MEMORANDUM

To: Professor Willie Faye Garrett  
   Chair, ASPPC, Faculty Senate

From: Dr. Deepak Kumar, Chair  
   Biology and Chemistry Department

From: Dr. Isadora Posey, Director  
   Chemistry Program

From: Dr. Daryao Khatri, Professor and chair  
   Departmental Curriculum Committee

Date: May 2, 2012

Subject: Chemistry/Biology and Physics Program Reorganization

Before January 1, 2012, the chemistry and physics programs were part of the Department of Chemistry and Physics. After the reorganization, the chemistry program was merged with biology to create a Department of Biology and Chemistry. As a result, the physics program was placed in the Computer Science Department as part of the School of Engineering and Applied Sciences (SEAS). As part of program review, during the last year or so, we had extensive discussions among faculty members of the Biology, Chemistry, and Physics programs. Although not optimal for chemistry and physics, in order to move the process forward, we submit the following recommendations for the committee's consideration.

Recommendation

The three programs of Biology, Chemistry, and Physics continue to offer B.S. degrees in their respective disciplines as Department of Biology and Department of Chemistry and Physics (configuration of Fall Semester, 2011).

Rationale for the Recommendation

1. **Disciplinary specialization led to Departmentalization.** "Specialization in the disciplines—which the departments mirrored—represented professors' vocational interests and aspirations. This was
particularly apparent in newly established natural and social science departments, whose very existence was justified on the basis of specialized research." (source: *Education in the twenty-first century, John Hopkins University Press, 2011*). This scenario applies to this situation; these departments are highly specialized. We are building a flagship, and we should approach it in the right manner to accomplish our goal.

2. **Merged biology and chemistry programs are practically unheard of.** We have done an extensive internet search for comparable HBCUs in terms of program offerings and number of students they serve, and we found 39 such institutions. Of these 39 institutions that offer B.S. and higher degrees, there is only one institution where the biology and chemistry programs are merged. After 15 years as a unit in a merged department, the chemistry program is combined yet again with a new department - Biology. It is unclear what impact this will have as we approach the upcoming five year approval review by the American Chemical Society (ACS) in July.

3. **The chemistry program is ACS accredited.** In this regard, ACS anticipates that, "the administration of the approved program should rest in a chemistry department organized as an independent unit with control over an adequate budget, faculty selection and promotions, curriculum development, and assignment of teaching responsibilities."(Source: *ACS Accreditation Guidelines*)

4. **The potential of negatively impacting students' chances of admission to graduate schools would be diminished.** From their experiences, departmental faculty strongly feels that a merged biology and chemistry department could potentially lessen our students' chances of admission to graduate and other professional schools.

5. **It would have a positive impact on securing external grant funds.** Some faculty members from these departments have served on various grant review panels for the National Science Foundation, U.S. Department of Education, and National Institute of Health. Based on their experiences, there is a strong feeling that independent departments will strengthen our proposals in the eyes of reviewers, thereby reducing our chances of receiving external grant funds. In the proposed arrangement the biology department is independent and the two other programs would have the chance reach a favorable point for separation into independent departments.

6. **The department chairs would have more time to focus on program needs.** While most colleges and universities structure their departments strictly according to academic discipline, departments in the community college setting often reflect an aggregation of many academic areas. The various disciplines are often combined, more for administrative convenience, such as numerical parity, rather than for cohesiveness. As a result, departments can have faculty members whose academic disciplines have little in common. Recent literature (Lucas, 2000) acknowledges that one of the most important skills that the chair needs is the ability to orchestrate the functioning of departments that have widely divergent disciplines and orientations." (Source: [http://www.atlantic.edu/program/academic/mcarthur/democratic_leadership.htm](http://www.atlantic.edu/program/academic/mcarthur/democratic_leadership.htm)). As a result, there is very little time left for advancing and/or implementing the goals of a combined department with diverging needs.

7. **The physical sciences, chemistry and physics, belong in the same college.** Both programs would be more visible under the proposed arrangement.