DEPARTMENT OF CHEMISTRY AND PHYSICS
FACULTY MEETING MINUTES
October 19, 2016


ABSENT: Sarah Gray.

I. CALL TO ORDER
The meeting was called to order at 12:00 on October 19, 2016 in Room 2016. Dr. Will Lynch presided.

II. APPROVAL OF MINUTES
The Minutes from September 21th, 2016 were approved as presented.

III. NEW BUSINESS
A. Faculty Senate
The Faculty Senate Meeting was canceled, therefore, there was nothing to report at this time.

B. CST Dean Search Up-date
The Search Committee will be meeting today to regroup. From 51 applicants, 8 of them were selected to be interviewed at the next level. The committee is planning to interview the applicants via skype next week and is anticipating that campus visits will take place early to mid-November.

C. Biochemistry Committee
The committee talked about a few changes regarding the Biochemistry program. The first change was to up-date the course description for CHEM 3801.

They also discussed the addition of 2 new courses: BCHEM 3801 and BCHM 3802 and to change the program of study for the degree of Bachelor of Science in Biochemistry.

The faculty voted unanimously to go forward with items 1, 2, and 3 from the proposed action items and to table items 4, 5 and 6 as they require broader discussion. For more details, please refer to Attachment#1.

D. Course Fee Proposal
Dr. Lynch presented the faculty with a course fee proposal regarding laboratory fee increase for every laboratory course in our programs effective 2017/2018. The faculty
voted unanimously to increase the fee for all laboratory courses to $60.00. For more details, please refer to Attachment #2.

E. Hurricane Feedback
Dr. Lynch asked the faculty to give him feedback regarding actions taken by the department and by the administration during the hurricane.

After a short discussion, the faculty concluded that the flow of information coming from Dr. Lynch’s office during the hurricane was very helpful. The faculty thanked Dr. Lynch for keeping everyone informed in a timely manner.

Regarding the flow of information coming from the University, the faculty concluded the following:

a. Data Back-up
The instructions and information given by ITS regarding data back-up was confusing and would like clarification on whether or not it is the individual’s responsibility to back-up his or her data and if, indeed, there is a back-up system implemented by ITS.

b. Decision to re-open the university
Again, the faculty felt that the university officials did not make an accurate decision on how to convey information regarding the re-opening of the university and would like to know the reason behind the delay in making a decision and standing by it instead of keeping everyone waiting.

c. Informing the Faculty Prior to e-mailing students
The faculty felt that the university should have informed the faculty first of decisions made prior to making the information known to students as this brought a bit of confusion.

Academic Affairs will hold its meeting tomorrow and Dr. Lynch will convey the above information to the Dean’s Office.

F. Spring 2017 / Summer 2017
To better manage spring 2017 enrollment, Dr. Lynch dropped down all the enrollments for the introductory courses. As for summer 2017, all courses are fixed with the exception of the May Mester, which hopefully will be approved soon.

G. Newsletter Proposal
Dr. Lynch felt that it was time to revisit getting a department newsletter out and would like to know if this would be a good idea and worth investing our efforts in. We would need a committee of 4 or 5 individuals to oversee the process. The newsletter would be posted on the website. We will reach out to alumni, high school teachers and will ask for people’s contributions. Of course, we will also need for the faculty to provide content. Please let Dr. Lynch know what's your opinion concerning the newsletter and if you would like to be part of the committee.

H. Other
The General Chemistry Committee will schedule a meeting in spring 2017 to inform everyone who teaches General Chemistry regarding the Openstax textbook. The committee plans to begin using the Openstax textbook this upcoming fall 2017. Openstax is free but students can buy a printed copy for $50 if they are so inclined. For the time being they will continue to use the Mastering Chemistry so that they can transition the students out who have already purchase the Trö book.

V. OLD BUSINESS
   A. Budget Up-date
Dr. Lynch reminded the faculty that the budget is still in good shape.

VI. Announcements
   A. Upcoming Dates
      i. Oct. 28 – Country Day AP Class on Campus
      ii. Oct. 28 – Greg Tschumper – Univ. of Mississippi (noon)
      iii. Oct. 31 – Pre Med Meeting – Ray-El Gaston, Dir. Of Vol. Opps @ Memorial Hospital
      iv. Nov. 4 - Low Country Boil @ Bamboo Farms at 6pm
      v. Nov. 12 – Pirate Preview
      vi. Dec. 5, 6, 7 – BCHM 4501 (2-3pm)
      vii. Dec. 5, 7, 9 – CHEM 4500 (noon)

   B. Faculty Information
      i. Congratulations to Ms. Donna Mullenax as the Math Science Partnership grant that was funded.
      ii. Congratulations to Drs. Guillet, Hizer, MacGowan and Lea Padgett as their Openstax textbook was funded.

The meeting was adjourned at 12:57pm.

cc: Dr. Delana Nivens, Interim Dean, College of Science and Technology
    Dr. Brent Feske, Interim Associate Dean, College of Science and Technology
Biochemistry Committee Update

Memorandum 10/14/16

To: Dr. Will Lynch
   Head, Department of Chemistry and Physics

From: Dr. Mitch Weiland
   Chair, Biochemistry Committee

Re: Proposed changes to the Biochemistry Program of Study

The Committee proposes six action items:

1. **Modify the following course:**

   **CHEM 3801 BIOCHEMISTRY I** 3-0-3
   Prerequisite: CHEM 2102 (minimum grade of C) & CHEM 2102L (minimum grade of C)
   Chemistry of cellular components: introduction to protein structure and function, enzyme kinetics and bioenergetics, mechanisms of catalysis, carbohydrate and lipid metabolism and biosynthesis, and major pathways of carbohydrate metabolism. Cross-listed with BCHM 3801.

   **Rationale:**
   The course description has been modified to accurately reflect the material taught since the adoption of the biochemistry major.

2. **Modify the following course:**

   **CHEM 3802 BIOCHEMISTRY II** 3-0-3
   Prerequisite: CHEM 3801 (minimum grade of C)

   **Rationale:**
   The course description has been modified to accurately reflect the material taught since the adoption of the biochemistry major.

3. **Modify the following course:**
BCHM 3403 BIOPHYSICAL CHEMISTRY 3-0-3
Prerequisite: CHEM 2300 (minimum grade of C) and MATH 1161 (minimum grade of C)
Prerequisite or corequisite: PHYS 1112K or PHYS 2212K
The fundamentals of physical chemistry from a biochemical perspective. Topics including gas laws, heat and work, and the laws of thermodynamics, material and reaction equilibrium, standard thermodynamic functions, and reaction kinetics. Cross-listed with PHYS 3403.

Rationale:
The pre-requisite for BCHM 3403 is being modified to match departmental policy on math pre-requisites.

4. Create the following course:

BCHM 3801 Biochemistry I 3-0-3
Prerequisite: BIOL 2400 (minimum grade of C) or permission of Department Head, CHEM 2102 (minimum grade of C) & CHEM 2102L (minimum grade of C)
Chemistry of cellular components, introduction to protein structure and function, enzyme kinetics and bioenergetics, mechanisms of catalysis, and major pathways of carbohydrate metabolism. Cross-listed with CHEM 3801.

Rationale: The BCHM 3801 courses is being created to include more biochemistry labelled courses for the biochemistry major. Analysis of student success, from previous terms, shows students who have a fundamental understanding of the molecular biology topics taught in BIOL 2400 have lower DFW rates. The permission of Department Head clause has been added to allow ACS-certified majors an opportunity to take the course without the prerequisite as their program of study does not allow for six additional credit hours (BIOL 1107 and BIOL 2400). This course will be cross-listed with CHEM 3801.

Effective Term: Fall 2017

CURCAT:
Major Department: Chemistry and Physics
Can Course be repeated for additional credit? No
Maximum Number of Credit Hours: 3
Grading Mode: Normal
Instruction Type: Lecture
Course Equivalent: CHEM 3801

5. Create the following course:

BCHM 3802 Biochemistry II 3-0-3
Prerequisite: BCHM 3801 (minimum grade of C) or CHEM 3801 (minimum grade of C)

**Rationale:** The BCHM 3802 courses is being created to include more biochemistry labelled courses for the biochemistry major. This course will be cross-listed with CHEM 3802.

**Effective Term:** Fall 2017

**CURCAT:**
**Major Department:** Chemistry and Physics
**Can Course be repeated for additional credit?** No
**Maximum Number of Credit Hours:** 3
**Grading Mode:** Normal
**Instruction Type:** Lecture
**Course Equivalent:** CHEM 3802

6. Change the following program of study:

**PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY**

A. **General Requirements**
   
   **Core Areas A, B, C, D,IIA, and E** .............................................................42 hours
   Biochemistry Majors are required to take a minimum of MATH 1113 in Core Area A and MATH 1161 in Core Area D. Students may choose to take MATH 1161 in Core Area A and MATH 2072 in Core Area D.

   **Area F** ........................................... ................................................... ...........18 hours
   CHEM 1211/1211L and CHEM 1212/1212L (unless taken to satisfy Core Area D, in which case, substitute CHEM 2101/2101L and CHEM 2102/2102L)
   Choose one sequence from:
   - PHYS 1111K- Introductory Physics I and
   - PHYS 1112K- Introductory Physics II or
   - PHYS 2211K- Principles of Physics I and
   - PHYS 2212K- Principles of Physics II or
   - One hour excess for MATH 1161
   - One hour lower division approved elective

   **Physical Education** .................................................................................. .....3 hours
   **First-Year Seminar** ................................................................................... 1 hour

B. **Major Field Courses** ............................................................................. .....36 hours

   BCHM 3301 Bioanalytical Chemistry
   BCHM 3403 Biophysical Chemistry
   **BCHM 3801 Biochemistry I**
   **BCHM 3802 Biochemistry II**
   BCHM 3811 Introduction to Biochemical Techniques
   Choose one of the following classes:
   - BCHM 3812 Advanced Biochemistry Laboratory
   - BCHM 3900 Biochemical Research (1 credit hour)
   - BCHM 4991 Advanced Biochemical Research (1 credit hour)
   - CHEM 3900 Chemical Research (Biochemistry approved, 1 credit hour)
   - BCHM 4811 Bioinstrumental Laboratory
CHEM 2101/2101L Organic Chemistry I with Laboratory
CHEM 2102/2102L Organic Chemistry II with Laboratory
CHEM 2300 Principles of Chemical Analysis
CHEM 3801 Biochemistry I
CHEM 3802 Biochemistry II
CHEM 4500 Chemistry Seminar or BCHM 4501 Biochemistry Seminar
7 hours of approved upper division chemistry or biochemistry courses. **No more than 3 hours total can be from CHEM 3900, CHEM 4991, BCHM 3900 and BCHM 4991. (Note: CHEM 3801 and CHEM 3802 may not be used as upper division chemistry or biochemistry elective)**
Biochemistry Discussion Item

Table 1: Chemistry Major Performance in CHEM 3801. The “Taken” indicates the students took the course prior to CHEM 3801. Number in parenthesis for the “Taken BIOL 2400” indicates the number of students who passed 3801.

<table>
<thead>
<tr>
<th>Term</th>
<th>Average GPA</th>
<th>DFW %</th>
<th>Taken BIOL 1107</th>
<th>Taken BIOL 2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2016 (n=10)</td>
<td>1.6</td>
<td>50.0</td>
<td>8</td>
<td>2 (2)</td>
</tr>
<tr>
<td>Fall 2015 (n=2)</td>
<td>1.2</td>
<td>50.0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Spring 2015 (n=9)</td>
<td>1.6</td>
<td>33.3</td>
<td>9</td>
<td>3 (2)</td>
</tr>
<tr>
<td>Fall 2014 (n=11)</td>
<td>0.7</td>
<td>63.6</td>
<td>9</td>
<td>3 (3)</td>
</tr>
<tr>
<td><strong>n=32</strong></td>
<td><strong>1.22</strong></td>
<td><strong>49.2</strong></td>
<td><strong>28</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

Table 2: Biochemistry Major Performance in CHEM 3801

<table>
<thead>
<tr>
<th>Term</th>
<th>Average GPA</th>
<th>DFW %</th>
<th>Taken 1107</th>
<th>Taken 2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2016 (n=4)</td>
<td>2.25</td>
<td>25.0</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Fall 2015 (n=6)</td>
<td>3.2</td>
<td>0</td>
<td>6</td>
<td>3</td>
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<tr>
<td>Spring 2015 (n=2)</td>
<td>3.5</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fall 2014 (n=1)</td>
<td>4.0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>n=13</strong></td>
<td><strong>3.2</strong></td>
<td><strong>6.3</strong></td>
<td><strong>13</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>
Memorandum

To: Faculty and Staff, Department of Chemistry and Physics
From: W Lynch
Re: Laboratory Fee Increase for 2017-2018
Date: Oct. 18, 2016

Currently our lab fees are set at $40 per laboratory for required BCHM, CHEM and PHYS courses inside our majors and $25 for courses outside our majors (ISCI, PHSC, CHEM 1151L/1152L, etc.)

Our annual revenue is approximately $77,500 from course fees in the academic year. This has declined approximately $8000 since removal of the co-requisite lab and changes in pre-reqs for General Chemistry.

I am proposing a fee increase to $60 for every laboratory course in our programs. This includes non-majors courses. A $60 fee would leave us behind Columbus State in fee structure on the CHEM side and a bit higher on PHYS side. A $60 fee would align us with Georgia College overall and $10 above North Georgia.**

** Other Institutional Data for Fall 2016:**

- West Georgia: $45 for all CHEM & PHYS
- Valdosta: $30 for all CHEM & PHYS
- Columbus State: $75 for all CHEM (including 1151L) & PHYS $50
- Georgia College: $50 for 1000 level CHEM, $100 for CHEM 2000 and above, and PHYS @ $50
- Clayton State: $35 per lab for all Natural Sciences
- UNG**: $50 all natural science labs

Fall 2016 = $35,080 Current Anticipated Revenue
$56,640 Proposed Fee Structure @ $60 per Lab (~$45,000 increased revenue annually)

**Other Notes:**
1. General Physics is using a free text saving students approximately $250 annually per student.
2. General Chemistry is moving a free text saving students approximately $250 annually per student.
3. Survey Chemistry is considering a free text with trial run in SP 17
4. There is no lab manual fee currently for General Chemistry or Physics or Survey Chemistry.
5. We are attempting to maintain a state of the art inventory with diminishing fees and no increase in state support.
6. We have no formal commitment for faculty start-up support, previously we have pieced together packages that have impacted the department for supporting specific faculty.
7. In early 2010’s we were annually receiving $50,000 - $200,000 from EOY support at Armstrong, the past 3 years we have seen no EOY support from Academic Affairs Office (everything has come from the Dean’s office).
8. Last example: In Fall 2017, the BS chemistry major will save over $500 on books alone (PHYS 1111K & 1112K and CHEM 1211/1212). If we ask for a portion of that back in a $60 fee, it is a total of 11 fees (CHEM 1211, 1212, 2101, 2102, 2300, 3300,3401, 3402, 3200 and PHYS 2211, 2212) or $220 increase in fees which still saves a student $280.
ATTACHMENT #3

Department Newsletter
As a result of our alumni weekend being “postponed” I wanted to look at other avenues to reach out to our students, alumni and friends about the successes of our programs. A newsletter (or increased alumni interaction) has long been a part of our strategic plans. The goal is to help build a bridge between our programs and our constituencies to open up:
   a. Communication about our efforts
   b. Build alumni relationships to improve interest and support
   c. Improve visibility on campus and in the community at large
   d. Increase outreach to local industry and schools

Ideas
Two editions annually (December and May, Contribution due dates Mid November, Mid April)
Electronic with minimal printing
Emailed to majority of alumni, industry partners, Armstrong employees, students and high school teachers in Savannah.

Example Sections
1. Letter from Head
2. Updates on BCHM (Weiland), CHEM (Lynch), PHYS (Baird) programs if any
3. Graduates from the Department – listed and where they are heading
4. Updates on former faculty – If any
5. Comments from student groups – Pre-Pharm, Pre-Med, SAACS, SARC
6. Updates on faculty achievements (for example)
   1. Polymer Grant
   2. Publications
   3. Gen Chem text grant
   4. MSP grant
   5. Leon @ 40
7. Updates on student / alumni achievements
   1. Scholarship Winners
   2. Acceptances to X school.
8. Faculty Spotlights
9. Student Spotlight – such as Alexis Fields or similar
10. Lots of pictures
11. Other?

Committee to edit / prepare – individual faculty to put in information