UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

June 19, 2009

Dean Ana Mari Cauce
College of Arts and Sciences
Box 353765

Dear Ana Mari:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of the revised admissions and programs requirements, and a new continuation policy for the Bachelor of Arts degree in Chemistry, the Bachelor of Science degree in Chemistry, the Bachelor of Science degree in Chemistry (ACS-Certified), the Bachelor of Arts degree in Biochemistry, and the Bachelor of Science degree in Biochemistry. A copy of the changes is attached.

I am writing to inform you that the Department of Chemistry is authorized to specify these requirements beginning Spring quarter 2010.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

Mark A. Emmert
President

Enclosure

cc: Ms. Lani Stone (with enclosure)
Mr. Robert Corbett (with enclosure)
Dr. Deborah H. Wiegand (with enclosure)
Mr. Todd Mildon, J.D. (with enclosure CHEM-20090224)

301 Gerberding Hall • Box 351230 • Seattle, Washington 98195-1230 • 206-543-5010 • FAX: 206-616-1784

UNIVERSITY OF WASHINGTON

CREATING AND CHANGING UNDERGRADUATE ACADEMIC PROGRAMS

✓DB 3-27-09

OFFICE USE ONLY
Control # CHEM-20090224

After college/school/campus review, send a signed original and 8 copies to the Curriculum Office/FCAS, Box 355850. MAY 04 2009

For information about when and how to use this form: http://depts.washington.edu/uwcr/1503instructions.pdf

College/Campus Arts & Sciences/Seattle Campus	**Department/Unit** Chemistry	**Date** 2/24/09

RECEIVED
MAR 25 2009
DEANS OFFICE A & S

New Programs

- ☐ Leading to a Bachelor of _____ in _____ degree.
- ☐ Leading to a Bachelor of _____degree with a major in _____.
- ☐ Leading to a _____ Option within the existing major in _____.
- ☐ Leading to a minor in _____

Changes to Existing Programs

- ☒ New Admission Requirements for the Major in Biochemistry & Chemistry within the Bachelor of Science and Arts.
- ☐ Revised Admission Requirements for the Major in _____ within the Bachelor of _____.
- ☒ Revised Program Requirements for the Major in 11 within the Bachelor of 11.
- ☒ Revised Requirements for the Option in _____within the major in _____.
- ☐ Revised Requirements for the Minor in _____.

PRB

Other Changes

- ☐ Change name of program from _____ to _____.
- ☒ New or Revised Continuation Policy for see above
- ☐ Eliminate program in _____.

Proposed Effective Date: **Quarter:** ☐ Autumn ☐ Winter ☒ Spring ☐ Summer **Year:** 20 10

Contact Person: Lani Stone	Phone: 543-9343	Email: stone@chem.washington.edu	Box: 351700

EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (*Use additional pages if necessary*).

See attached document.

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit:	Chair/Program Director:	Date:
Biochemistry		3-3-09
Department/Unit: Chemistry	Chair/Program Director:	Date: 3-23-09

CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

Department Admission Requirements
Students in good academic standing may declare this major at any time.

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications). **Please note:** all copy will be edited to reflect uniform style in the General Catalog.

See attached document.

APPROVALS

Chair/Program Director: PSR	Date: 3/2/09
College/School/Campus Curriculum Committee:	Date: 5/1/09
Dean/Vice Chancellor:	Date: 5/1/09
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date: 6/16/09

POST TRI-CAMPUS APPROVAL (when needed)

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date:

Current Admissions Catalog Copy
Students in good academic standing may declare this major at any time.

Proposed Admissions Catalog Copy
Application to BA and BS degree programs in chemistry and biochemistry is competitive. Applicants are considered in the following groups: Direct Freshman Admission, Early Admission, First-Year Admission, and Regular Admission. Completion of the minimum requirements described below does not guarantee admission. All applicants have the right to petition and appeal the department's admission decision. Applications will be considered twice a year on the Friday of the fourth week of autumn and spring quarter each academic year with the exception of the Direct Freshman Admission. The application and additional information is available at http://depts.washington.edu/chem/undergrad/.

1. Direct Freshman Admission
    a. Open to freshman students formally admitted to the UW
    b. Score of 5 on the AP Chemistry exam.
    c. Indication on the UW freshman application of chemistry or biochemistry as the student's first choice of major.
    d. Successful direct-admission applicants generally have received ≥1400 on the SAT (math and verbal sections), or ≥30 on the ACT.
    e. Admission is for autumn quarter only.

2. Early Admission:
    a. Students with exceptional records can apply for consideration for early admission to either the chemistry or biochemistry majors via the Honors or Research tracks. Students seeking early admission should submit an application that includes:
        i. Cover sheet (available on the Department of Chemistry website);
        ii. Unofficial transcript
        iii. Statement of purpose: This statement can include a description of interest in Biochemistry or Chemistry, career goals, undergraduate research interests, degree interest (B.A. or B.S.), and any other information that the applicant believes will be useful in evaluating the application.
        iv. *(Research track only)* Written letter of recommendation from research advisor.

        1. Honors Track. Students participating in the Chemistry Honors sequence who have completed the following courses with a minimum cumulative GPA of 3.0: CHEM 145, CHEM 155 (10 credits); MATH 124 and MATH 125, or MATH 134 and MATH 135 (10 credits).
        2. Research Track. Students who have performed at least 6 credits of undergraduate research (CHEM 1/299 or higher) and who provide a strong recommendation from faculty research adviser. Biochemistry undergraduate research may be considered as well.

3. First-Year Admission-Biochemistry:
    a. Course requirements:
        i. CHEM 142, CHEM 152, CHEM 162 or
        CHEM 144, CHEM 154, CHEM 164 or
        CHEM 145, CHEM 155, CHEM 165 (15 credits);
        ii. BIOL 180 (5 credits);
        iii. MATH 124, MATH 125 or
        MATH 134, MATH 135 (10 credits).
    b. Factors included in the admissions decision will include academic performance as measured by GPA in the courses required for application. In addition, other factors will be considered such as difficulty of other courses completed, frequency of incompletes or withdrawal grades, number of repeated courses, relevant work and life experience, and record of honors.
    c. For first-year admissions successful applicants for the BS Biochemistry typically have a cumulative GPA greater than 3.2 in the courses listed above under "course requirements". Successful applicants for the BA Biochemistry typically have a cumulative GPA greater than 3.0 in the courses listed above under "course requirements"

4. Regular Admission-Biochemistry:
    a. Course requirements:
        i. CHEM 142, CHEM 152, CHEM 162 or
        CHEM 144, CHEM 154, CHEM 164 or
        CHEM 145, CHEM 155, CHEM 165 (15 credits)
        ii. CHEM 237, CHEM 238 or
        CHEM 335, CHEM 336 (8 credits)
        iii. BIOL 180, BIOL 200 (10 credits
        iv. MATH 124, MATH 125 or
        MATH 134, MATH 135 (10 credits).
    b. Factors included in the admissions decision will include academic performance as measured by GPA in the courses required for application. In addition, other factors will be considered such as difficulty of other courses completed, frequency of incompletes or withdrawal grades, number of repeated courses, relevant work and life experience, and record of honors.
    c. Successful applicants for the BS Biochemistry typically have a cumulative GPA greater than 2.5 in the courses listed above under "course requirements" with no individual course grade lower than a 2.0. Successful applicants for the BA Biochemistry typically have a cumulative GPA greater than 2.0 in the courses listed above under "course requirements" with no individual grade below a 1.7.

5. First-Year Admission-Chemistry:
    a. Course requirements:
        i. CHEM 142, CHEM 152, CHEM 162 or
        CHEM 144, CHEM 154, CHEM 164 or
        CHEM 145, CHEM 155, CHEM 165 (15 credits);
        ii. PHYS 121, PHYS 122 (recommended) or
        PHYS 114, PHYS 115 (10 or 8 credits)
        iii. MATH 124, MATH 125 or
        MATH 134, MATH 135 (10 credits).
    b. Factors included in the admissions decision will include academic performance as measured by GPA in the courses required for application. In addition, other factors will be considered such as difficulty of other courses completed, frequency of incompletes or withdrawal grades, number of repeated courses, relevant work and life experience, and record of honors.
    c. Successful applicants for the BS Chemistry and BS Chemistry-ACS Certified degrees typically have a cumulative GPA greater than 3.2 in the courses listed above under "course requirements". Successful applicants for the BA Chemistry typically have a cumulative GPA greater than 3.0 in the courses listed above under "course requirements".

6. Regular Admission-Chemistry:
    a. Course requirements:
        i. CHEM 142, CHEM 152, CHEM 162 or
        CHEM 144, CHEM 154, CHEM 164 or
        CHEM 145, CHEM 155, CHEM 165 (15 credits)
        ii. CHEM 237, CHEM 238 or
        CHEM 335, CHEM 336 (8 credits)
        iii. PHYS 121, PHYS 122 (recommended) or
        PHYS 114, PHYS 115 (10 or 8 credits)
        iv. MATH 124, MATH 125 or
        MATH 134, MATH 135 (10 credits).
    b. Factors included in the admissions decision will include academic performance as measured by GPA in the courses required for application. In addition, other factors will be considered such as difficulty of other courses completed, frequency of incompletes or withdrawal grades, number of repeated courses, relevant work and life experience, and record of honors.
    c. Successful applicants for the BS Chemistry and BS Chemistry-ACS Certified typically have cumulative GPA greater than 2.5 in the courses listed above under "course requirements" with no individual course grade lower than a 2.0. Successful applicants for the BA Chemistry typically have a cumulative GPA greater than 2.0 in the courses listed above under "course requirements" with no individual course grade lower than a 1.7.

Continuation Policy:

Students enrolled in the degree programs in Chemistry and Biochemistry must maintain both a cumulative and individual-course GPA consistent with the requirements for their degree. Students pursuing B.S. degrees must maintain a cumulative GPA $\geq$2.5 for courses required for the major, and $\geq$2.0 for an individual course required for the major. Students pursing B.A. degrees must maintain a cumulative GPA $\geq$2.0 for courses required for the major, and $\geq$1.7 for an individual course required for the major. Failure to maintain these GPA standards will result in the student being placed on academic probation for one quarter, and dropped from the major if marked improvement in academic performance is not achieved. Students who experience extraordinary circumstances may petition for one or more additional probationary quarters.

Current Program Requirements:

Major Requirements

Bachelor of Science degree in Chemistry (ACS-Certified)

95 credits as follows:

4. Minimum grade of 2.0 is required in each chemistry course; a minimum GPA of 2.80 is required for courses used to satisfy major requirements; a minimum overall cumulative GPA of 2.80 and minimum 185 credits required for graduation.

Bachelor of Science degree in Chemistry

92 credits as follows:

4. Minimum grade of 2.0 is required in each chemistry course; minimum GPA of 2.80 is required for all CHEM, MATH, and PHYS courses used to satisfy major requirements.

Bachelor of Science degree in Biochemistry

107 credits, as follows:

8. Minimum 2.80 GPA required for all chemistry, biology, and biochemistry courses counted toward the major; minimum 2.0 grade required for all chemistry, biology, and biochemistry courses counted toward the major. Minimum 2.50 GPA required for the BIOC 440, BIOC 441, and BIOC 442 sequence.

Proposed Program Requirements:

Major Requirements

Bachelor of Science degree in Chemistry (ACS-Certified)

95 credits as follows:

4. Minimum grade of 2.0 is required in each chemistry course; a minimum GPA of 2.50 is required for courses used to satisfy major requirements; a minimum overall cumulative GPA of 2.50 and minimum 185 credits required for graduation.

Bachelor of Science degree in Chemistry

92 credits as follows:

4. Minimum grade of 2.0 is required in each chemistry course; minimum GPA of 2.50 is required for all CHEM, MATH, and PHYS courses used to satisfy major requirement; a minimum overall cumulative GPA of 2.50 required for graduation.

Bachelor of Science degree in Biochemistry

107 credits, as follows:

8. Minimum 2.50 GPA required for all chemistry, biology, and biochemistry courses counted toward the major; minimum 2.0 grade required for all chemistry, biology, and biochemistry courses counted toward the major. Minimum 2.50 GPA required for the BIOC 440, BIOC 441, and BIOC 442 sequence; a minimum overall cumulative GPA of 2.50 required for graduation.

Continuation Policy:

Students enrolled in the degree programs in Chemistry and Biochemistry must maintain both a cumulative and individual-course GPA consistent with the requirements for their degree. Students pursuing B.S. degrees must maintain a cumulative GPA $\geq$2.5 for courses required for the major, and $\geq$2.0 for an individual course required for the major. Students pursing B.A. degrees must maintain a cumulative GPA $\geq$2.0 for courses required for the major, and $\geq$1.7 for an individual course required for the major. Failure to maintain these GPA standards will result in the student being placed on academic probation for one quarter, and dropped from the major if marked improvement in academic performance is not achieved. Students who experience extraordinary circumstances may petition for one or more additional probationary quarters.

University of Washington Correspondence

INTERDEPARTMENTAL

Department of Chemistry Box 351700
206.543.1613 FAX 206.685.8665
email: chair@chem.washington.edu

MEMORANDUM

March 23, 2009

To: Kevin Mihata – Assistant Dean, College of Arts and Sciences

From: Paul B. Hopkins – Professor and Chair, Department of Chemistry

Subject: Proposal to Change Chemistry Bachelor Degree Programs from Open to Competitive Entry

Attached please find an application for conversion of bachelor degree programs in chemistry and biochemistry from open to competitive entry.

We have watched the growth of chemistry and biochemistry degree programs during the past two decades with considerable amazement. Until very recently, we have found ways to accommodate the growing list of students who were declaring these majors, and to foresee ways to accommodate projected continued growth. We are at the end of our ability to do the latter. If further growth were allowed to happen without a significant investment of new resources in some or all of faculty, staffing, teaching assistants, and laboratory equipment, we would be unable to keep all of our students on a timely path to degree. For this reason, we now judge that the responsible path is for the institution to approve a "valve" that could be used if necessary to prevent growth in these programs that exceeds what resources can accommodate. An ancillary benefit is that some weaker students unlikely to prosper in these programs will be saved the time and resources spent discovering this fact.

The proposal herein was developed over the course of about six months by the Department of Chemistry Undergraduate Education Committee led by Professor Philip Reid. The proposal was considered and endorsed by the voting faculty of Chemistry. The proposal was also discussed with and modifications made at the request of faculty members in the Department of Biochemistry, who are our partners in the biochemistry degree programs. Their chair has signed off on the proposal.

Given historical growth rates, we believe it would be prudent to have in place some entry controls as soon as possible. We ask that you act upon this proposal expeditiously.

Thank you in advance for your consideration.

Cc: Ana Mari Cauce, Dean, College of Arts and Sciences
Philip Reid, Professor of Chemistry
Lani Stone, Lead Academic Counselor, Chemistry
Werner Stuetzle, Divisional Dean, Natural Sciences
Alan Weiner, Professor and Chair, Department of Biochemistry

Proposal to Change Chemistry and Biochemistry to Competitive Entry Degree Programs

The Department of Chemistry proposes to change admission to the Chemistry and Biochemistry majors from "open" to "competitive". This change is required to ensure adequate student access to high-demand upper-division courses required for the major, and to ensure that the quality of the academic programs in Chemistry and Biochemistry are maintained. Motivating factors for this change, the nature of the admission process, and potential impacts of the proposed change are outlined below.

Introduction and Rationale for Program Change

The undergraduate degree programs in the Department of Chemistry have experienced extraordinary growth over the past two decades, expanding five-fold, as shown in Figure 1. According to data compiled by the American Chemistry Society, this UW program, which now produces some 270 degrees per year, is the *largest* of any in the nation. The latest data (from 2006-07 degree production) show our UW program producing over 30 more degrees per year than second largest UCLA. Other than UCLA, no other program nationally is producing even 200 degrees per year. The median degree production rate for the top 25 programs nationally is fewer than 100 degrees per year.

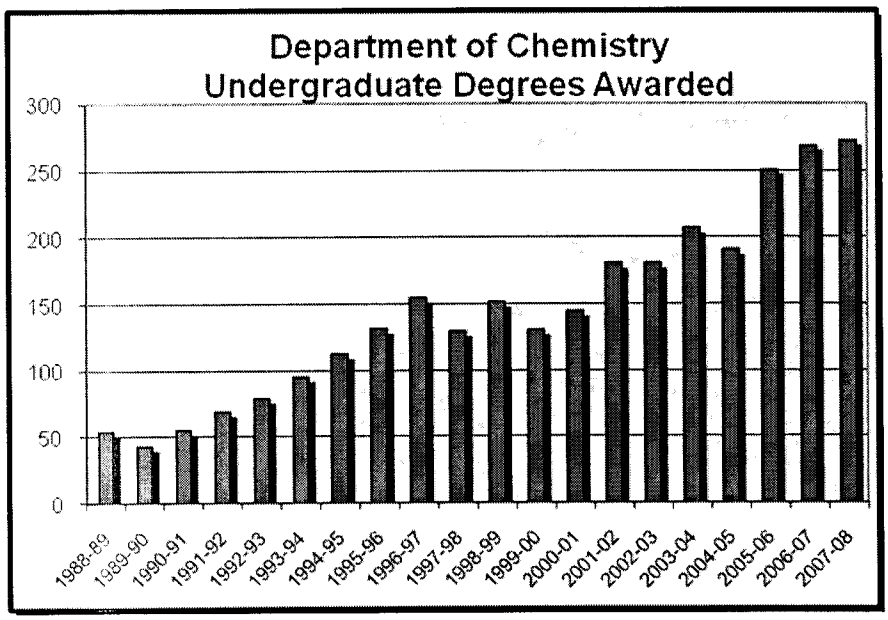

Figure 1. Total number of undergraduate degrees awarded in Chemistry and Biochemistry by academic year.

The number of declared Chemistry and Biochemistry majors has grown correspondingly. Figure 2 shows the number of declared majors for each of the degree programs, and the total number of degrees awarded. In 2005-06, a total of 1100 students had declared Chemistry and Biochemistry as their major. In 2007-08, this number has risen to over 1400. The impact of this growth on future degree production rates is unclear, because students are signing on earlier. There is certainly no evidence, though, that the program will decline in size absent some action on our part.

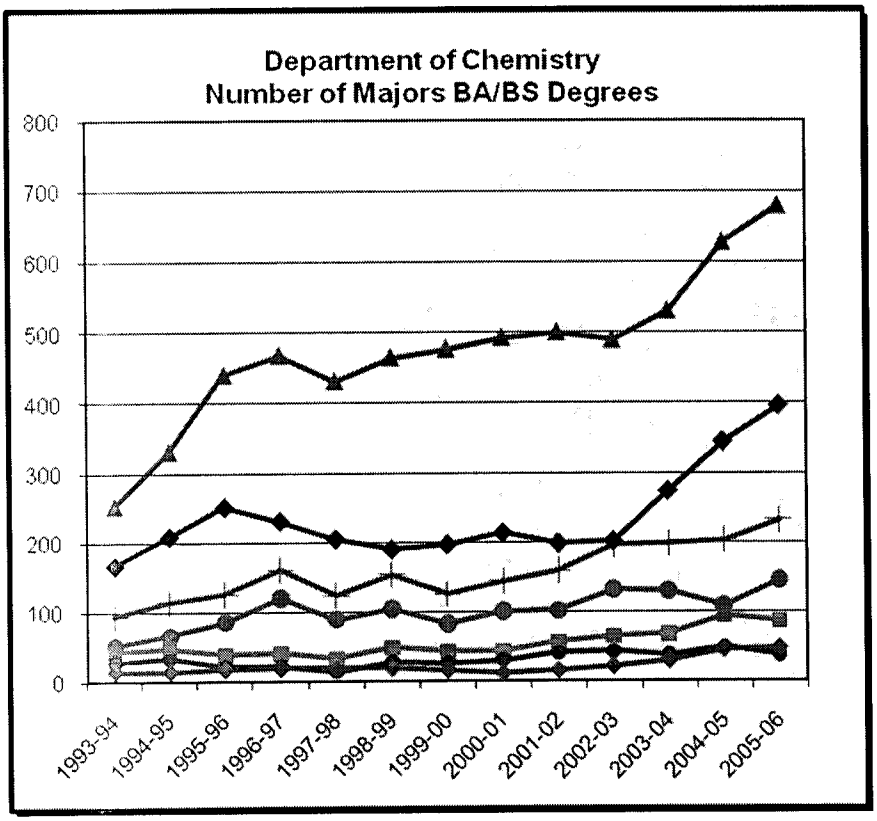

Figure 2. Number of declared Chemistry and Biochemistry majors. Key is as follows:

Purple: Biochem Majors
Blue: Chem Majors
Brown: Total Degrees
Green: Biochem B.S.
Teal: Chem B.S. & B.A.
Maroon: Chem B.S.
Red: Chem B.A.

This explosive growth did not happen by design, but rather is the result of our programs having been run under a policy of open admissions. Obviously there is some limit to the number of graduates the UW is able to support in these degree programs. Lessons we have learned in growing to our present size motivate us now to propose that in the future we actively manage the size of these degree programs. By so doing, we hope to better serve students by both ensuring the availability for our majors of spaces in required courses (and thus timely progress toward degree), and an appropriate quality level in these courses.

Growth in the total number of majors has resulted in demand for enrollments in our upper-division courses that has already exceeded our ability (in both the Departments of Chemistry and Biochemistry) to adequately staff our courses, given present limitations in all of number of faculty members, number of TAs, and instructional laboratory spaces. For the majority of our majors, access to upper-division laboratory courses is possible only after declaring to graduate. Our majors postpone coursework that should be taken in their third year of study simply because space is not available in high-demand courses. Providing timely access to courses required for our degrees is a central goal of our undergraduate program.

Additionally, we have introduced a new degree, the Biochemistry B.A., the requirements for which are closely aligned with medical school admission requirements. Unchecked, there is a great risk that this program could generate enrollment demands far in excess of what we can provide.

We propose that admission to degree programs in Chemistry and Biochemistry be changed from the current status of "open" to "competitive". The change to competitive degree programs in

Chemistry and Biochemistry will assure that all of our majors have access to upper-division courses, and will allow us to maintain the quality of our undergraduate degree programs. To be clear, Chemistry would have preferred to remain an open major, but following a path of continued growth unmatched by growth in the resource base (which is frankly rather unlikely) will ultimately result in the denial of enrollment in courses required for the degree and the erosion of overall instructional quality. By becoming a competitive major, we will be able to ensure that degree production and the resources needed to support our majors will be in balance.

We emphasize that this proposed change will not affect access to 100- and 200-level courses. We recognize the importance of our introductory course offerings to students pursuing a variety of degrees outside of Chemistry and Biochemistry, and it is our intent to continue access to these high-demand introductory courses.

Matching Resources to Number of Majors

The number of students accepted into the Chemistry and Biochemistry degree programs will be determined by available instructional resources. Available space in the following upper-division laboratory courses will largely determine the number of students pursuing B.S. degrees that can be supported:

BIOC 426 (Biochemistry Laboratory)
CHEM 317 (Advanced Inorganic Laboratory)
CHEM 321 (Quantitative Analysis)
CHEM 461 (Physical Chemistry Laboratory)

The number of B.A. students will be determined by the space available in upper-division lecture courses:

CHEM 452 and 453 (Physical Chemistry for Biochemists series)
CHEM 455, 456, and 457 (Physical Chemistry series)

Anticipated Effects of Conversion to Competitive Admission

There are a variety of benefits that will be achieved by establishing a competitive major in Chemistry and Biochemistry:

Matching of student enrollment demands with available space. Many required upper-division laboratory courses currently experience extreme enrollment demands. Many of our majors can only register for these courses after declaring graduating status, thereby receiving priority registration. As such, 300-level laboratory courses are populated exclusively by fourth- and fifth-year students. By aligning the number of majors to available instructional space, students will be able to enroll in these courses during a more appropriate stage in their undergraduate careers.

Decreased time to degree. If students are able to access required courses in a timely fashion, the time to degree will be significantly reduced. It is quite common for students to take more than four years to earn degrees in Chemistry and Biochemistry, largely due to limited course access. This change in the admission process will directly address this issue.

Maintaining degree quality. By balancing student demand and resources, we will be able to maintain the quality of our degree programs. Students will be assured of the access to instructors and TAs which is required to meet the demands of these challenging degree programs. Additionally, by setting performance benchmarks for the degree, we will ensure that the students receiving degrees will have met the academic standards and learning goals of our program.

Increased participation in undergraduate research. Our upper-division laboratory courses are designed to provide third-year students with the laboratory skills required to carry out undergraduate research. However, students in these courses are almost exclusively fourth-years and graduating seniors. Greater third-year student access to these courses will provide students with the skills required to pursue research opportunities earlier in their academic careers, ultimately resulting in increased participation in departmental research efforts. Increasing the number of students doing undergraduate research has been a long-standing goal of Chemistry, and of the University as a whole.

Although the benefits achieved by conversion to a competitive major are numerous, there are potential concerns involving impacts to student access and diversity. We hope we adequately address these concerns below.

Student Access to the Major. To determine the effect of change to a competitive major, the academic performance of students receiving degrees in Chemistry and Biochemistry from 2004 to 2007 was analyzed. Students were grouped into three categories: Biochemistry B.S., Chemistry B.S. (both ACS-certified and flexi), and Chemistry B.A. (the Biochemistry B.A. did not exist during this time). Figure 3 shows the overall GPA for recipients of the Biochemistry B.S. degree in 2007 (similar findings were made when data from 2004-06 were analyzed). There is a strong correlation between the cumulative GPAs, demonstrating that academic performance in the prerequisite courses served as a good indicator of future performance. Also in Figure 3 is a red line representing the 2.5 minimum GPA required for admission to the program. Relatively few students in this cohort would have been ineligible for admission to the Biochemistry B.S. program based on GPA.

In 2007, 134 Biochemistry B.S. degrees were awarded. This number exceeds by about 34 the number of enrollments annually available in BCHM 426, a course that is "required" for the degree. That year, because student demand greatly exceeded capacity in this course, we quite reluctantly accepted from some 34 students evidence of other laboratory experiences in order not to delay their graduation. To avoid this in the future, we would need to admit approximately 34 fewer students to this program. Retrospective analysis indicates that if GPA alone were used to achieve this, a cumulative GPA cutoff of 2.96 would have been required for entry. It is expected that the Biochemistry B.A. will provide an alternative degree track for a subset of these students interested in biochemistry, but not requiring the upper-division laboratory coursework required for the B.S.

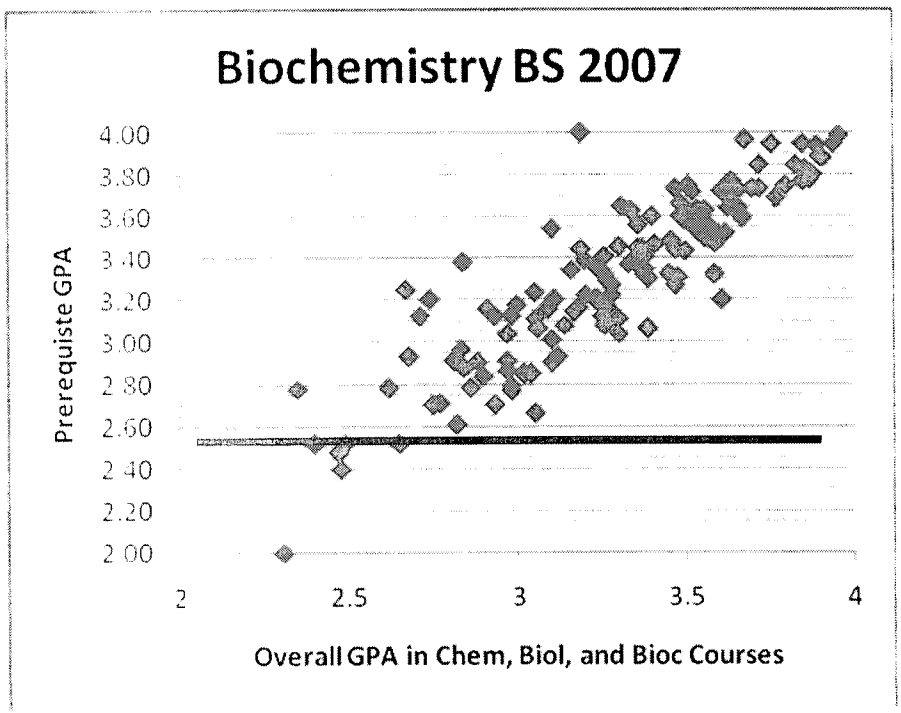

Figure 3. Correlation of cumulative GPA for proposed prerequisite courses for entering the Biochemistry B.S. and cumulative GPA for all Chemistry, Biology, and Biochemistry courses required for the major. Data corresponds to 2007 degree recipients. Red line represents the proposed 2.5 cumulative GPA required for entry into the major.

Figure 4 shows the same data analysis for the Chemistry B.S. degree in 2007. 37 Chemistry B.S. degrees were awarded, 10 of which were for the ACS-certified degree. As with the Biochemistry B.S. data, a correlation exists between cumulative GPAs, demonstrating that academic performance in the prerequisite courses serves as a good indicator of future performance. Only one student would have been ineligible for admission into the Chemistry B.S. program due to an insufficient GPA. Furthermore, 37 students received Chemistry B.S. degrees in this year, a number that can be readily accommodated given current resources.

Finally, analysis of the Chemistry B.A. data for 2007 is presented in Figure 5. Only one student would have been ineligible for admission to this program based on the minimum GPA requirement we propose. In 2007, 38 students received the Chemistry B.A. This graduation rate, together with all other chemistry and biochemistry bachelors degrees granted that year, was achieved only by temporarily lifting enrollment caps in upper division physical chemistry courses. To reduce those 400-level courses to an enrollment cap of even 100 would require reduction in number of Chemistry B.A. students by about 10. To achieve this through a GPA cutoff alone, a student would have required a cumulative GPA of about 2.8 for entry to the Chemistry B.A. program for graduation that year. This retrospective analysis may not reflect the future accurately, though, because of two effects that are likely to reduce demand for the Chemistry B.A. degree. These are the availability of the relatively new Biochemistry B.A. and lower overall GPA requirements students will need to satisfy to earn the Chemistry B.S. and Biochemistry B.S. degrees.

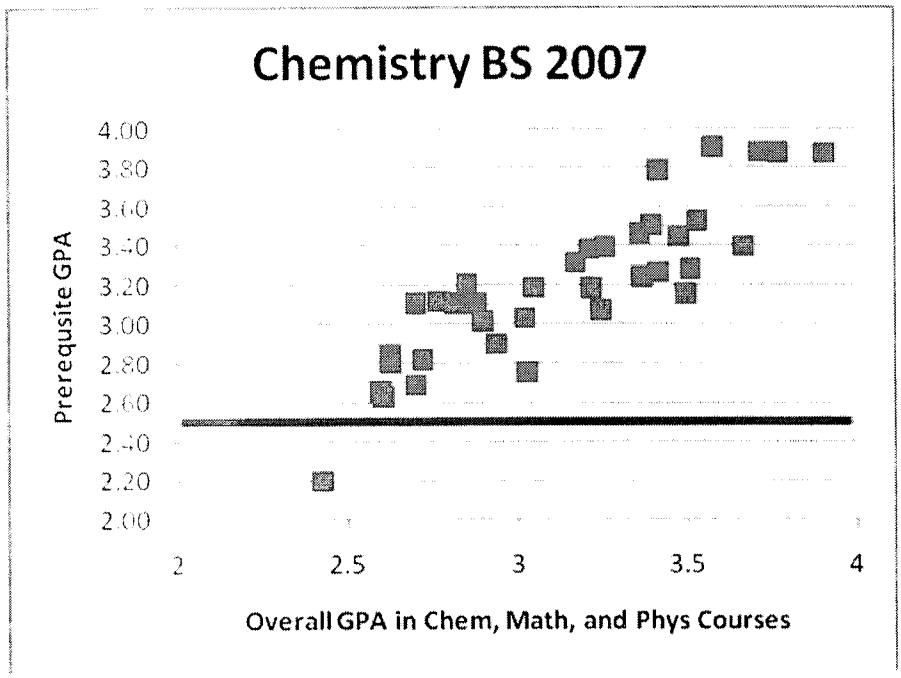

Figure 4. Correlation of cumulative GPA for proposed prerequisite courses for entering the Chemistry B.S. and cumulative GPA for all Chemistry, Math, and Physics courses required for the major. Data corresponds to degree recipients in 2007. Red line represents the proposed 2.5 cumulative GPA required for entry into the major.

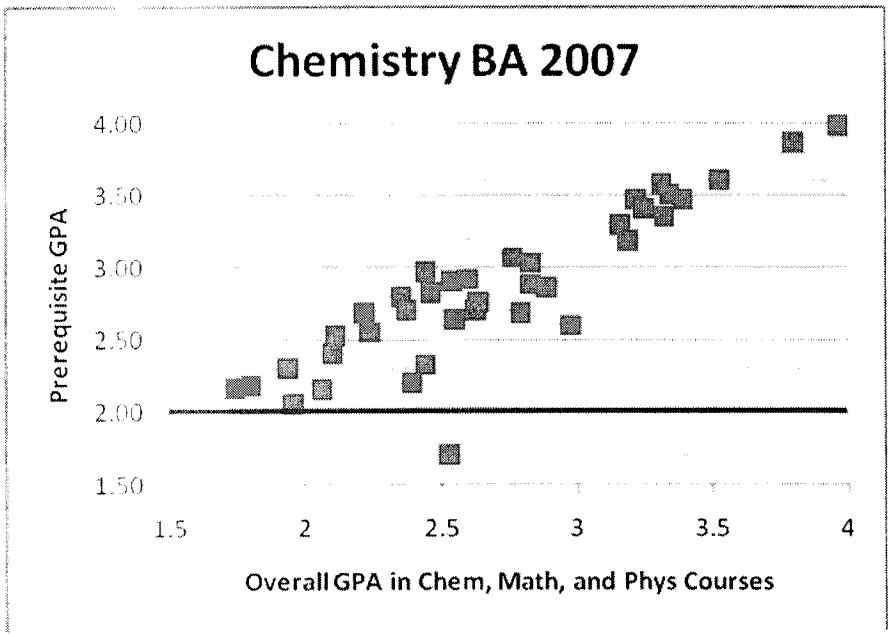

Figure 5. Correlation of cumulative GPA for proposed prerequisite courses for entering the Chemistry BS and cumulative GPA for all Chemistry, Math, and Physics courses required for the major. Data corresponds to degree recipients in 2007. Red line represents the proposed 2.0 cumulative GPA required for entry into the major.

In summary, the data in Figures 3-5 demonstrate that the cumulative GPA for the proposed prerequisite courses serves as a good indicator of future student performance and subsequent success in achieving the desired degree. The admission requirements outlined here will allow us to balance student demand with available instructional resources while maintaining reasonable access to our degree programs.

Diversity. The data on 2007 degree recipients was also used to gauge the impacts on the diversity of 1400 current majors in Chemistry and Biochemistry had these students been subject to the GPA admissions requirements described above. We found that 60 students would have been denied admission based on GPA requirements alone. The diversity of these students was essentially identical to the entire applicant pool. Therefore, the impact of the proposed change in admission policy on diversity is expected to be modest at most.