOL 4510 – Molecular Development
    BIOL 4650 – Immunology
  Choose two of the following:
    BIOL 3020 – Vertebrate Zoology
    BIOL 3150 – Horticulture
    BIOL 3200 – Plant Taxonomy
    BIOL 3300 – Entomology
    BIOL 3310 – Invertebrate Zoology
    BIOL 3750 – Natural History of Vertebrate Animals
    BIOL 3770 – Developmental and Comparative Anatomy of the Vertebrates
BIOL 3800 – Mycology
BIOL 3920 – Parasitology
**BIOL 3950 – Human Embryology**
BIOL 4470 – Sea Turtle Biology
BIOL 4550 – Biology of Marine Organisms
BIOL 4600 – Ichthyology

C. Related Field Course ................................................................. 1 hour
   CHEM 2101L – Organic Chemistry I Lab

D. Electives ................................................................................... 20-27 19-24 hours
   Select free electives to bring total of 3000+ course work to at least 39 hours.

Track II: Marine Biology

B. Major Field Courses ................................................................. 32-35 35-36 hours
   Required Courses (19-20 hours)
   BIOL 2020 – Plant Biology
   BIOL 3000 – Cell Biology
   BIOL 3050 – General Ecology
   BIOL 3700 – Genetics
   BIOL 4550 – Biology of Marine Organisms
   **BIOL 4802 – Senior Seminar in Marine Biology**
   Elective Courses (13-16 hours)
   Choose one of the following:
   BIOL 4150 – Plant Physiology
   BIOL 4200 – Mammalian Physiology
   BIOL 4210 – Comparative Physiology
   Choose one of the following:
   BIOL 3020 – Vertebrate Zoology
   BIOL 3310 – Invertebrate Zoology
   BIOL 3750 – Natural History of Vertebrate Animals
   Choose two of the following:
   BIOL 3250 – Limnology
   BIOL 4320 – Environmental Microbiology
   BIOL 3200 – Plant Taxonomy
   BIOL 4460 – Phytoplankton Ecology
   BIOL 4470 – Sea Turtle Biology
   BIOL 4750 – Tropical Field Biology
   BIOL 4600 – Ichthyology

C. Related Field Courses ................................................................. 9 hours
   CHEM 2101L – Organic Chemistry I Lab
   PHYS 1111K – Introductory Physics I or PHYS 2211K- Principles of Physics I
   MATH 1161 – Calculus I (If taken in core area A, then substitute with either MATH 2072; PHYS 1112K or PHYS 2212K)

D. Electives ................................................................................... 16-19 15-16 hours
   Select free electives to bring total of 3000+ course work to at least 39 hours.
Track III: Cell and Molecular Biology

B. Major Field Courses ................................................................. 25-28 26-29 hours

Required Courses (12-13 hours)
- BIOL 3000 – Cell Biology
- BIOL 3700 – Genetics
- BIOL 4100 – Cell and Molecular Biology Laboratory
- BIOL 4500 – Bioinformatics and Biotechnology
- BIOL 4803 – Senior Seminar in Cell and Molecular Biology

Elective Courses (13-16 hours)
Choose one of the following:
- BIOL 4150 – Plant Physiology
- BIOL 4200 – Mammalian Physiology
- BIOL 4210 – Comparative Physiology
Choose one of the following:
- BIOL 3020 – Vertebrate Zoology
- BIOL 3300 – Entomology
- BIOL 3310 – Invertebrate Zoology
- BIOL 3750 – Natural History of Vertebrate Animals
- BIOL 3800 – Mycology
- BIOL 3920 – Parasitology
Choose two of the following:
- BIOL 3520 – Medical Microbiology
- BIOL 3950 – Human Embryology
- BIOL 4000 – Cancer Biology
- BIOL 4010 – Evolution
- BIOL 4220 – Endocrinology
- BIOL 4230- Neurophysiology and Disease
- BIOL 4310 – Applied Microbiology
- BIOL 4320 – Environmental Microbiology
- BIOL 4400 – Virology
- BIOL 4510 – Molecular Development
- BIOL 4650 – Immunology

C. Related Field Courses .............................................................. 16 hours
- CHEM 2101L – Organic Chemistry I Lab
- CHEM 2102/2102L – Organic Chemistry II
- CHEM 3801 – Biochemistry
- PHYS 1111K – Introductory Physics I or PHYS 2211K- Principles of Physics I
- PHYS 1112K – Introductory Physics II or PHYS 2212K- Principles of Physics II

D. Electives ......................................................................................... 16-19 15-18 hours

Select free electives to bring total of 3000+ course work to at least 39 hours.

Total Semester Hours 123 hours

E. Exit Exam
B. Chemistry and Physics

Items 1-23 from the Department of Chemistry and Physics were discussed and approved by the committee. They are being submitted to the Faculty Senate for approval.

1. Create the following course:
   CHEM 4800 Pedagogy and Supplemental Instruction in Chemistry (0-3)-(0-9)-(1-3)
   Pre-requisite: Open only to chemistry majors, CHEM 2300 (minimum grade of C), CHEM 2102 (minimum grade of C), CHEM 2102L (minimum grade of C) and permission of Department Head.
   Description: Provides students interested in becoming high school chemistry educators with the knowledge, skills, and strategies fundamental to the best practices of inclusive chemistry instruction in high school settings. Course goals will be accomplished through the reading of pedagogical works, mentoring with an instructor, direct supplemental instruction, tutoring, lesson planning and delivery in a lower-level chemistry course. Completion of a chemistry education project is also required.
   Rationale: The course is designed for chemistry majors who have expressed an interest in becoming a high school teacher to allow them to experience the field and matriculate towards the MAT program within the College of Education. This course will support the NSF funded Noyce Scholarship Program and we view this course as an educational internship, similar to a chemical laboratory internship (CHEM 4960).
   Effective Term: Fall 2013
   CURCAT:
   Major Department: Chemistry & Physics
   Can course be repeated for additional credit? Yes
   Maximum number of credit hours: 9
   Grading Mode: Normal
   Instruction Type: Lecture / Lab
   Course equivalent: None

2. Create the following course and add to the Core D 2 and D3 options for non-science majors (See Attachments 1 and 2):
   CHEM 1100 Chemistry of the Environment 3-0-3
   Pre-requisite or Co-requisite: MATH 1001 or MATH 1111
   Description: Introduction to chemical principles in the context of global environmental systems. Topics may include: energy; source and fate of contaminants in ground and water systems; water, solid and hazardous waste management; toxic chemicals (metals and organics) and toxicology; air pollution; global warming; ozone depletion; sustainability and environmentally
friendly synthesis. (Credit in CHEM 1100 may not be applied to the major field requirement in chemistry).

Rationale: The course is designed for non-science majors to have a greater understanding of environmental chemistry that affects their everyday lives and global environment. The course will expand core science offerings by giving a chemistry perspective on important scientific issues of the day allowing students to be better informed about decisions they make that impact the global community. Core D – non-lab science.

Effective Term: Subject to approval by BOR

CURCAT:

Major Department: Chemistry & Physics
Can course be repeated for additional credit? No
Maximum number of credit hours: 3
Grading Mode: Normal
Instruction Type: Lecture
Course equivalent: None

3. Modify the following programs of study:

PROGRAM FOR THE DEGREE OF BACHELOR OF ARTS IN CHEMISTRY
Track I: Chemistry
B. Major Field Courses .............................................. 33 hours
   Required (20 Hours)
      CHEM 2101/2101L - Organic Chemistry I
      CHEM 2102/2102L - Organic Chemistry II
      CHEM 2300 - Principles of Chemical Analysis
      CHEM 3200 - Inorganic Chemistry
      CHEM 3401 - Physical Chemistry I
   Approved upper-division electives (13 hours) in the major from:
      CHEM 3300 - Instrumental Analysis
      CHEM 3402 - Physical Chemistry II
      CHEM 3801 - Biochemistry I
      CHEM 3802 - Biochemistry II
      CHEM 3803 - Biochemistry Laboratory
      CHEM 4100 - Advanced Topics in Organic Chemistry
      CHEM 4200 - Advanced Topics in Inorganic Chemistry
      CHEM 4300 - Advanced Topics in Analytical Chemistry
      CHEM 4400 - Advanced Topics in Physical Chemistry
      CHEM 4500 - Chemistry Seminar
      CHEM 4600 - Advanced Topics in Interdisciplinary Chemistry
      CHEM 4940 - Special Topics in Chemistry
      CHEM 4950 - Special Lecture Topics in Chemistry
      with a maximum 3 hours total from:
CHEM 3900 - Chemical Research

CHEM 4800 – Pedagogy and Supplemental Instruction in Chemistry

CHEM 4960 – Internship

CHEM 4991 - Advanced Chemical Research

Transfer credit for similar courses

Track II: Biochemistry

B. Major Field Courses .............................................. 33 hours

Required (30 Hours)

CHEM 2101/2101L - Organic Chemistry I
CHEM 2102/2102L - Organic Chemistry II
CHEM 2300 - Principles of Chemical Analysis
CHEM 3200 - Inorganic Chemistry
CHEM 3300 Instrumental Analysis
CHEM 3401 - Physical Chemistry I
CHEM 3801 - Biochemistry I
CHEM 3802 - Biochemistry II
CHEM 3803 - Biochemistry Laboratory

Approved upper-division electives (3 hours) in the major from:

CHEM 3402 - Physical Chemistry II
CHEM 3900 - Chemical Research - Biochemistry Approved
CHEM 4100 - Advanced Topics in Organic Chemistry
CHEM 4200 - Advanced Topics in Inorganic Chemistry
CHEM 4300 - Advanced Topics in Analytical Chemistry - Biochemistry Approved
CHEM 4400 – Advanced Topics in Physical Chemistry – Biochemistry Approved
CHEM 4600 - Advanced Topics in Interdisciplinary Chemistry - Biochemistry Approved
CHEM 4940 - Special Topics in Chemistry - Biochemistry Approved
CHEM 4950 - Special Lecture Topics in Chemistry - Biochemistry Approved

CHEM 4800 – Pedagogy and Supplemental Instruction in Chemistry

CHEM 4960 - Internship - Biochemistry Approved

CHEM 4991 - Advanced Chemical Research - Biochemistry Approved

Transfer credit for similar courses

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

B. Major Field Courses .............................................. 39 hours

CHEM 2101/2101L - Organic Chemistry I
CHEM 2102/2102L - Organic Chemistry II
CHEM 2300 - Principles of Chemical Analysis
CHEM 3200 - Inorganic Chemistry
CHEM 3300 - Instrumental Analysis
CHEM 3401 - Physical Chemistry I
CHEM 3402 - Physical Chemistry II
CHEM 4500 - Chemistry Seminar

9 hours from:

CHEM 3801, 3802, 3803, 4100, 4200, 4300, 4400, 4600, 4940, 4950, with a maximum 2 hours total from: CHEM 3900, 4800, 4960, 4991
Rationale: Add CHEM 4800 to program of study

Effective Term: Fall 2013

4. DELETE THE FOLLOWING COURSE
PHYS 3210 INTERMEDIATE MECHANICS

Rationale: PHYS 3210 is never offered. Physics majors take Advanced Mechanics PHYS 4170.

Effective Term: Fall 2013

5. Modify the following course:
PHYS 4950 SPECIAL TOPICS IN PHYSICS

RATIONALE: The current arrangement for special topics only allows for a minimum of three credit hour courses. The physics faculty would like to have the option of offering 1 or 2 credit hour special topic courses as well.

Effective Term: Fall 2013

6. Modify the following course:
PHYS 3120 DIGITAL ELECTRONICS

RATIONALE: The 7 contact hours for faculty have posed a problem with course assignments and remaining within the 12 hour or 15 hour workload for faculty. All faculty agree the lab component can successfully be completed within the five hours.

Effective Term: Fall 2013

7. Modify the following course:
PHYS 3801K MODERN PHYSICS

RATIONALE: Three contact hours for an upper level physics lab is not sufficient to complete detailed experiments that require many hours of measurements and data analysis. The extra hour will benefit the students allowing them to not have to rush through their experiments.

Effective Term: Fall 2013

8. Modify the following course:
PHYS 4120 SCIENTIFIC MEASUREMENT WITH DIGITAL INTERFACING

RATIONALE: The 7 contact hours for faculty have posed a problem with course assignments and remaining within the 12 hour or 15 hour workload for faculty. All faculty agree the lab component can successfully be completed within the five hours.

Effective Term: Fall 2013
9. Modify the following course:
   PHYS 1010 THE PHYSICS OF SPORTS 3-0-3
   Prerequisite: MATH 1111 (minimum grade of C)
   RATIONALE: Students will need a proficient understanding of college algebra to successfully complete PHYS 1010.

   Effective Term: Fall 2013

10. Modify the following course:
    PHYS 3220 MECHANICS OF DEFORMABLE BODIES 3-0-3
    Prerequisite: ENGR 2020 MATH 3411 (minimum grade of C) and PHYS 2212K (minimum grade of C)

    RATIONALE: ENGR 2020 is not offered anymore at Armstrong. PHYS 2212K and MATH 3411 will provide the student with the foundation to succeed in PHYS 3220

    Effective Term: Fall 2013

11. Modify the following course:
    PHYS 3230 FLUID MECHANICS 3-0-3
    Prerequisite: MATH 3411 (minimum grade of C) and either ENGR 2020 or ENGR 2202 or PHYS 3210 and either PHYS 3300 or PHYS 3400

    RATIONALE: ENGR 2020 is not offered at Armstrong anymore. PHYS 3210 is being deleted. Applied Physics Majors do not need to take ENGR 2202 anymore within the related fields.

    Effective Term: Fall 2013

12. Modify the following course:
    PHYS 3300 THERMODYNAMICS 3-0-3
    Prerequisite: PHYS 2212K (minimum grade of C) and MATH 3411 (minimum grade of C)

    RATIONALE: Students earning a D in MATH 3411 do not generally succeed in PHYS 3300. To benefit the student, the pre-requisite of minimum grade of C has been added for MATH 3411.

    Effective Term: Fall 2013

13. Modify the following course:
    PHYS 3312 ELECTROMAGNETISM 3-0-3
    Prerequisite: PHYS 2212K (minimum grade of C) and MATH 2083 (minimum grade of C)

    RATIONALE: Students earning a D in MATH 2083 do not generally succeed in PHYS 3312. To benefit the student, the pre-requisite of minimum grade of C has been added for MATH 2083.

    Effective Term: Fall 2013
14. Modify the following course:
PHYS 3400 CHEMICAL THERMODYNAMICS 3-0-3
Prerequisite: CHEM 1212 (minimum grade of C) and MATH 2072 (minimum grade of C) and either PHYS 1112K (minimum grade of C) or PHYS 2212K (minimum grade of C)

RATIONALE: Students earning a D in MATH 2072 and CHEM 1212 do not generally succeed in PHYS 3400. To benefit the student, the pre-requisite of minimum grade of C has been added for MATH 2072 and CHEM 1212

Effective Term: Fall 2013

15. Modify the following course:
PHYS 3500 DIFFRACTION AND CRYSTALLOGRAPHY 3-0-3
Prerequisite: PHYS 3801K (minimum grade of C)

RATIONALE: Students earning a D in PHYS 3801K have not demonstrated proficient skills to succeed in PHYS 3500. To benefit the student, the pre-requisite of minimum grade of C has been added for PHYS 3801K. PHYS 3801 was previously changed to PHYS 3801K.

Effective Term: Fall 2013

16. Modify the following course:
PHYS 3802 INTRODUCTION TO QUANTUM MECHANICS 3-0-3
Prerequisite: MATH 2072 (minimum grade of C) and PHYS 3801K (minimum grade of C)

RATIONALE: Students earning a D in MATH 2072 do not generally succeed in PHYS 3802. To benefit the student, the pre-requisite of minimum grade of C has been added for MATH 2072. PHYS 3801 was previously changed to PHYS 3801K.

Effective Term: Fall 2013

17. Modify the following course:
PHYS 4120 SCIENTIFIC MEASUREMENT WITH DIGITAL INTERFACING 1-6-3
Prerequisite: PHYS 3120 (minimum grade of C) and CSCI 1301 (minimum grade of C)

RATIONALE: Students earning a D in PHYS 3120 and/or CSCI 1301 have not demonstrated proficient skills to succeed in PHYS 4120. To benefit the student, the pre-requisite of minimum grade of C has been added for PHYS 3120 and CSCI 1301.

Effective Term: Fall 2013

18. Modify the following course:
PHYS 4170 ADVANCED MECHANICS 3-0-3
Prerequisite: MATH 2083 (minimum grade of C) and PHYS 2212K (minimum grade of C). (MATH 3411 also recommended).
RATIONALE: Students earning a D in MATH 2083 do not generally succeed in PHYS 3802. To benefit the student, the pre-requisite of minimum grade of C has been added for MATH 2083.

Effective Term: Fall 2013

19. Modify the following course:
PHYS 4960 PHYSICS INTERNSHIP
Prerequisite: ENGR 2201 and PHYS 3100 and either PHYS 3300 or PHYS 3400 and Permission of instructor or department head.

RATIONALE: Delete the specific classes as pre-requisite courses for PHYS 4960. The specific prerequisites are not valid for a student to complete an internship in applied physics and can be restrictive if a student is eligible for the internship.

Effective Term: Fall 2013

20. Create the following course:
PHYS 3200 Mathematical Methods for Physicists
Prerequisite: PHYS 2212K (minimum grade of C), MATH 2083 (minimum grade of C), and MATH 3411 (minimum grade of C).

Rationale: Each area of physics has a number of different mathematical methods employed in the subject. This course will present a variety of mathematical subjects within the context of the physical sciences. The course will build upon the prerequisites and expand the mathematical skill set of the students.

Effective Term: Fall 2013

CURCAT:
Major Department: Chemistry and Physics
Can course be repeated for additional credit? No
Maximum number of Credit Hours: 3
Cross-Listed Courses: None
Grading Mode: Normal
Instruction Type: Lecture

21. Create the following course:
PHYS 3142 Computational Physics
Prerequisite: PHYS 2212K (minimum grade of C), MATH 2083 (minimum grade of C), and MATH 3411 (minimum grade of C).
Description: A survey of computational methods used in the natural sciences: approximation of functions, numerical calculus, numerical differential equations, Monte Carlo techniques, parallel computing, and distributed computing.

Rationale: Each area of physics has a number of different computational methods employed in the subject. This course will present a variety of computational subjects within the context
of the physical sciences. The course will build upon the prerequisites and expand the mathematical skill set of the students. A new computational center is currently being assembled and will be a cornerstone of the physics program. This course has been offered as a special topics class twice since 2009 and will be offered again in Spring 2013. The computational physics course has become a part of the upper division physics course rotation and this should be reflected in the course catalog.

Effective Term: Fall 2013

CURCAT:
   Major Department: Chemistry and Physics
   Can course be repeated for additional credit? No
   Maximum number of Credit Hours: 3
   Cross-Listed Courses: None
   Grading Mode: Normal
   Instruction Type: Lecture

22. Create the following course:
   PHYS 4800 Pedagogy and Supplemental Instruction in Physics (0-3)-(0-9)-(1-3)
   Pre-Requisite: Open only to applied physics majors, PHYS 2212K (minimum grade of C) and permission of Department Head.
   Description: Provides students interested in becoming high school physics educators with the knowledge, skills, and strategies fundamental to the best practices of inclusive physics instruction in high school settings. Course goals will be accomplished through the reading of pedagogical works, mentoring with an instructor, direct supplemental instruction, tutoring, lesson planning and delivery in a lower-level physics course. Completion of a physics education project is also required.
   Rationale: The course is designed for physics majors who have expressed an interest in becoming a high school teacher to allow them to experience the field and matriculate towards the MAT program within the College of Education. This course will support the NSF funded Noyce Scholarship Program and we view this course as an educational internship, similar to a physics laboratory internship (PHYS 4960).

Effective Term: Fall 2013

CURCAT:
   Major Department: Chemistry & Physics
   Can course be repeated for additional credit? Yes
   Maximum number of credit hours: 9
   Grading Mode: Normal
   Instruction Type: Lecture / Lab
   Course equivalent: None

23. Modify the following program of study:

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN APPLIED PHYSICS
B. Major Field Courses .................................................. 30 hours
   PHYS 3100 - Electric Circuit Analysis
   PHYS 3120 - Digital Electronics
PHYS 3210 – Intermediate Mechanics or PHYS 4170 - Advanced Mechanics
PHYS 3300 - Thermodynamics or PHYS 3400 - Chemical Thermodynamics
PHYS 3801K – Modern Physics
PHYS 3802 - Introduction to Quantum Mechanics
PHYS 4120 - Scientific Measurement with Digital Interfacing
Nine semester hours from:
  PHYS 2900 – Introduction to Research in Physics
  PHYS 3142 – Computational Physics
  PHYS 3200 – Mathematical Methods for Physicists
  PHYS 3220 - Mechanics of Deformable Bodies
  PHYS 3230 - Fluid Mechanics
  PHYS 3312 - Electromagnetism
  PHYS 3500 - Diffraction and Crystallography
  PHYS 3700K – Optics
  PHYS 4800 - Pedagogy and Supplemental Instruction in Physics (maximum of 3 hours can be used in this section)
PHYS 4900 - Independent Study in Physics
PHYS 4950 - Special Topics in Physics
PHYS 4960 - Physics Internship
PHYS 4991 – Advanced Research in Physics

Rationale: Add new courses, remove deleted courses

Effective Term: Fall 2013

C. Computer Science and Information Technology (no items)
D. Engineering Studies (no items)

E. Mathematics

*Items 1-3 from the Department of Mathematics were discussed and approved by the committee. They are being submitted to the Faculty Senate for approval.*

1. Create the following Certificate program:

**PROGRAM FOR THE CERTIFICATE OF ACTUARIAL SCIENCES**

This program offers students the opportunity to prepare for a career as an actuary. In order to become an actuary, one must pass a number of competency exams in certain disciplines and obtain a number of educational experiences that pertain to the field of actuarial sciences. These requirements are determined by the Society of Actuaries (SOA) and the Casualty Actuarial Society (CAS).

The purpose of this program is to prepare students for the Probability (Exam P or Exam 1) and Financial Mathematics (Exam FM or Exam 2) exams and to provide all the educational experiences listed by the Validation of Educational Experience (VEE) Requirements to become an actuary. The certificate will only be offered to students
who are earning a degree while completing the requirements for the certificate; the certificate will be awarded at the time of completion of the degree. An official certificate and transcript annotation will be made upon completion of the program. In order to receive the Certificate of Actuarial Sciences, students must earn a grade of B or better in the following courses:

**Certificate of Actuarial Sciences**

- STAT 3211 - Probability and Statistics Applications I
- STAT 3222 - Probability and Statistics Applications II
- ECON 3050 - Intermediate Macroeconomics
- ECON 3060 - Intermediate Microeconomics
- ECON 3230 - Finance
- ECON 3700 - Econometrics
- MATH 4200 – Actuarial Science Seminar

For more information about the certificate or for a career as an actuary, please contact the Department of Mathematics.

**Rationale:**

Given above.

**Effective Term: Fall 2013**

2. Modify the following program of study:

**PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN MATHEMATICS WITH TEACHER CERTIFICATION**

C. Related Field Courses

- EDUC 2110 – Investigating Critical and Contemporary Issues in Education
- EDUC 2120 – Exploring Socio-Cultural Perspectives on Diversity in Education Contexts
- EDUC 2130 – Exploring Learning and Teaching
- EDUC 3100 – Technology Applications for Teachers
- EDUC 3200 – Curriculum, Instruction, and Assessment
- EDUC 3300 – Educating Students with Disabilities in the General Education Classroom
- MGSE 3400 – Classroom Management Strategies
- MATH 3750 – Internship I – Pre-Student Teaching
- MGSE 3750 – Internship I
- MATH 4750 – Internship II – Student Teaching (12 semester hours)
- MATH 5412U – Secondary School Curriculum and Methods, Mathematics

**Rationale:** Because it has a wider audience than MATH 3750, MGSE 3750 – Internship I can be offered more frequently than MATH 3750, giving candidates greater flexibility on when to take this course in their program of study. MGSE 3750 can also accommodate a greater number of practicum hours to better prepare
candidates for student teaching. Since candidates for certification in grades 6-12 are expected to have placements at both the middle and high school levels, their placement in MGSE 3750 (Internship I) will be at the middle school level (grades 6-8) and their placement in MATH 4750 (Internship II – Student Teaching) will be at the secondary level (grades 9-12).

**Effective Term: Fall 2013**

3. Delete the following course:

   MATH 3750 – Internship I – Pre-Student Teaching 0-V-3

   **Rationale:** Because it has a wider audience than MATH 3750, MGSE 3750 – Internship I can be offered more frequently than MATH 3750, giving candidates greater flexibility on when to take this course in their program of study. MGSE 3750 can also accommodate a greater number of practicum hours to better prepare candidates for student teaching. Since candidates for certification in grades 6-12 are expected to have placements at both the middle and high school levels, their placement in MGSE 3750 (Internship I) will be at the middle school level (grades 6-8) and their placement in MATH 4750 (Internship II – Student Teaching) will be at the secondary level (grades 9-12).

   **Effective Term: Fall 2013**

**F. Psychology**

*Item 1 from the Department of Psychology was discussed and approved by the committee. It is being submitted to the Faculty Senate for approval.*

1. Create the following post-baccalaureate certificate:

   **Certificate Program**

   Available to students who hold a baccalaureate degree from an accredited institution

   **Post-Baccalaureate Certificate in Applied Behavior Analysis.......... 18-22 hours**
   PSYC 1101 or 1101H—Introduction to Psychology
   One course selected from:
   - PSYC 3160—Clinical Psychology
   - PSYC 3200—Industrial and Organizational Psychology
   - PSYC 3800—Health Psychology
   - PSYC 3400—Introduction to Learning or both PSYC 4090 and PSYC 4091—Learning and Behavior/Learning and Behavior Laboratory
   - PSYC 4130—Senior Internship
   - PSYC 5060U or 5060G—Basic Behavior Principles and Behavior Change
PSYC 5061U or 5061G—Advanced Behavioral Assessment
PSYC 5062U or 5062G—Advanced Behavior Change Techniques

**Rationale:** Our department’s sequence in Applied Behavior Analysis (PSYC 5060U/G, 5061U/G, and 5062U/G) has been approved by the Behavior Analysis Certification Board (BACB) as meeting the coursework requirements for eligibility to take the Board Certified Assistant Behavior Analyst Examination. We get multiple calls each semester from individuals who hold a baccalaureate degree and want to qualify for taking the national exam. These students also state they want “something” to recognize them for their educational efforts before they could take and pass the exam. Students who successfully complete the courses listed for the proposed certificate do deserve recognition for returning to school and completing focused study in the area of applied behavior analysis.

**Effective Term: Fall 2013**

V. Interdisciplinary Programs

*The following item (1) from the College of Liberal Arts and College of Science and Technology was discussed and approved by the committee. It is being submitted to the Faculty Senate for approval.*

1. **Create the Minor in Environmental Studies (15 hours):**

   Required. 15 credit hours from the following lists. Nine of these must be 3000 level or above. At least nine must be from a discipline other than your major.

   At least two science courses from this list. Courses used in core curriculum do not count in this area.

   **BIOL 1103 (and Lab) Concepts of Biology**
   **BIOL 1107 (and Lab) Principles of Biology I**
   **BIOL 1108 (and Lab) Principles of Biology II**
   **BIOL 1120 Diversity of Life**
   **BIOL 1140 Environmental Biology**
   **BIOL 3050 (and Lab) General Ecology**
   **BIOL 3100 Man and the Environment**
   **BIOL 3250 Limnology**
   **BIOL 3470 Environmental Restoration**
   **BIOL 3600 (and Lab) Salt Marsh Ecology**
   **BIOL 4550 (and Lab) Biology of Marine Organisms**
   **BIOL 4970 (and Lab) Special Topics (as appropriate)**
   **CHEM 1100 Chemistry of the Environment**
   **CHEM 1211 (and Lab) Principles of Chemistry I**
   **CHEM 1212 (and Lab) Principles of Chemistry II**
   **CHEM 2200 Science, Technology, and the Modern World**
   **CHEM 4100 Advanced Topics in Organic Chemistry (as appropriate)**
CHEM 4200  Advanced Topics in Inorganic Chemistry (as appropriate)
CHEM 4300  Advanced Topics in Analytical Chemistry (as appropriate)
CHEM 4600  Advanced Topics in Interdisciplinary Chemistry (as appropriate)
GEOL 2010  Introduction to Physical Geology
OCEA 3100  Introduction to Oceanography

At least two non-science courses from this list
ARTS 3680  Environmental Art
ECON 3450  Environmental Economics
ENGL 5280U  Literature and the Environment
ENST 4000  Internship in Environmental Studies
HSCC 3760  Environmental and Community Health Issues
PHIL 3200  Technology, Society, and Human Values
POLS/LWSO 4190  Environmental Laws and Regulations
POLS 5530U  Global Environmental Politics

Rationale: To expand interdisciplinary offerings.

Effective Term: Fall 2013

The following item (2) was discussed and approved by the committee. It is being submitted to the Faculty Senate for approval.

2. UCC Agenda Item: First Year Seminar (See Attachments 3 and 4)

Modify the catalog and programs of study as noted below: Placement of the First-Year Seminar as an extra credit hour in all programs of study

First Class Learning Community (~ page 66)
All students entering Armstrong Atlantic State University with fewer than 30 credits must enroll in a First Class Learning Community, composed of a core course and a first-year seminar (FYSE 1100, FYSH 1100, FYSI 1100, or FYSS 1100), in order to fulfill their graduation requirements. Since these courses comprise a learning community, a withdrawal necessarily means withdrawing from both courses. Transfer students entering with 30 or more credits are exempt from this requirement.

General Education Requirements in Catalog (~ page 80) and All Programs of Study
Physical Education ............................................................................................................................ 3 hours
First-Year Seminar........................................................................................................................ 1 hour

Effective: Fall 2013

Rationale:
After consultation with the QEP Course Design and Curriculum Change subcommittee, the SACS leadership committee, deans, department heads, and faculty, the Armstrong QEP steering committee recommends that one credit hour be added to all programs of study. Campus-wide discussions about a mandatory first-year seminar credit hour course revealed that many programs could not accommodate it as an elective. The seminar cannot be placed in the core because the BOR prohibits orientation
courses in the core; however, the BOR does allow institutions to add credit hours to programs of study if those hours pertain to physical education, health, or university orientation. Since most incoming freshmen enroll in an average of 14 credits in their first semester, an additional credit should be not burdensome. Neither will the extra credit hour negatively affect the vast majority of students on HOPE scholarship with 127+ hours in their programs of study or transfer students. Most of these students are already taking many more hours than the minimum required. The alternative to adding an extra-hour is to replace a PE credit hour with the FYS credit hour, but the Steering Committee decided that adding an added hour was the better option. The extra hour of tuition will generate revenue to defray the costs of implementing the QEP, largely comprised of instructional expenses, including hiring additional full-time and part-time faculty. Also eliminating one credit of PE will have a negative impact on the College of Education, including full-time faculty who teach physical education courses. In trying to balance university, college, department, faculty, and student needs, the QEP steering committee unanimously voted to recommend adding the FYS credit hour to all programs of study.

For Reference: First-Year Seminar Catalog Descriptions approved by UCC and Senate

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<tr>
<td>FYSE 1000</td>
<td>First-Year Seminar – Science &amp; Technology</td>
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<tr>
<td>FYSS 1000</td>
<td>First-Year Seminar – Education</td>
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<tr>
<td>FYSL 1000</td>
<td>First-Year Seminar – Liberal Arts</td>
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<td>Pre-requisite: Fewer than 30 credit hours completed</td>
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</tbody>
</table>

Corequisite: Associated core course (for catalog purposes. Registrar will handle the mechanics of implementation).

Description: First year students will learn the skills to become active, effective participants in the Armstrong experience. University physical, academic, and student support services will be discussed, as well as information literacy skills which include recognition of information needs, selection and evaluation of resources to fill information needs, and responsible communication of information. Skills learned will also be demonstrated and evaluated as part of the corequisite core class.

OTHER BUSINESS

A. Informational item (see Attachment 5). In May 2012, the Board of Regents approved adding BIOL 1103 to the core, and changing Area D.IIB to be in alignment with other USG institutions. These changes were reflected in the 2012-13 Undergraduate Catalog, but were never documented in the UCC minutes.

ADJOURNMENT. The meeting was adjourned at 4:48 p.m.

Respectfully submitted,

Phyllis L. Panhorst
Catalog Editor and Secretary to the Committee
Core Curriculum Course Proposal Form

Note: Refer to the following information on the Board of Regents web site: Core Curriculum; Guidelines: Areas A-F, Goals A-E and Goals I-III; and Common Course Prefixes, Numbers, and Descriptions.

NOTE: You cannot start the form and save it – If you exit this web page before submitting, all data will be lost. Please have all required information ready prior to beginning.

Submit Proposal To
Select who should receive this course proposal submission (required)

NOTE: Courses that have not gone through the institutional review process must do so and then be reviewed by the appropriate Academic Advisory Council before submission to the Council on General Education.

Regents Academic Advisory Committee (for core area(s) selected in #4 below)
System Council on General Education

Institutional Information
1. Institution (required) Armstrong Atlantic State University

Error: This field is required.

2. This is a proposal for (select one) A new course
A change in an existing course (If this is a change, please provide information on the current course, complete information on the new course, and a rationale for the change.)
Placement of an existing Area F course into the Core Curriculum
Placement of an existing course other than from Area F into the Core Curriculum

3. Course approval by institution – required

Attach documentation (in PDF format) that this course been reviewed and approved by the institution's appropriate campus committees that oversee the core curriculum.

Approval date: 

Upload Institution approval document (PDF format)

File names should include an appropriate extension (e.g. somefile.pdf)

Please Note: File names should NOT contain special characters such as: # & !
4. This course is requested to satisfy Core Area(s) (select all that apply)  

- ☐ Area A (English, Mathematics)  
- ☐ Area B (Institutional Options)  
- ☐ Area C (Humanities, Fine Arts, Ethics)  
- ☑ Area D (Natural Sciences, Mathematics, Technology)  
  If Area D, select appropriate major(s):  
  - ☐ math/science majors  
  - ☑ health professions majors  
  - ☑ non-math/science/health professions majors  
- ☐ Area E (Social Sciences)  
- ☐ Area F (Lower division major requirements)  

Course Information *required fields*  

5. Course Subject: Environmental Chemistry  
6. Course Prefix and Number: CHEM 1100  
7. Course Title: Chemistry and the Environment  
8. Lecture Hours-Laboratory Hours-Credit Hours: 3-0-3  
9. Learning Support Prerequisites: None  
10. Other Prerequisites: MATH 1001 or 1111  
11. Course Co-requisites: MATH 1001 or 1111  
12. The institution has reviewed the list of common course prefixes, numbers and descriptions, and this course is in compliance. *  
   [Academic Affairs Handbook, section 2.4.10]  

- ☑ Yes  
- ☐ No  

Comment (Additional information about your review of course names/numbers)
13. Provide a catalog description of the course *

CHEM 1100 Chemistry of the Environment (3-0-3)

Pre-requisite or Co-requisite: MATH 1001 or MATH 1111

Introduction to chemical principles in the context of global environmental systems. Topics may include: energy; source and fate of contaminants in ground and water systems; water, solid and hazardous waste management;

14. Attach a Syllabus *(generic, rather than one from a specific instructor)* or a Common Course Outline with detailed information regarding the content of the course (and laboratory, if applicable), required reading, grading requirements, course objectives, and learning outcomes and assessment.

Upload Syllabus document

*File names should include an appropriate extension (e.g., .pdf, .doc)*

*Please Note: File names should NOT contain special characters such as: # & !*

15. Explain how this specific course fits within the context of the institution's mission and general education program and advances the University System and the institution's general education learning outcomes. *

If this is a course proposal for Area B, explain how the course addresses the institution's philosophy, goals, and objectives for courses offered in Area B. Also note that courses specific to the major, skills-based courses and orientation courses are not appropriate for Area B of the Core.

This course is a core D course for non-science majors which meets the general education outcomes of Core D for Armstrong Atlantic State University. Introduction to chemical principles in the context of global and local environmental systems.

16. Goals A-E *

*Indicate the approved institutional Core Area learning outcome that this course supports* (e.g., The course is proposed in support of Learning Goal A1 Communication Outcomes and the learning outcome is: Students have the ability to adapt communication to circumstances and audience).

Goal D (Natural Sciences)

Students will demonstrate a collegiate-level understanding of the method by which scientific study is conducted, and, students will accurately evaluate data in scientific reasoning problems.
Goals I-III

17. Does this course fulfill an overlay requirement for Learning Goal I - US Perspectives in the institution's General Education Program?

☐ No  ☐ Yes

If “Yes,” What is the proposed or approved learning outcome?

Explain how the course fulfills this goal:

18. Does this course fulfill an overlay requirement for Learning Goal II - Global Perspectives in the institution's General Education Program?

☐ No  ☐ Yes

If “Yes,” What is the proposed or approved learning outcome?

Explain how the course fulfills this goal:

This course will look at global environmental issues from a chemistry context.

19. Does this course fulfill an overlay requirement for Learning Goal III - Critical Thinking in the institution's General Education Program?

☐ No  ☐ Yes
If "Yes," What is the proposed or approved learning outcome?

Explain how the course fulfills this goal:

This course will look at global environmental issues from a quantitative context.

Review Process

**IMPORTANT!** You may skip questions 20 and 21 if you are submitting this form to a Regents Academic Advisory Committee. This information is **required** for submissions to the Council on General Education.

20. Regents Academic Advisory Committee Course Approval

*(required for submission to Council on General Education)*

The course must be reviewed by the relevant Academic Advisory Committee.

Approval date: 

Upload Advisory committee review document

*File names should include an appropriate extension (e.g., .pdf .doc)*

*Please Note: File names should NOT contain special characters such as: # & !*

21. Institutions may apply for permission to specify that students in one or more of their degree programs are required to take particular courses within Areas A-E. Applications will be considered first by the relevant Regents Academic Advisory Committees (the committee for the degree program and the advisory committee for course), then by the Administrative Committee on Academic Affairs (RACAA).

*(required for submission to Council on General Education)*

Are you requesting a pre-requisite exception?

- [ ] Yes
- [ ] No

If Yes, please enter the Approval dates:

Regents Academic Advisory Committee Approval date:
Administrative Committee on Academic Affairs (RACAA) Approval date:

Upload RACAA approval document
File names should include an appropriate extension (e.g., .pdf, .doc)

22. Is this a Resubmission? (select one)

☐ Yes ☐ No

23. Please provide the following contact information

VPAA Name: Carey Adams

VPAA Email Address: "Carey Adams" <carey.adams@armstrong.edu>,

VPAA Phone Number: 912-344-2525

VPAA Mailing Address: Armstrong Atlantic State University
11935 Abercorn Street
Savannah, GA 31419

Don't put anything here

Help us reduce spam. Please enter the answer to the question below (required).
CHEM 1100 Chemistry of the Environment  
Fridays 10 am-12 noon SC 2502  

Instructor: TBD  
Email: TBD  

Phone: (office) TBD  
Office: TBD  
Office Hours: TBD  

Required Texts: Chemistry in Context 7th Edition, Catherine Middlecamp, Steven Keller, Karen Anderson, Anne Bentley, Michael Cann, Jamie Ellis  
American Chemical Society  

Cellular phones, beepers and pagers are to be turned OFF or on SILENT and placed into your book bag or purse during class. NO TEXT messaging during class. During exams, all cell phones must be in an inaccessible bag and not available for use for any reason. Please be courteous to your fellow students! Visitors are not permitted in the class.  

Grading:  
2 exams (mid-term & final) 200 points  
Presentation 100 points  
Case Studies 300 points  

The grade scale is as follows: 90-100% A, 80-89 % B, 70-79% C, 60-69% D, Less than 60% F  

ACADEMIC DISHONESTY: Cheating and plagiarism are prohibited by the AASU code of conduct. Failure to turn in your own work will result in significant penalty (see AASU Honor Code). Examples of cheating or plagiarism include:  

1.) COPYING Material from a book, journal or website or another student. You may use books, journal and websites, as sources for your presentation, but you may not copy their language word for word. If you borrow pictures from a book, journal or website, you must reference it correctly (according to ACS style).  

2.) Any other form of cheating as listed in the AASU Honor code such as copying from another student on an exam. READ THE HONOR CODE!  

EXAMS: Each exam will be in class and will take ONLY one hour of the class period. After a short break, we will continue with the class. Exams will be a mixture of short answer, problems and essays. Attendance at exams is MANDATORY. Any request for a make-up exam must be handled in the following manner:  

Attachment 2
1.) **The Instructor must be notified (e-mail or phone) BEFORE THE EXAM BEGINS. ONCE THE EXAM HAS STARTED, YOU MAY NOT REQUEST A MAKE UP TEST FOR ANY REASON.** The time date stamp on MY phone or e-mail serves as the time of notification.

2.) MAKE-ups will only be granted in extreme circumstances accompanied by a doctor’s note, family obituary or note from a university official that you were attending a university sanctioned event (conference where you presented your work or athletics).

3.) Make-up exams will not be allowed for routine dentist, doctor etc. appointments or for work related activities.

4.) Make-up exams **WILL NOT** be the same as the regular exam and **WILL NOT** from the practice questions.

**Case Studies.** Links to case studies will be posted on the class website under Chemistry of the Environment. You will read the case studies and answer (in writing) any questions that are asked at the end of the reading assignment. You must email your answers to the instructor as a Microsoft Word Document by the date indicated on the web-site.

**TOPICS:**

- Sustainability, What is it? How do we define it?
- Composition of the air we breathe
- The Ozone Layer – Status and Implications
- Global Climate Change – Principles and Data
- Energy of Combustion
- Water – Life’s Elixer
- Acid Rain – History, Implications and Future
- Nuclear Power – What is it? How safe is it?
- Batteries – The future of transportation?
- Polymers and Plastics
- Drug Design and Implications

PowerPoint Lecture Notes are provided (in pdf form) at the class web-site (http://chemphys.armstrong.edu/nivens/course_list.htm). They are password protected. Password announced in class.

**Exam dates:** There will be two exam dates. One prior to mid-term and a final exam. Test dates will be announced at the beginning of the semester.
### Degree Programs at 127 or More Credit Hours

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*Source: Armstrong Office of Institutional Research 11-13-12*
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Source: Armstrong Office of Institutional Research 11-13-12
May 3, 2012

Dr. Anne Thompson
Vice President for Academic Affairs
Armstrong Atlantic State University
11935 Abercorn Street
Savannah, Georgia 31419

Dear Dr. Thompson:

The University System of Georgia Council on General Education met in full session April 20, 2012. The Council on General Education approved the proposed change in Area D for health science students and approved the BIOL 1103 course.

If you have questions about the above, please contact me.

Thank you very much.

Sincerely,

Virginia J. Michelich, Ph. D., Associate Vice Chancellor for Student Achievement