

# Armstrong

## 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

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**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~~ **four** 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 (~~15~~16 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 (~~17~~18-24 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~~ hoursRequired 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** ~~3-0-3~~

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 ~~V-V-(3-9)~~ **V-V-(1-9)**

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 ~~1-6-3~~ **1-5-3**

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 ~~2-3-3~~ **2-4-3**

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 ~~1-6-3~~ **1-5-3**

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

V-V-(1-10)

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

3-0-3

Prerequisite: PHYS 2212K (minimum grade of C), MATH 2083 (minimum grade of C),  
and MATH 3411 (minimum grade of C).

**Description: A survey of advanced mathematical techniques used in the natural sciences: vector calculus, ordinary differential equations, partial differential equations, matrix methods, probability, statistics, and complex analysis.**

**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

V-V-3

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.....21 hours**

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.....38 hours

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.**

<b>BIOL 1103 (and Lab)</b>	<b>Concepts of Biology</b>
<b>BIOL 1107 (and Lab)</b>	<b>Principles of Biology I</b>
<b>BIOL 1108 (and Lab)</b>	<b>Principles of Biology II</b>
<b>BIOL 1120</b>	<b>Diversity of Life</b>
<b>BIOL 1140</b>	<b>Environmental Biology</b>
<b>BIOL 3050 (and Lab)</b>	<b>General Ecology</b>
<b>BIOL 3100</b>	<b>Man and the Environment</b>
<b>BIOL 3250</b>	<b>Limnology</b>
<b>BIOL 3470</b>	<b>Environmental Restoration</b>
<b>BIOL 3600 (and Lab)</b>	<b>Salt Marsh Ecology</b>
<b>BIOL 4550 (and Lab)</b>	<b>Biology of Marine Organisms</b>
<b>BIOL 4970 (and Lab)</b>	<b>Special Topics (as appropriate)</b>
<b>CHEM 1100</b>	<b>Chemistry of the Environment</b>
<b>CHEM 1211 (and Lab)</b>	<b>Principles of Chemistry I</b>
<b>CHEM 1212 (and Lab)</b>	<b>Principles of Chemistry II</b>
<b>CHEM 2200</b>	<b>Science, Technology, and the Modern World</b>
<b>CHEM 4100</b>	<b>Advanced Topics in Organic Chemistry (as appropriate)</b>

<b>CHEM 4200</b>	<b>Advanced Topics in Inorganic Chemistry (as appropriate)</b>
<b>CHEM 4300</b>	<b>Advanced Topics in Analytical Chemistry (as appropriate)</b>
<b>CHEM 4600</b>	<b>Advanced Topics in Interdisciplinary Chemistry (as appropriate)</b>
<b>GEOL 2010</b>	<b>Introduction to Physical Geology</b>
<b>OCEA 3100</b>	<b>Introduction to Oceanography</b>

**At least two non-science courses from this list**

<b>ARTS 3680</b>	<b>Environmental Art</b>
<b>ECON 3450</b>	<b>Environmental Economics</b>
<b>ENGL 5280U</b>	<b>Literature and the Environment</b>
<b>ENST 4000</b>	<b>Internship in Environmental Studies</b>
<b>HSCC 3760</b>	<b>Environmental and Community Health Issues</b>
<b>PHIL 3200</b>	<b>Technology, Society, and Human Values</b>
<b>POLS/LWSO 4190</b>	<b>Environmental Laws and Regulations</b>
<b>POLS 5530U</b>	<b>Global Environmental Politics</b>

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, FYSL 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**

FYSH 1000 First-Year Seminar – Health Professions	1-0-1
FYSE 1000 First-Year Seminar – Science & Technology	1-0-1
FYSS 1000 First-Year Seminar – Education	1-0-1
FYSL 1000 First-Year Seminar – Liberal Arts	1-0-1

Pre-requisite: Fewer than 30 credit hours completed

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*)

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 \*

6. Course Prefix and Number \*

7. Course Title \*

8. Lecture Hours-Laboratory Hours-Credit Hours \*

9. Learning Support Prerequisites \*

10. Other Prerequisites \* (enter "none" if not applicable)

11. Course Co-requisites \* (enter "none" if not applicable)

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)

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;

13. Provide a catalog description of the course \*

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.

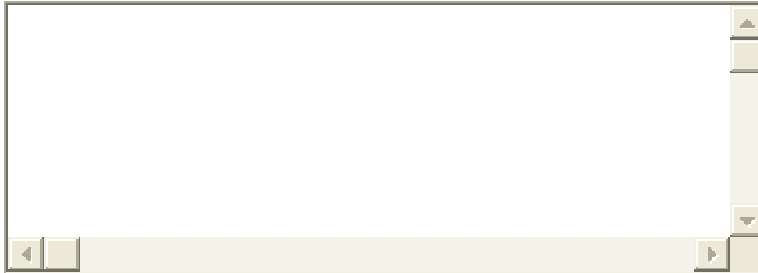
Goals I-III

**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:

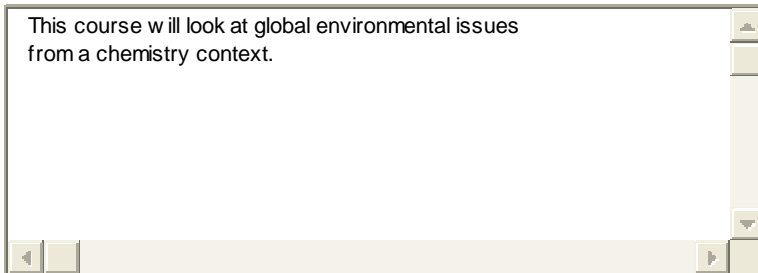
A large, empty rectangular text box with a light beige background and a thin black border. It has a vertical scrollbar on the right side and horizontal scrollbars at the bottom, indicating it is a scrollable area for text input.

**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:

A rectangular text box with a light beige background and a thin black border. It contains the text "This course will look at global environmental issues from a chemistry context." in a black, sans-serif font. The text is positioned in the upper left corner of the box. The box has a vertical scrollbar on the right side and horizontal scrollbars at the bottom.

**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:	<input type="text" value="Carey Adams"/>
VPAA Email Address:	<input "="" type="text" value='"Carey Adams" &lt;carey.adams@armstrong.edu,&gt;,'/>
VPAA Phone Number:	<input type="text" value="912-344-2525"/>
VPAA Mailing Address:	<input type="text" value="Armstrong Atlantic State University&lt;br/&gt;11935 Abercorn Street&lt;br/&gt;Savannah, GA 31419"/>

Don't put anything here

Help us reduce spam. Please enter the answer to the question below (required).



- 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](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**

<b>BACHELOR OF SCIENCE IN NURSING (127)</b>	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
Degrees Conferred	85	129	137	149	146
Degrees Conferred Students that Entered as Freshmen	17	34	31	38	36
Mean Overall Hours of Students that Entered as Freshmen	142	141.7	138.5	141.6	143.8
Entered as Freshmen & HOPE Eligible in Graduating FY				15	15
Entered as Freshmen, HOPE Eligible in Graduating FY, & Minimum Hours				0	0

<b>BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES (129)</b>	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
Degrees Conferred	55	48	46	65	47
Degrees Conferred Students that Entered as Freshmen	24	21	19	19	19
Mean Overall Hours of Students that Entered as Freshmen	142.9	135.7	135.8	143	144.1
Entered as Freshmen & HOPE Eligible in Graduating FY				5	5
Entered as Freshmen, HOPE Eligible in Graduating FY, & Minimum Hours				1	0

<b>BACHELOR OF SCIENCE IN RESPIRATORY THERAPY (129)</b>	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
Degrees Conferred	23	18	22	22	19
Degrees Conferred Students that Entered as Freshmen	9	7	6	4	4
Mean Overall Hours of Students that Entered as Freshmen	139.6	139.1	144.2	135.3	166.3
Entered as Freshmen & HOPE Eligible in Graduating FY				1	0
Entered as Freshmen, HOPE Eligible in Graduating FY, & Minimum Hours				0	0

<b>BACHELOR OF SCIENCE IN ART EDUCATION (132)</b>	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
Degrees Conferred	7	3	3	6	12
Degrees Conferred Students that Entered as Freshmen	2	1	0	2	7
Mean Overall Hours of Students that Entered as Freshmen	141	150	n/a	136.5	149.3
Entered as Freshmen & HOPE Eligible in Graduating FY				2	2
Entered as Freshmen, HOPE Eligible in Graduating FY, & Minimum Hours				0	0

<b>BACHELOR OF MUSIC EDUCATION (132)</b>	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
Degrees Conferred	5	5	3	6	3
Degrees Conferred Students that Entered as Freshmen	2	4	2	5	2
Mean Overall Hours of Students that Entered as Freshmen	152.5	143.8	142	149.8	146
Entered as Freshmen & HOPE Eligible in Graduating FY				1	1
Entered as Freshmen, HOPE Eligible in Graduating FY, & Minimum Hours				0	0

## FY 2010-11 Bachelors Degrees Conferred

Degree		Total		Entered as Freshmen				Entered as Transfers			
		n	Mean Overall Credit Hours	n	%	Minimum Credit Hours	Mean Overall Credit Hours	n	%	Minimum Credit Hours	Mean Overall Credit Hours
BA	Art	6	148.2	1	16.7%	---	---	5	83.3%	0	153.0
BA	Chemistry	5	147.9	1	20.0%	---	---	3	60.0%	0	144.0
BA	Economics	19	130.1	7	36.8%	2	127.2	11	57.9%	2	129.6
BA	English	45	133.0	21	46.7%	3	127.3	18	40.0%	1	139.9
BA	Gender and Women Studies	2	139.5	1	50.0%	---	---	1	50.0%	---	---
BA	History	20	133.6	8	40.0%	2	125.6	11	55.0%	2	137.4
BA	Law and Society	4	125.3	3	75.0%	1	124.0	1	25.0%	---	---
BA	Music	7	142.4	5	71.4%	0	134.9	1	14.3%	---	---
BA	Political Scienc	13	133.1	5	38.5%	1	128.3	5	38.5%	0	133.5
BA	Psychology	12	133.9	5	41.7%	0	126.8	6	50.0%	0	140.2
BA	Spanish	7	135.4	2	28.6%	0	136.7	3	42.9%	0	136.8
BA	Theatre	13	123.0	8	61.5%	1	130.0	3	23.1%	0	130.2
BFA	Bachelor of Fine Arts in Visual Arts	16	141.5	7	43.8%	0	131.9	7	43.8%	0	135.9
BLS	Bachelor of Liberal Studies	84	136.1	29	34.5%	11	130.1	43	51.2%	2	140.2
BHS	Bachelor of Health Science	43	134.2	25	58.1%	1	13.1	15	34.9%	0	140.3
BIT	Bachelor of Information Technology	21	135.9	10	47.6%	4	124.9	9	42.9%	0	150.6
BME	Bachelor of Music Education	6	161.8	5	83.3%	0	149.8	1	16.7%	---	---
BS	Applied Physics	3	148.6	1	33.3%	---	---	2	66.7%	0	158.3
BS	Art Education	6	161.6	2	33.3%	0	136.5	3	50.0%	0	172.7
BS	Biology	53	140.6	26	49.1%	3	132.4	20	37.7%	0	153.0
BS	Chemistry	6	130.5	5	83.3%	0	131.6	1	16.7%	---	---
BS	Computer Science	11	142.2	4	36.4%	0	144.3	4	36.4%	0	146.6
BS	Criminal Justice	36	129.6	12	33.3%	7	125.4	24	66.7%	3	131.7
BS	Mathematical Sciences	17	147.0	4	23.5%	1	130.3	8	47.1%	0	158.4
BS	Medical Technology	35	158.4	4	11.4%	0	140.3	15	42.9%	0	163.3
BS	Nursing	149	142.8	38	25.5%	0	141.6	77	51.7%	0	158.1
BS	Rehabilitation Sciences	20	137.0	9	45.0%	1	134.3	11	55.0%	0	139.3
BS	Psychology	17	138.1	12	70.6%	0	132.6	5	29.4%	0	151.3
BS	Radiologic Sciences	65	148.0	19	29.2%	1	143.0	33	50.8%	0	163.8
BS	Respiratory Therapy	22	136.7	4	18.2%	0	135.3	13	59.1%	0	155.4
BS	Communication Science & Disorders	12	136.8	3	25.0%	0	127.0	8	66.7%	0	149.5
BSED	Early Childhood Education	80	137.4	24	30.0%	1	129.6	50	62.5%	0	141.5
BSED	Health & Physical Education	15	138.4	7	46.7%	0	134.9	6	40.0%	0	145.5
BSED	Middle Grades Education	29	146.2	5	17.2%	0	140.0	21	72.4%	0	147.0
BSED	Special Education	7	155.7	3	42.9%	0	156.7	3	42.9%	0	153.3

Source: Armstrong Office of Institutional Research 11-13-12



**BOARD OF REGENTS OF  
THE UNIVERSITY SYSTEM OF GEORGIA**

VIRGINIA J. MICHELICH, PH.D.  
ASSOCIATE VICE CHANCELLOR FOR STUDENT ACHIEVEMENT  
ACADEMIC AFFAIRS  
270 WASHINGTON STREET, S.W.  
ATLANTA, GEORGIA 30334

404-962-3107

VIRGINIA.MICHELICH@USG.EDU

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