

# Consideration of the Eight Criteria for Unit Merger

## CHEMISTRY CONTRIBUTION

### **i. Improve operational efficiencies**

- Many students that take classes and have majors in SBS and Chemistry have the goal of working in health care. It will be natural to bring Pre-Medicine, Pre-Dental and Pre-Health major designations together under one organizational umbrella.
- SBS and Chemistry have similar advising processes and procedures for students, and these tasks can be streamlined.
- Both units receive large numbers of packages in support of their research and teaching activities. During current renovations, the Chemistry Storeroom has temporarily served both units in this capacity, and this efficiency could be retained in the new unit.
- The “shared services” model for staff is not usable by SBS and Chemistry due to the chemical and biological safety requirements for materials handling in both units. Specific knowledge relevant to the biological and chemical sciences is required for all aspects of the ordering, tracking, distribution and disposal of hazardous materials to comply with the many regulations governing this area (EHS, CMP, Fire, Occupational, and Radiation).
- Both teaching and research labs in the two units have similar instructional models and are unlike any other lab programs on campus in size and scope. Grouping these activities in one unit would lead to better management of labs in both units.
- Similar types of research and teaching spaces are used by both units and can be shared.
- The two units already partially share some instrumentation and this could be expanded and regularized, benefiting undergraduate and graduate students as well as research programs. Such instruments are usually expensive to acquire and maintain.
- Moving Chemistry to a smaller unit will simplify communications processes with unit administration.

### **ii. Sharpen strategic focus to better achieve goals**

- Those students with majors and degree programs in the two units will be served by one coordinated unit, focused on their specific educational and professional needs.
- Recruiting of both students and faculty will be enhanced by a sharper focus on a core set of research emphases and activities.
- In terms of the IPhD program, the two units in SBS and along with Chemistry would comprise a natural grouping of disciplines for expanded interdisciplinary degree and course offerings.
- Upcoming additions of faculty can be considered in the larger context of the new unit as new shared goals and emphases are developed.

### **iii. Clarify unique value and competitive distinction**

- Both units have distinctive strengths that can be combined to enhance research programs, collaborations and grants opportunities.
- Both units have faculty with established reputations in specific areas and with certain granting agencies that can be leveraged for other faculty in a new, combined unit. Faculty in both units would likely stand a better chance of funding.
- Chemistry has existing strength in materials that can blend well with several of the active programs in SBS.
- The new unit would be one of very few structured like this nationally, and we could use that in recruiting and promotion.

#### **iv. Improve quality**

- Many students overlap in degree programs between Chemistry and SBS. Combining the two units will facilitate better and more carefully constructed degree programs.
- With the same general education requirements, more students will likely be drawn to double major or minor in the new units.
- A combined unit would be better able to coordinate student schedules to make effective use of laboratory space, leading to better graduation rates.
- Chemistry has an ACS approved degree and Biology has a degree seeking accreditation from ASBMB. Two such notable, internationally recognized degree programs in the same unit would be an attractive and prestigious.
- A larger set of graduate students in the new unit will provide a better experience as more shared resources are available in areas like seminar speakers, stipends awards etc.

#### **v. Improve the work experience and bring out the “better” in faculty and staff**

- If SBS and Chemistry join, the faculty and staff will be working together to recruit students instead of competing for them.
- Being that Chemistry and SBS co-occupy a building it is beneficial to bring the two units together in order to encourage a cohesive organizational atmosphere for the faculty, staff, and students as well as internal and external customers.
- Chemistry and biology at UMKC could have, and should have, much better collaborative relationship. Being in the same school helps promote that collaborative spirit.

#### **vi. Empower academic leaders by providing greater support and accountability**

- Chemistry would be joining a ‘science unit’, under the leadership of a Dean in an allied discipline. The focus of both units in the research, teaching, and service missions are more similar than either is to the majority of the College. Chemists and Biologists are more alike in how we relate to our work than either group is to, for example, English or Philosophy. The types of publications we value, how we expect our students to have careers, what kinds of service we value, etc. are all very similar. Indeed, Biologists are often members of the same professional organizations as Chemists, and vice versa. Combined seminar series would likely pull in not only better quality speakers, but a broader range of interested students.

### **vii. Take advantage of new ways to learn, teach, and work**

- There are unique components to each unit's degree programs that might benefit current and future students in the other discipline. (SBS boot camp, Chemistry's chemical literature course, ACS approved degree program, environmental chemistry and lab safety courses.)
- Together, the units may have the ability to create new emphasis areas with one or both degrees like forensics, biochemistry, or laboratory management.
- Since SBS has many biochemists/molecular biologists, we could bring faculty in for guest lectures in classes in which topics that are biologically related are covered. This could work in the other direction as well, where our chemical expertise could be helpful in some of their classes. Team teaching could also be enhanced in this multi-disciplinary fashion.

### **viii. Take advantage of new opportunities for knowledge creation and knowledge transmission**

- Closer interaction between chemists and biologists could lead to informal discussions of research ideas ("hall talk") that could spawn new research collaborations, potentially leading to increased extramural research funding, and numbers of presentations and publications.
- Increased participation in each other's seminar programs would allow the number and variety of speakers to be increased to the benefit of both units.
- Participation by both units together in the IPhD programs will provide students with a broader experience, preparing them for careers at the boundary of biology and chemistry.
- Courses bridging chemistry and biology such as Biochemistry & Chemical Biology can be offered.

For more information concerning the Department of Chemistry, please see the profile document included in the email.