I. Call To Order: The meeting was called to order at 12:00 noon on January 20, 2010 in the Conference Room 2603. Dr. Will Lynch presided.

II. Standing Items
A- The Minutes from November 11, 2009 were approved as presented.

B- Faculty Senate
1. Ms. Carpenter shared that the ad hoc committee on furloughs was to have made a progress report at the January Senate meeting, but no such report was made.

2. Another topic discussed was related to a statement that the Senate adopted regarding faculty being intimidated by the presence of administrators during the Senate meetings because faculty would be less likely to talk openly and frankly if the Dean and/or Vice President are present. Apparently that is a great concern for some faculty. A resolution was proposed to go to the President stating that the Faculty Senate will support any faculty who have been adversely impacted by statements made in Senate meetings that were negative regarding administrators present. She also added that if anyone would be interested in reading what the resolution says, that they have copies of it and that as soon as the President signs it, it will be posted on the Senate website.

3. Two other items that will be coming up and that all voting members of the faculty will be alerted to via e-mail are a couple of amendments, one to the constitution and a couple to the Senate bylaws that have to be approved by the faculty. The constitution says that it can only be amended with at least two thirds of the voting faculty and the bylaws can only be amended by more than 50% of the faculty. There will be a voting process on Cove, which will begin within the next 10 days and all faculty will be alerted of its presence on Cove. There will be a period of 4 weeks for the constitution amendments and a period of 2 weeks for the bylaws amendments, during which the amendment will be posted on Cove for you to read and there will be also a chat room open that you can send questions and concerns that will be answered by the leadership of the Senate and the constitution bylaws committee. Later on, at a prescribed date, which will be listed on Cove, the chat room will be closed and you will be asked to vote.

Ms. Carpenter strongly encouraged the faculty to participate in this voting process because she noted that there are things in the constitution’s bylaws that need changing in order to make it a more efficient process and if the faculty does not vote, these changes will not pass.

III. Committee Reports
A. Assessment Committee
1. Dr. Padgett reported that CHEM 1211/1212 ACS scores data for the fall semester would be distributed shortly.
Dr. Lynch asked Dr. Padgett to start thinking about his year to year trends. Presently we have 3 years worth of data. As we make changes in General Chemistry, we may be able to see some assessment trends up or down, which either will support our changes or will go against those changes.

B. General Chemistry Committee – Dr. Lea Padgett reported that the committee did meet at the end of the last semester and that at the moment no major changes were taking place in the labs.

C. Curriculum Committee/Chemistry
Dr. Smith proceeded to explain what the committee is trying to accomplish by updating the advanced courses. In the current structure, BS students are required to take two advanced courses. The changes made to these advanced courses remove the lab portions and reduce the credit to 2 hours, which allows students to have a broader exposure to a variety of advanced topics. These changes have resulted in the updating of the course descriptions and the creation of a new course CHEM 4600. The pre-requisite courses are those required for success in each of the advanced courses. A motion was made and passed to recommend these changes to the department faculty for approval.

Dr. Lynch summarized the above stating that essentially what we are doing is reorganizing advanced level courses by replacing lecture/lab courses with lecture only courses, which will allow more variety of topics and not so much faculty time in labs and to make pre-requisites not necessarily easier, but more appropriate.

Dr. Wallace shared a concern regarding the above change. He explained that his concern was that the original proposal would allow for the possibility that students could take the majority of their upper level electives as laboratory courses (research and internship). They would receive a much greater breadth of knowledge if some of this time was spent in a traditional class. Therefore, he suggested that perhaps we needed to consider adding a statement that limits how many hours the students can pull from those experiential type courses. He added that maybe the easiest would be to limit those 3 courses to 3 hours.

Dr. Lynch summarized the above, stating that we have 2 friendly modifications of the CHEM curriculum committee report:
   a- In the BA, we are going to limit to 3 hours our the courses Research, Adv. Research and Internship.
   b- In the BS, we are going to limit to 2 hours our 3 courses Research, Adv. Research and Internship.

The faculty voted unanimously in favor of adopting these two modifications, see attachment #1.

In page 7 of attachment #1, there was also a friendly modification in CHEM 1212H, which adds the words “qualifying score”. The faculty voted unanimously in favor of adopting this modification as well. Please refer to attachment #1.

C. Curriculum Committee/Physics – Copies of the Physics curriculum committee were distributed and Mr. Jaynes informed the faculty that the committee is making 3 requests:
   1- To replace Independent Study with Advanced Research for the honors. All voted in favor.

   2- To add the word “concurrently” to the following statement to the Pre-Medical/Pre-Dental/Pre-Pharmacy/ and Pre-Veterinary description on page 156 of the AASU catalog:
      “Students majoring in applied physics may currently complete (with directed advisement) all pre-medical requirements.
      Rationale: Students majoring in physics have the highest success rates for all major candidates entering medical school.
      The faculty voted unanimously in favor of the above change.
3- To approve adding the following statement to page 12 to the Pre-Professional Programs section and somewhere in the Financial Aid section on pages 46-53:

All students at AASU (including those participating in pre-professional programs) must declare an AASU major by the time of attaining 60 credit hours. Students will not be eligible for financial aid at AASU after attaining 60 credit hours unless an AASU major has been declared.

Rationale: AASU began enforcing this policy beginning Spring Semester 2010. Written Information regarding application should be included in the AASU catalog.

The faculty voted unanimously in favor of writing a memo to both the Vice-President’s Office and the Financial Aid Office requesting the implementation of the above petition. Please refer to attachment #2.

D. Exp. Activities Committee – No Report, but Ms. Mullenax asked the faculty to mark in their calendars February 6 and February 27 for the Science Bowl.

E. Safety Committee – There was no report but Ms. Hizer expressed her concern regarding non-operational hoods, which causes us to work in an unsafe environment. Dr. Lynch will look into this matter.

F. ACS Certification Committee – No Report.

G. Planning Committee – Dr. Nivens informed us that at this point there are no major changes. Some of the instruments listed in the strategic plan distributed last semester have been purchased and some will be bought shortly. FYI, hot plates have been ordered and we are waiting for their delivery.

The committee did revise the MOU regarding the Robert Kolodny Scholarship and decided to make some changes. Among them, in section 3, they decided to eliminate the ability for freshmen to obtain the scholarship.

Ms. Carpenter expressed several concerns she has as follows:

1- She is opposed to the planning committee being the selection group for the recipients of the scholarships. She proposed that the decision should be reached by the entire department in a departmental meeting and the scholarship applications should be returned to the department and not to the planning committee.

The department voted in favor of the above being a departmental meeting function and April 1st, 2010 (12:00 noon, SC 2603) was picked as the date for the department to meet and discuss the scholarships.

2- Ms. Carpenter also is against not allowing freshmen to be eligible for a Kolodny Scholarship. The faculty voted to specify that chemistry students should have completed CHEM 1211 and Phys students concurrently be currently enrolled in PHYS 2211.

There were 17 votes in favor and one against this proposal.

3. Ms. Carpenter proposed obtaining the financial need status of the students prior to making a decision of who gets the scholarship.

The faculty voted unanimously in favor of the proposal.
And lastly, Ms. Carpenter proposed the deletion of the first sentence in the Kolodny Scholarship Application regarding anticipated usage of funds if granted and the deletion of the same sentence in paragraph 4 of the MOU as well.

The faculty voted unanimously as well to adopt the above proposal. Please refer to attachment #3.

IV. Old Business
A. Biochemistry Search Update – Dr. Lynch reported that an offer has been extended to one of the 3 candidates and we are waiting for an answer. We have not given the candidate a firm deadline yet and she has other options. We are hoping that the candidate will accept our offer, but in the meantime the Search Committee is examining the pool again. Be aware that we may ask you to participate in one or more interviews in the future.

V. New Business
A. Summer 2010 - Dr. Lynch addressed the faculty with a new issue of a 5-5-10 as the way we can offer courses during the summer. The physics faculty opted to teach 5 week sessions. The chemistry faculty decided to teach 5 week sessions as well with 3 labs a week for those courses that require labs.

He also asked that the faculty let him know who will be teaching during the summer. The senior faculty has priority to choose first.

B. COE update – Dr. Lynch would like to discuss this topic regarding the creation of a new earth science course in the 3000 level with interested parties at a later date. Please refer to attachment #4 for more details.

C. APARS 2009 (Eface summaries, 1211/1212 data)
At the present we do not have a due date for APARs submission due to e-FACE, but as soon as we do, Dr. Lynch will let you know. Dr. Clifford Padgett will be placing the CHEM 1211/1212 data for the fall and summer semesters in your mailboxes. Dr. Lynch asked the faculty to include the MFAT data for this year for both CHEM and PHYS, and a 2 page NSF CV in the APARS.

V. Announcements
A. Other
1. Dr. Lynch shared that Post-bac students will no longer be allowed to register for 2000 level and above courses in our department without departmental permission.

2. He added that the Department Heads in the College will request that students be removed automatically if they do not have the pre-requisite structures via banner. At the moment we do not have the automatic removal process in effect; therefore, we do have to do it manually, which is time consuming.

3. Furloughs – Dr. Lynch informed us that some information is available that there may be more furloughs as well as a budget reduction in the short term.

VI. Adjournment
The meeting was adjourned at 1:30pm.

cc: Dr. Ellen V. Whitford, Vice-President of Academic Affairs – Dean of Faculty
    Dr. George Shields, Dean, College of Science and Technology
    Dr. Stephen Jodis, Assistant Dean, College of Science and Technology
ATTACHMENT #1  Chemistry Curriculum Committee Minutes  
Department of Chemistry and Physics  
December 4, 2009

Present: Joshua Smith, Suzanne Carpenter, and Brent Feske  
Visitors: Cliff Padgett, Eric Werner, and Cathy McGowan

I. Call to Order  
The meeting was called to order at 3:03 PM

II. Standing Business

A. Continue the discussion and evaluation of the upper level chemistry electives- 4000 level courses

The following items were discussed by the committee.

i) Updating the advanced chemistry courses

CHEM 4100 ADVANCED ORGANIC CHEMISTRY  
Prerequisite: CHEM 2102 and CHEM 2102L and CHEM 3401  
2-4-3 2-0-2

Topics include synthesis of complex molecules and natural products, asymmetric synthesis and mechanistic organic chemistry. Analytical applications of organic chemistry emphasized through lab investigations. Course offerings include medicinal chemistry and molecular level organic chemistry. Course may be repeated as topics vary.

Effective Term: Fall 2010

CURCAT:  
Major Department: Chemistry & Physics  
Can course be repeated for additional credit? Yes  
Maximum number of credit hours: 2  
Grading Mode: Normal  
Instruction Type: Lecture  
Course equivalent: None

CHEM 4200 ADVANCED INORGANIC CHEMISTRY  
Prerequisite: CHEM 3200 and CHEM 3401  
2-4-3 2-0-2

Advanced applications of inorganic chemistry through lab investigations. Course offerings include metals in medicine, bioinorganic chemistry, and applied catalysis and biocatalysis. Course may be repeated as topics vary.

Effective Term: Fall 2010

CURCAT:  
Major Department: Chemistry & Physics  
Can course be repeated for additional credit? Yes  
Maximum number of credit hours: 2  
Grading Mode: Normal  
Instruction Type: Lecture  
Course equivalent: None

CHEM 4300 ADVANCED ANALYTICAL CHEMISTRY  
Prerequisite: CHEM 3300 and CHEM 3401  
2-4-3 2-0-2

Advanced applications of spectrometric and chromatographic analyses. Course offerings include bioanalytical chemistry and NMR methods in chemistry. Course may be repeated as topics vary.

Effective Term: Fall 2010

CURCAT:  
Major Department: Chemistry & Physics  
Can course be repeated for additional credit? Yes  
Maximum number of credit hours: 2  
Grading Mode: Normal
Rationale: In the current structure, B.S. students are required to take two advanced courses. The changes made to these courses remove the lab portions and reduce the credits to 2 hours, which allows our students to have a broader exposure to a variety of advanced topics. Making these changes has resulted in the updating of the course descriptions, and the creation of a new course (CHEM 4600). The prerequisite courses are those required for success in each of the advanced 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
Chemistry Seminar

Two courses from:

CHEM 3801 - Biochemistry I
CHEM 4100 - Advanced Organic Chemistry
CHEM 4200 - Advanced Inorganic Chemistry
CHEM 4300 - Advanced Analytical Chemistry
CHEM 4400 - Advanced Physical Chemistry

Two credit hours from 9 hours from:

CHEM 2700, 2900, 3801, 3802, 3803, 3900, 4100, 4200, 4300, 4400, 4600, 4940, 4950, 4960, or 4991/2/3/4 with a maximum 2 hours from: CHEM 3900, 4960, 4991/2/3/4

CHEM 4991 - Advanced Chemical Research - Biochemistry Approved (maximum of 3 credit hours)

with a maximum 3 hours from:

CHEM 3900 - Chemical Research
CHEM 4960 - Internship – Biochemistry Approved (maximum of 3 credit hours)

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

B. Major Field Courses ................................................................. 38 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

Two courses from:

CHEM 3801 - Biochemistry I
CHEM 4100 - Advanced Organic Chemistry
CHEM 4200 - Advanced Inorganic Chemistry
CHEM 4300 - Advanced Analytical Chemistry
CHEM 4400 - Advanced Physical Chemistry

Two credit hours from 9 hours from:

CHEM 2700, 2900, 3801, 3802, 3803, 3900, 4100, 4200, 4300, 4400, 4600, 4940, 4950, 4960, or 4991/2/3/4 with a maximum 2 hours from: CHEM 3900, 4960, 4991/2/3/4

C. Electives .................................................................................. 22 21 hours

45 14 hours of upper-division courses from within College of Liberal Arts
7 hours of free electives

Total Semester Hours 123 hours

Pre-professional/Biochemistry Option:

B. Major Field Courses ................................................................. 38 39 hours

Add CHEM 3801, 3802 - Biochemistry I, II as requirements

C. Related Field Courses .............................................................. 7 hours

BIOL 1107 - Principles of Biology I and BIOL 1108 - Principles of Biology II (one hour counted in Area F)

D. Electives .................................................................................. 45 14 hours

Upper-division courses from chemistry or other subjects within the College of Liberal Arts (15 semester hours)
Pre-Graduate Study Option:

Note: PHYS 2211/2211L and PHYS 2212/2212L is the recommended physics sequence.

C. Related Field Courses ................................................................. 10 hours
   MATH 2072 - Calculus II (one hour counted in Area F) and
   MATH 2083 - Calculus III and
   PHYS 3801/3801L - Optics and Modern Physics as requirements

D. Electives .................................................................................. 12 hours
   Upper-division courses from chemistry or other subjects within the College of Liberal Arts

PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY WITH AMERICAN CHEMICAL SOCIETY CERTIFICATION

B. Major Field Courses ................................................................. 42 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 3801 - Biochemistry I
   CHEM 4500 - Chemistry Seminar
   CHEM 4991 - Advanced Chemical Research (3 hours)

   Two Three courses from:
   CHEM 4100 - Advanced Organic Chemistry
   CHEM 4200 - Advanced Inorganic Chemistry
   CHEM 4300 - Advanced Analytical Chemistry
   CHEM 4400 - Advanced Physical Chemistry
   CHEM 4600 - Advanced Interdisciplinary Chemistry

C. Related Field Course ................................................................. 7 hours
   MATH 2072 (1 hour in area F)
   MATH 2083

D. Electives .................................................................................. 11 hours
   9 hours of upper-division electives
   2 hours of free electives

Rationale: The changes made to the degree programs reflect the proposed course changes.

CHEM 1211 PRINCIPLES OF CHEMISTRY I 3-3-4
   Prerequisite: or corequisite: MATH 1111 Must pass the Chemistry Placement Exam or have AP credit for CHEM 1211 or have taken
   CHEM 1200 (minimum grade of C)
   Prerequisite or corequisite: MATH 1111
   Corequisite: CHEM 1211L
   First course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Topics
   include composition of matter; nomenclature; atomic structure; bonding and molecular geometries; stoichiometry; properties of solids, liquids,
   gases; acids and bases; thermochemistry; and periodic relations. The lab reinforces these topics.

CHEM 1212H HONORS PRINCIPLES OF CHEMISTRY II 3-0-3
   Prerequisite: CHEM 1211 and approval of department head and a minimum grade of B in CHEM 1211 Eligibility for MATH 1113 and either
   CHEM 1211 (minimum grade of B) or AP credit for CHEM 1211 or a qualifying score on the Chemistry Placement Exam.
   Prerequisite or corequisite: CHEM 1212A
   Second course in a two-semester sequence covering the fundamental and more advanced principles and applications of chemistry designed for
   science majors. A more in-depth treatment of the topics covered in CHEM 1212.

CHEM 1200 Introduction to Chemistry—Concepts and Calculations (2-0-2)
   Prerequisite or Corequisite: MATH 0099 or MATH 1111
   Introduction to chemical concepts including the periodic table, bonding and stoichiometry. Significant class work involves
   mathematics review and application to chemistry concepts. Students who do not take the Chemistry Placement Exam, must take
   CHEM 1200 before taking CHEM 1211. Credit for CHEM 1200 does not count toward the chemistry major and does not count in
   Core Area D for any major.

Effective Term: Fall 2010

CURCAT:
   Major Department: Chemistry & Physics
   Can course be repeated for additional credit? Yes
Rationale: Data collected over several CHEM 1211 courses shows a strong correlation between students’ final grades and their performance on an entrance exam (Toledo Exam) given the first day of class (see graph below). Students scoring below the passing score on the entrance exam would be moved into a chemistry preparatory course (CHEM 1200) to give them an opportunity to improve on the skills required to perform well in CHEM 1211. The assessment committee will evaluate this change in two years, and make further recommendations based on their findings.

![Toledo Exam Data Spring 2007-Fall 2008](image)

The vote was held electronically. The committee voted to move these items to the Department faculty for approval.
1. Change the following courses:

PHYS 1111 INTRODUCTORY PHYSICS I (3-0-3)
PHYS 1111k INTRODUCTORY PHYSICS I (3-3-4)
   Prerequisite: MATH 1113 with a grade of C or better
   Prerequisite or Corequisite: PHYS 1111L
Introductory mechanics, thermodynamics, and waves using elementary algebra and trigonometry including laboratory investigation of the concepts of mechanics, thermodynamics, and waves.

PHYS 1112 INTRODUCTORY PHYSICS II (3-0-3)
PHYS 1112k INTRODUCTORY PHYSICS II (3-3-4)
   Prerequisite: PHYS 1111 (minimum grade of C) and PHYS 1111L (minimum grade of C)
   Prerequisite or Corequisite: PHYS 1112L
Introductory electromagnetism, optics, and modern physics using elementary algebra and trigonometry including laboratory investigation of the concepts of electromagnetism, optics, and modern physics.

PHYS 2211 PRINCIPLES OF PHYSICS I (3-0-3)
PHYS 2211k PRINCIPLES OF PHYSICS I (3-3-4)
   Prerequisite: MATH 1161 (minimum grade of C)
   Prerequisite or Corequisite: PHYS 2211L
Introductory mechanics, thermodynamics, and waves using elementary differential calculus including laboratory investigation of the concepts of mechanics, thermodynamics, and waves.

PHYS 2212 PRINCIPLES OF PHYSICS II (3-0-3)
PHYS 2212k PRINCIPLES OF PHYSICS II (3-3-4)
   Prerequisite: PHYS 2211 (minimum grade of C) and PHYS 2211L (minimum grade of C) and MATH 2072
   Prerequisite or Corequisite: PHYS 2212L
Introductory electromagnetism, optics, and modern physics using elementary differential and integral calculus including laboratory investigation of the concepts of electromagnetism, optics, and modern physics.

Rationale: We are currently teaching these courses as “Studio Physics” with the lecture and lab scheduled together. Combining the lecture/lab descriptions into one will facilitate scheduling and registering, as students would register for one course instead of two that have to be coupled at registration. This would also clarify the assignment of the one grade for the course including the lab for which the lab would be used as 25% instead of assigning separate grades. Laboratory inclusion statements have been placed at the end of each new course description.

Effective Term: Fall 2010

2. Delete the following courses:
PHYS 1111L  INTRODUCTORY PHYSICS I LAB (0-3-1)
PHYS 1112L  INTRODUCTORY PHYSICS II LAB (0-3-1)
PHYS 2211L  PRINCIPLES OF PHYSICS I LAB (0-3-1)
PHYS 2212L  PRINCIPLES OF PHYSICS II LAB (0-3-1)

Rationale: The above laboratory courses are being incorporated into a stand alone studio course and the
grading will be incorporated in the course as a single grade.

Effective date: Fall 2010

3. Change the following course title:

PHYS 3802 INTERMEDIATE MODERN PHYSICS to
PHYS 3802 INTRODUCTION TO QUANTUM MECHANICS

Rationale: This title more accurately conveys the content covered in the course as conveyed in the course
description. In the physics discipline, the title with quantum mechanics is more appropriate for this upper
level course.

Effective date: Fall 2010
Minutes of the Physics Curriculum Committee
Meeting Date/Time: Thurs., 11/19/09 at 1:00pm-2:00pm
Meeting Location: SC 2402
Present: Leon Jaynes (Chairman), William Baird, Jeffery Secrest, & Donna Mullenax (Guest)

1. The minutes for the Physics Curriculum Committee Meeting of 9/22/09 were approved by online e-mail communication.
2. Mr. Jaynes gave the committee an update on the progression of the past curriculum items.
3. It was agreed to develop four tracks in the physics degree and to request that they be put in the AASU Catalog. Assignments for preparing drafts were made as follows:
   (1) Bio/medical Physics-Jeff
   (2) Traditional Physics(Graduate School Preparation)-Bill
   (3) Astrophysics-Donna
   (4) Applied Physics-Leon
4. It was concluded that a General Physics track with teaching certification would not be done at this time. That might be a track or a B. A. Physics degree for future consideration.
5. Good progress has been made in preparing a physics brochure and a poster. We need pictures of happenings, especially of physics students. A department photo-day is already planned. We will make use of shots that are acquired then and see if we need more.
6. Approved changing the description of Honors in Physics on page 156 of the AASU Catalog by replacing PHYS 4900 (Independent Study in Physics) with PHYS 4991 (Advanced Research in Physics)
   Rationale: At the time the Honors in Physics was established, no formal opportunities were available for advanced research in physics. In recent years, the program in physics has been strengthened by adding opportunity for doing advanced research in physics. In order to earn honors status in physics, the candidate should have completed advanced research in physics.
7. Approved adding the following statement to the Pre-Medical/Pre-Dental/Pre-Pharmacy/Pre-Veterinary description on page 156 of the AASU Catalog:
   Students majoring in applied physics may currently complete (with directed advisement) all pre-medical requirements.
   Rationale: Students majoring in physics have the highest success rates for all major candidates entering medical school.
8. Approved adding the following statement to page 12 to the Pre-Professional Programs section and somewhere in the Financial Aid section on pages 46-53:
   All students at AASU (including those participating in pre-professional programs) must declare an AASU major by the time of attaining 60 credit hours. Students will not be eligible for financial aid at AASU after attaining 60 credit hours unless an AASU major has been declared.
   Rationale: AASU began enforcing this policy beginning Spring Semester 2010. Written information regarding application should be included in the AASU Catalog.

9. The committee reviewed the physics equipment/technology list for the department Planning Committee. (Final changes were made by e-mail correspondence and sent to the Planning Committee on 12/01/09.) The committee also reviewed the equipment list for duplicating PHYS 2211 & PHYS 2212 Labs in anticipation of projected doubling of engineering studies enrollments. (Final changes were made by e-mail correspondence and sent to Dr. Lynch to present to Dean Shields for attempts to secure funding beyond the regular budget.)
Respectfully Submitted,
Leon Jaynes, Chairman
ATTACHMENT #3

Strategic Plan

YEAR 2009-2010

GOAL 1: The Department will acquire and maintain technology and instrumentation that will meet the needs of the 21st century scientific community.

- Develop a capital campaign to meet the financial needs of the department in the areas of technology and instrumentation.
- Actively seek opportunities for external funding for new equipment and programs.
- Develop a plan of action for the periodic replacement of outdated/non-functional equipment and technology resources

Year 4 (2009-2010): Top Priority Instrumentation/Technology Required to Fulfill Educational Mission

1.) Assure that general supplies are adequate for general chemistry and upper division chemistry courses
   a. Need hot plates and stirrers (some being repaired by Bill Baird, will need parts). **We have just ordered 20 hot plates in the 2010 budget.**

2.) Major Equipment Needs
   A. Chemistry
      a. **Speed Vac – Specific instrument to be determined - ~approx. ($4,000 – 8,000)**
         Justification: A speed vac is a microcentrifuge that is under vacuum, which is ideal for evaporating small aqueous samples, especially those that need to be held at a specific temperature (i.e. 4 °C). Standard biochemistry item that may attract biochemist and will be needed to implement biochemistry degree.
      b. **GC/MS ($60,000)**
         Justification: This is a workhorse instrument used in Chem 2101, 2102, 3200, 3300, 4100, 4200, 4300 and all research courses. Current instrumentation is ~10+ years old and often down due to repairs. No service is available because the manufacturer has discontinued it. We can do lease purchase through many companies.
      c. **Cold Chromatography Cabinet: $7000 (~$1000 from Feske RUI).**
         Refrigerator for performing protein separations. Needed for CHEM 3803L and for new biochemist.
      d. **Fluorometer. ($25,000)** This is a workhorse instrument for CHEM 3401, 3402, Chem 3300 and Chem 3200. It is also highly utilized for CHEM 2900, 3900 and 4991. **Ordered**
      e. Analytical Balance for quant :one just broke this semester, $2,000
      f. **Muffle furnace** (Fisher 10-750-126N) $6,700. Current muffle furnace does not hold temperature over 600C. Needed for CHEM 2300, Chem 3300 and other classes as well as UR.
      g. **60 MHz NMR Eft-GENII 60MHz Anasazi Instruments** Approximate cost is $90,000 minus current amounts collected of $20,000
         Justification: The low-field instrument we currently have is more than 20 years old, unreliably produces good 1H NMR spectra and has limited capabilities beyond
simple 1H spectra. Since the sophomore students taking the organic chemistry sequence (several hundred each year) run their own spectra week-by-week, there is a high demand for the low-field instrument. Having a second instrument would ease the current backlog. Secondly, the current instrument cannot run 13C and two-dimensional spectra. Both of these topics are found increasingly more often on the ACS Organic Chemistry Exam and in sophomore organic chemistry textbooks

B. Physics
a. **8 Standard Spectrometers** (WLS1799-23) from Sargent-Welch @ $199.09 ea. (Needed to provide PHYS 1112 & 2212 labs with identical spectrometers and to shift precision spectrometers to the optics lab and older basic units to the physical science lab) **ORDERED.**
b. **8 Amadeus Digital Spectrometer Systems** (SE-7183) from PASCO @ $499.00 ea. **ORDERED.**
c. **Laser Pointers** – (16 needed @ $300) **ORDERED.**
d. **Motor Driven Centripetal Force Apparatus w/Digital Controls** - (6 needed $1600 ea. = $9600) (Needed to replace 4 antiquated units and add 2 additional units) (Alternative Option EX-9925 from PASCO is a Data Studio/Science Workshop version 8 at $850 ea. = $6800 which would be a possible alternative)
e. **Multichannel Analyzer** – (3 needed @ $4200ea. = $12,600) (Needed to replace antiquated RS232 ported units to USB ported systems for PHYS 3801 & PHYS 3802 and undergrad. Physics research)
f. **High Vacuum Pump w/Gauge** (1 needed @ $800) (Needed to produce HV for alpha ray spectrometer, for cathode ray tube demonstration, for coin/feather demonstration)
g. **Alpha Ray Spectrometer Detector** – (1 needed @ $1000) (Need to either replace detector or repair alpha ray spectrometer)

3.) Technology Needs
A. Physics
a. **National Instruments USB-6009 data acquisition boards** (10 needed @ $269 ea. = $2600) (Needed for PHYS 3120 PHYS 4120 to upgrade from RS-232 ported data acquisition systems and release dos based systems)
b. **Laptop Computers for SC 2308** (8 @ $1000 each. = $8,000) (Needed to replace 8 aging/unreliable benchtop computers in 2308 to run physics experiments when mechanics experiments are occurring at the same time)
c. **Assorted Microcontrollers** (50 needed @ avg. of $10 ea. = $500) (Needed to do undergraduate applied physics research)
d. **Networked Printer for SC 2402** (1 needed @ $500) (Needed for printing to replace 6 antiquated printers with one networked printer-Carryover request from Year 3 2008-2009)

B. Chemistry
a. **Computer**: $700 Computer to be ordered to replace computer on HP-UV-VIS that died. (Purchased, September 2009??)
b. **Monitors**: 2-3 replacement monitors for Instrumental lab

C. Departmental
a. 2 new **laser printers (networked)** for the instrument lab (networked for faculty printing and instrumental printing)

**YEAR 2010-2011**

GOAL 1: The Department will acquire and maintain technology and instrumentation that will meet the needs of the 21st century scientific community.

- Develop a capital campaign to meet the financial needs of the department in the areas of technology and instrumentation.
- Actively seek opportunities for external funding for new equipment and programs.
- **Develop a plan of action for the periodic replacement of outdated/non-functional equipment and technology resources**

**2010-2011 Top Priority Instrumentation/Technology Required to Fulfill Educational Mission**

1.) Assure that general supplies are adequate for general chemistry and upper division chemistry courses
   - A. pH meters (2-4 additional)
   - B. Spectronic Genesis (2 additional)
   - C. Hot Plates/Stirrers (20 more)

2.) Major Equipment Needs
   - Chemistry
     - a. **Magnetic susceptibility Balance ($4000)**
       Justification: We have one that has been broken for 3 years. If it cannot be fixed, it needs to be replaced for CHEM 3200 and 4200.
     - b. **Diode Array UV-VIS., $13,000** Workhorse instrument for all classes using the Instrument room. A new one should be on the horizon to replace the oldest of the 3 we have before it breaks.
     - c. **AA spectrometer** with both flame and Graphite furnace capabilities (quote coming from PE, expected to be about $25-30,000). Current AA is the only instrument in our instrumental lab without computer control, and the buttons are beginning to wear. The instrument still functions well and we have a donated graphite furnace that may be operational soon. However, we must keep this instrument on the horizon since it is required for both CHEM 2300 or CHEM 3300.
     - d. CE: (need I really comment on our CE??)…the one we have is a boat anchor, requiring some sort of repair every semester. We should have this capability for our students and our faculty. We need something more reliable. (quote in the works…expected to be about $20-40,000).

   - Physics
     - a. **Diffusion Cloud Chamber/Student Cloud Chamber Source** – (8 needed at $75 ea. = $600) (Needed to visually display the presence of radiation particles)
     - b. **Alpha-Beta Needles Source Set** – (4 needed at $140 ea. = $560) (Alpha & Beta Sources are needed to do radiation experiments with those sources)
c. **Fiber Optics Speed of Light Apparatus** – (5 needed @ $149 ea. from Electronix Express = $745) (Needed for PHYS 3801L to replace 1 that disappeared & to be able to measure a basic modern physics quantity)

d. **Duplicating and Equipping SC 2404 for Mechanics & E-M with 8 mechanics & 8 E-M stations** (16 stations @ approx. total cost of $135,000-$150,000* not including LCD Projector) (Needed to meet expected Engineering increases in enrollment and support current other enrollment in Introductory Physics) (This would have to come from a source other than normal dept. budget)

3.) Technology Needs
A. Chemistry
B. Physics
   a. **Laptop Computers for Physics Labs** (5 needed @ $1000 ea. = $5000) (Needed to replace one laptop that was apparently stolen from and to provide 4 laptops for advanced physics labs)
   b. **Lab View Site License Annual Renewal** – ($399 needed every year) (A license for $1999 for 1st year for 10 seats with annual renewal of $399 per year has now been secured. Renewal required in Fall 2010.)

GOAL 2: The Department will **recruit and retain students** resulting in graduates who are competitive in the workplace, in graduate schools and in professional schools. (Components of these items will be part of the departmental planning sessions forthcoming)

- **Develop programs that interest and excite students about science**
  
  Part of overall departmental planning discussions
  
  The department should monitor the new BA with Biochemistry Concentration program (when approved) and the planning and curriculum committees should work together to determine the next step with this degree offering.

  The department should continue to monitor the effectiveness of studio physics in light of the needed expenditures and departmental goals.

  The Chemistry Department Faculty will be meeting to discuss implementing (or not implementing) changes to the upper division chemistry structure. Depending on this meeting, the planning committee should be involved in determining any equipment needs to facilitate changes.

GOAL 3: The Department will expand and strengthen its relationships with alumni, industry and the general public.
MEMORANDUM OF UNDERSTANDING

between

The Faculty of the
Department of Chemistry and Physics

and

The Armstrong Atlantic State University Foundation, Inc.
Armstrong Atlantic State University, Savannah, Georgia

The Faculty of the Department of Chemistry and Physics hereby establish an endowment to be known as the ROBERT A. KOLODNY MEMORIAL SCHOLARSHIP. The endowment will be held in perpetuity and is initially funded by the funds presently in Armstrong Foundation Account 333 (formerly known as the Harris-Brewer scholarship). Interested parties may make additional contributions to the principal at their discretion.

The covenants and conditions of the above-named fund are set forth as follows:

1. **Name of program.** The endowment shall be known as the Robert A. Kolodny Memorial Scholarship Fund.

Dr. Robert A. Kolodny joined the Department of Chemistry and Physics in 1987. He interacted with several thousand students. He was active in recruiting students, raising money for scholarships, and helping majors find jobs in local industry. He was strongly devoted to the best interests of our students. In 1996, he received the H. Dean Propst Award, recognizing his prominent role in teaching, counseling and supporting students.

A native of Brooklyn, N.Y. Dr. Kolodny received his B.S. in chemistry from Queens College, and his Ph.D. in inorganic chemistry from the University of Georgia in 1971. He moved to Savannah in 1974 and founded Chatham Chemical Company.

Dr. Kolodny passed away August 1st 2004.

2. **Purpose:** The Robert A. Kolodny Memorial Scholarship will be used to provide support for students who are enrolled at Armstrong Atlantic State University majoring in chemistry or applied physics.
3. **Selection of Scholarship Recipients:** Recipients shall be selected by the departmental faculty and staff. Public announcement of the Scholarship will be made by March 1 each year, and interested students encouraged to apply. Applications will be accepted between March 1 and March 31 for the following academic year. Applications will be reviewed and scholarships awarded by April 15. To be eligible, a recipient must be a full-time student, with a declared major in chemistry or applied physics at AASU, as documented on the Student Help and Information Program (S.H.I.P). The applicant must have successfully completed CHEM 1211 or concurrently enrolled in PHYS 2211, and hold a cumulative grade point average of 3.0 or better.

4. **Scholarships:** Interest from the endowment will be used to award scholarships to qualified students. Scholarships will be dispersed in one installment at the beginning of the academic year. A student may re-apply each year that they remain eligible, and may be awarded a scholarship in more than one year. If at any time a holder of a scholarship becomes ineligible, the unused portion shall accrue to the *Robert A. Kolodny Memorial Scholarship* in the Armstrong Atlantic State University Foundation, Inc.

5. **Contributions and Investments:** Contributions to and investments of the *Robert A. Kolodny Memorial Scholarship Fund* will be accepted and administered in accordance with policies and procedures set by the Armstrong Atlantic State University Foundation, Inc., Board of Trustees.

6. **Income:** Income from the endowment will be credited to the *Robert A. Kolodny Memorial Scholarship Fund*, and will be maintained and administered in accordance with policies and procedures set by the Armstrong Atlantic State University Foundation, Inc. Board of Trustees.

7. **Contingency Clause:** Because conditions change over time, Armstrong Atlantic State University Foundation, Inc., has established the following contingency clause: *If, in the opinion of the Armstrong Atlantic State University Foundation, Inc. Board of Trustees, all or part of the funds cannot be applied in strict conformance with the purposes previously stated, the Foundation Board of Trustees may use these funds for other appropriate purposes as nearly aligned to the original intent of the donors as good conscience and need dictate within the authorized powers of the Foundation.*

8. **Publicity:** Only after consultation with and concurrence of Head of the Department of Chemistry and Physics will the Armstrong Atlantic State University Foundation release information about this scholarship to the media.

9. **Agreement:** The AASU Foundation, Inc. agrees to accept all contributions made to the *Robert A. Kolodny Memorial Scholarship Fund* and to administer the fund in accordance with the terms of this agreement.
Signed:

____________________________________________________________  Date

____________________________________________________________  Date

____________________________________________________________  Date

Executive Vice President  Date
Armstrong Atlantic State University Foundation
Requirements for application:
1. GPA of 3 or higher
2. Completed CHEM 1211 or enrolled in PHYS 2211.
3. Major in applied physics or chemistry as documented on S.H.I.P.

Date ________________________
Name__________________________________________ Student ID.#____________________________
(Please Print) Address____________________________________________________ Phone____________________
City________________________________________ State_______________ Zip___________________
Resident of Georgia? Yes__ No__     Have you applied for Financial Aid? Yes____ No_____
Major(circle one) Chemistry       Applied Physics

Are you currently employed? Yes_____ No_____  If yes, where?____________________ Hrs/wk____

If awarded, how do you anticipate using these funds?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Describe your college and career objectives:____________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

List extracurricular activities/work experience/internships:_______________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
Please list honors/awards received:________________________________________________________

________________________________________________________________________

________________________________________________________________________

Briefly describe your contributions specifically to the Department of Chemistry and Physics

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Grade Point Average___________ Hours Attempted _______________ Hours Earned __________

Anticipated Graduation Date:_________________________

Chemistry and Physics Courses Completed (list those with C or better only):

__________________________   ______________________ _______

__________________________   ______________________ _______

__________________________   ______________________ _______

__________________________   ______________________ _______

Member of (circle if applicable):   SAACS   Physics Club   Astronomy Club

I hereby authorize the Office of Financial Aid to release any information concerning my academic records and financial need status to the Department of Chemistry and Physics. I also certify that the information provided above is accurate and clearly states my eligibility and desire for scholarship consideration.

Signature:__________________________

Date:__________________________

Please submit your application as soon as possible, and no later than March 31, 2010. Return this form to:

Armstrong Atlantic State University
Department of Chemistry and Physics
11935 Abercorn Ext.
Savannah, GA  31419-1997

Scholarship Application 01/10
Attachment #4

College of Education
Recommendations from Dean Wacholz.

To satisfy 8th grade science: students would take:
1) CHEM 1151 (and lab), Survey of Chemistry I
2) PHSC 1211 (and lab), Physical Environment

To satisfy 7th grade science: students would take:
1) BIOL 1107 (and lab), Principles of Biology I
2) BIOL 1108 (and lab), Principles of Biology II

To satisfy 6th grade science: students would take:
1) new course, possible called Earth Science
   College of Education would like some of these courses at higher level so this could be a 3500 with appropriate pre-requisites. Possible pre-reqs could be Chem 1151 and/or PHSC 1211.

Another suggestion from this morning was to have pre-requisites like the current BIOL 3500 ("admission to the College of Education and two courses in science, including one lab course. Open only to students in middle grades science track.")

The COE would prefer a title like: Earth Science or Earth Sciences as opposed to something like Earth Science for Educators. The former title implies a more rigorous course while the latter might be considered an easy type course by students when they read the title.

2) BIOL 3500 might be tweaked some and would likely have 1107/1108 as pre-requisites so that deeper scientific study could be done. The course would probably have field work, field inquiry and inclusion of the scientific method. Request to consider giving a new title to the course with the tweaked content. Could the course title be Life Sciences rather than the current title?

Other items:
  a) COE does not need to have 3 3000 level courses (as in the past requirements).
  b) At present, for the two 3500 courses described above, most likely one section per year is appropriate at this time.
  c) COE would like some of the science courses that we suggested to be at the upper level.
  d) COE has no concerns if the current 3000 level courses like ASTR, METR, GEOL, OCEA are reclassified down to the 1000 or 2000 level.