Pattern of Administration

for

The Ohio State University

Department of Chemistry and Biochemistry

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PATTERN OF ADMINISTRATION
Department of Chemistry and Biochemistry

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ABBREVIATIONS

ASC: Arts and Sciences

CBC: Chemistry and Biochemistry

CEF: Committee of Eligible Faculty

DO: Director of Operations

DRS: Director of Research Support Services

VCR: Vice Chair for Research and Administration

VCG: Vice Chair for Graduate Studies

VCU: Vice Chair for Undergraduate Studies

FAC: Chair's Faculty Advisory Committee

GAC: Graduate Admissions Committee

GRA: Graduate Research Associate/ship

GSC: Graduate Studies Committee

GTA: Graduate Teaching Assistant/ship

P&T: Promotion and Tenure

POA: Pattern of Administration

POD: Procedures and Oversight Designee

PTS: Promotion and Tenure Subcommittee

TIU: Tenure Initiating Unit

I. INTRODUCTION

This document provides a brief description of the Department of Chemistry and Biochemistry (CBC) as well as a description of its guidelines and procedures. It supplements the Rules of the University Faculty and other policies and procedures of the University to which the Department and its faculty are subject. The latter rules, policies and procedures, and changes in them, take precedence over statements in this document.

This Pattern of Administration is subject to continuing revision. It must be reviewed and either revised or reaffirmed on appointment or reappointment of the Department Chair. However, revisions may be made at any time. Changes, which will be made in consultation with the Department faculty, will be disseminated to Department faculty in memos until sufficient changes have accumulated to warrant printing and distributing a complete new document. All revisions, as well as periodic reaffirmation, are subject to approval by the College and the Office of Academic Affairs.

The faculty is responsible for all academic programs conducted by the Department of Chemistry and Biochemistry of The Ohio State University. In order to facilitate the training of students in Chemistry and Biochemistry, to support the pursuit of new chemical knowledge, and to contribute to the development of the profession of Chemistry and Biochemistry, the faculty has adopted the following Pattern of Administration for the Department of Chemistry and Biochemistry. The purpose of such administration shall be to organize, support, and promote policies established by the faculty in support of the mission of the Department. Additional rules of the faculty, staff, and students and important policy statements of the Department are contained in the Appendices.

II. MISSION AND VISION STATEMENT

The Mission of the Department of Chemistry and Biochemistry is to provide an inclusive environment of innovative teaching, world-class research and dedicated service with an agile, responsive faculty and staff.

To this end, the Vision of the Chemistry and Biochemistry Department will:
Be the pre-eminent location for providing the best undergraduate opportunities to learn the language and concepts of Chemistry and Biochemistry and to participate in the research of the Department.

Be a top-tier location for graduate and postdoctoral research by providing challenging, novel and relevant cutting-edge research opportunities via faculty, staff and students dedicated to exploration, support and excellence and to opening new frontiers to benefit the citizens of Ohio, the nation and the world. Provide leadership to chart the direction of The Ohio State University as a premier center of teaching, research and service to the state of Ohio and the world.

III. ACADEMIC RIGHTS AND RESPONSIBILITIES

In April 2006, the university issued a reaffirmation of academic rights, responsibilities, and processes for addressing concerns.

IV. FACULTY

Faculty Rule 3335-5-19, defines the types of faculty appointments possible at The Ohio State University and the rights and restrictions associated with each type of appointment. For purposes of governance, the faculty of this Department include faculty for whom the Department is their tenure initiating unit (TIU). Associated faculty, emeritus faculty, and faculty who are joint appointees with TIUs in another department with at least a 30% appointment in the CBC are invited to participate in discussions on non-personnel matters, but may not participate and are not eligible to vote in personnel matters, including promotion and tenure. Associated faculty and tenure track faculty who are joint appointees with TIUs in another department are invited to discuss and vote on all other departmental issues. Detailed information about the appointment criteria and procedures for the various types of faculty appointments made in the Department is provided in the Appointments, Promotion and Tenure Document.

V. OVERVIEW OF DEPARTMENT AND DECISION MAKING

Policy and program decisions are made in a number of ways: by the Department faculty as a whole, by standing or special committees of the Department, or by the Chair. The nature and importance of any individual matter determines how it is addressed. Department governance proceeds on the general principle that the more important the matter to be decided, the more widespread the agreement on a decision needs to be. Open discussions, both formal and informal, constitute the primary means of reaching consensus on decisions of central importance.

VI. DEPARTMENT ADMINISTRATION

Principal administrative officers of the Department are the Chair, Vice Chair for Research and Administration (VCR), Vice Chair for Undergraduate Studies (VCU), Vice Chair for Graduate Studies (VCG), Director of Operations (DO), Director of Human Resources and Finance, and Director of Research Support Services (DRS). This group will comprise the Cabinet.

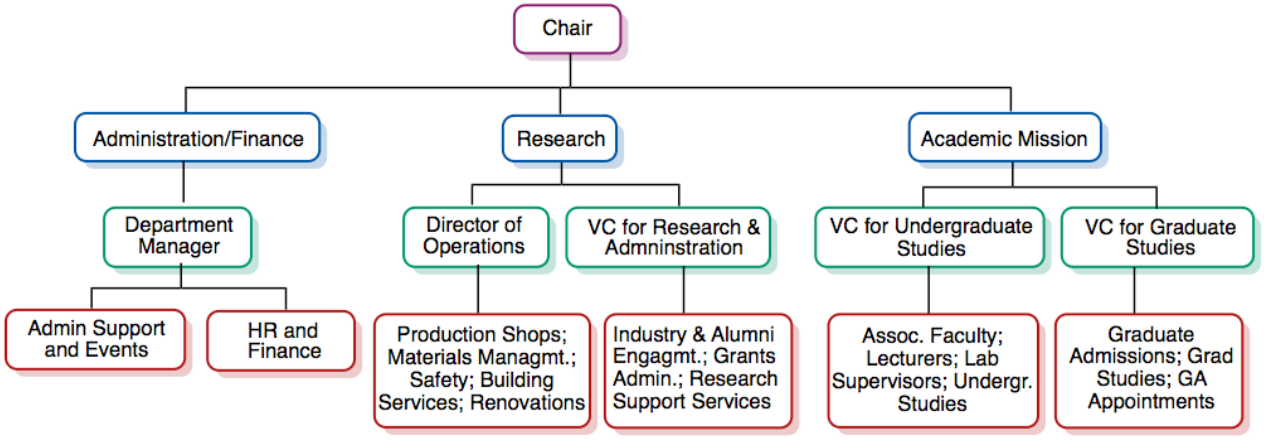

Figure 1. Administrative structure of the department

A. Department Chair

1. Appointment

The Chair is a member of the faculty and is appointed by the Dean in consultation with the faculty. Many of the responsibilities of the Chair are set forth in the Faculty Rule 3335-3-35 (C). The Chair normally has a reduced teaching load in recognition of significant administrative responsibilities.

The Chair acts on behalf of the Department in its official relations with the College and the University. The normal term of a Chair will be four years.

The Chair shall be responsible for appointing faculty, staff, and students to all Department committees except those for which specific methods of selection are described, appointing the Vice Chairs for Research and Administration, Graduate and Undergraduate Studies, assigning space to research groups, and recommending salary increases to the Dean. The Chair will recommend salary increases for faculty and staff to the Dean after consultation with the Cabinet and the Faculty Advisory Committee (FAC). The Chair will communicate the needs and wishes of the Department to the Dean, particularly in the area of faculty development and promotion and tenure (Appointments, Promotion and Tenure Document).

a. Duties

1. To have general administrative responsibility for its program, subject to the approval of the Dean of the College.

2. To develop, in consultation with the faculty, a pattern of administration (POA). This pattern of administration shall be made available to all present and prospective members of the faculty of the Department, and a copy shall be deposited in the office of the Dean of the College of Arts and Sciences, and in the office of the Executive Vice President and Provost.
    a) The Chair will provide a schedule of all faculty meetings (see rule 3335-5-18 of the Administrative Code) to all faculty members before the start of each academic term.

    b) The Chair (or designee) will maintain minutes of all faculty meetings and maintain records of all other actions covered by the Pattern of Administration.

    c) The Chair will consult with the faculty as a whole on all policy matters, and such consideration will, whenever practicable, be undertaken at a meeting of the faculty as a whole.

    d) There is a presumption favoring majority faculty rule on all matters covered by the Pattern of Administration. Whenever majority faculty rule is not followed, the Department Chair shall explain to the faculty the reasons for the departure to enhance communication and to facilitate understanding within the Department. Where possible, this

statement of reasons shall be provided before the departure occurs. This explanation shall outline the decision of the Department Chair and the reasons the decisions differ. The explanation shall be communicated to the faculty in writing, where possible, or at a faculty meeting, with an opportunity provided for faculty to comment.

e) The Chair shall consult with the faculty in the initiation of a search and in the review and selection of new faculty members for appointment.

f) The Chair shall work to see that faculty duties and responsibilities in instruction, scholarship, and service are assigned and distributed equitably.

3. The Chair shall, after consultation with the faculty and in accordance with the pattern of departmental administration, develop the Appointments, Promotion and Tenure (APT) document for the Department. The APT document describes the criteria and procedures according to which recommendations are made concerning appointments and/or dismissals, salary adjustments, promotions in rank, and matters affecting the tenure of the faculty. This document is subject to approval by the Dean and OAA and shall be made available to all present and prospective members of the Department; a copy shall be deposited in the office of the Dean of the College of Arts and Sciences and in the office of the Executive Vice President and Provost. At the beginning of each four-year term of the Chair, the members of the Department, the office of the Dean of the College, and the office of the Executive Vice President and Provost shall receive either a revision or reaffirmation of the original document.

4. To operate the business of the Department with efficiency and dispatch.

5. To plan with the members of the faculty and the Dean of the College a progressive program.

6. To evaluate continuously the instructional and administrative processes and lead in the study of methods of improving them.

7. To evaluate faculty members periodically in accordance with criteria approved by the Board of Trustees and subject to instructions from the Executive Vice President and Provost, and also according to such supplemental criteria as may be set up by the Department or College.

8. To inform faculty members when they receive their annual review of their right to review their primary personnel file and to place in that file a response to any evaluation, comment or other material contained in the file.

9. To recommend to the Dean of the College, after consultation with the faculty

in accordance with the Department's APT document and in accordance with procedures set forth in Faculty Rule 3335-6), appointments, promotions, dismissals and matters affecting the tenure of members of the Department faculty.

10. To see that all faculty members, regardless of their assigned location, are offered the departmental privileges and responsibilities appropriate to their rank, and in general to lead in maintaining a high level of morale.

11. To maintain a curriculum vitae for all personnel teaching a course in the Department's curriculum.

12. To see that adequate supervision and training are given to those members of the faculty, staff and students who may profit by such assistance.

13. To prepare (after consultation with the faculty) annual budget recommendations for consideration by the Dean of the College.

14. To promote improvement of instruction by providing for the evaluation of each course when offered, including written evaluation by students of the course and instructors, evaluation methods for on non-traditional courses, including lab, seminar, and introduction to research courses, and periodic review by the faculty, as outlined in Section IX of the departmental Appointments, Promotion and Tenure document. To be clear, this includes senior faculty members.

15. A critical role of the Chair is to build faculty consensus. This is best accomplished by the Chair's dissemination of information to the faculty as thoroughly as is practical and timely and to allow faculty input into important decisions. In addition to the faculty meetings, an annual retreat for strategic planning is recommended. It is recognized, however, that in sensitive situations, the Chair may not be able to share certain sensitive information confidential.

16. The Chair will approve or modify the teaching roster, and requests for increased or reduced teaching by an active faculty member. Overall, research and service activities, external support for research and research productivity may be considered in arriving at these decisions. These decisions dictate the need for temporary lecturers.

17. The Chair has final approval power over all financial matters in the Department. In consultation with the Cabinet and the College, the Chair will determine the salaries of teaching assistants, lecturers, and visiting faculty employed in the teaching program, and determine the maximum number of offers that can be made to foreign and domestic applicants to the graduate program and the salaries of teaching assistants. Additional funds to support

research will be allocated to faculty engaged in extra teaching. The Chair will delegate portions of the Department budget appropriately.

18. The Chair will report annually to the faculty on the state of the Department's finances.

19. The Chair will supervise certain members of the staff including the Director of Operations, Director of Human Resources and Finances and the administrative assistant to the Chair. As vacancies develop in the staff, the Chair will decide whether to fill the vacated position or to hire a new staff member with different skills and responsibilities. This decision will be made in consultation with the cabinet and interested faculty members.

20. The performance of the Department Chair will be reviewed by the Department approximately two years into his/her term. The review will be undertaken by the Faculty Advisory Committee. The findings of this review will be reported to the Chair and the Dean and, at the discretion of the committee and the Dean, to the faculty.

B. Vice Chair for Research and Administration

1. Appointment

The Vice Chair for Research and Administration (VCR) is a member of the faculty and is appointed by and reports to the Chair. The VCR is a member of the Chair's Cabinet. The VCR normally has a reduced teaching load in recognition of significant administrative responsibilities.

a. Duties

The VCR will assist the Chair in assigned aspects of Department administration, particularly in regard to administration, appointments, salary and performance reviews, and promotion and tenure. Assigned duties include:

1. The VCR will represent the Chair in appropriate official capacities and serve as acting chair when the Chair is unavailable.

2. The VCR will work with the DO and VCG and VCU to coordinate north and south campus operations, infrastructure, facilities and space assignments.

3. The VCR will chair the Awards Nominations Committee. The VCR is the Chair's designee to write the first draft of all award nomination letters that requires letters from the Chair. She/He will also actively search for potential awards that faculty could be eligible for and contact potential letter writers for each case, which requires providing them with candidate information.

4. The VCR will chair the Space Committee. She/He responds to all requests from faculty and staff regarding space allocation or other issues related to

equipment or renovations. She/He works with the space committee to arrive at decisions on these requests.

5. The VCR will approve or reject requests by the faculty for absences from Campus during on-duty periods (Faculty Rule 3335-5-08).

6. The VCR is an ex-officio member of the Industry Liaison Committee. The VCR oversees the scheduling and presentations associated with Technology Oversight Committee meetings and Industry Day. She/He is engaged in industry funding, collaborations with industry, and technology transfers. She/He is responsible for helping to match research interests of industrial partners with those of individual faculty, as well as identifying areas where OSU user facilities can engage industry for revenue.

7. The VCR is an ex-officio member of the Chair's Faculty Advisory Committee. She/He should be involved in discussion in the FAC but does not have a vote.

8. The VCR supervises the grants coordinators and the industry engagement staff, including the business analyst and industry liaison. She/He leads efforts to assist faculty with the review of drafts of proposals before submission, assists with identifying center proposal opportunities, and leads new initiatives to incentivize collaborative research.

C. Vice Chair for Undergraduate Studies

1. Appointment

The Vice Chair for Undergraduate Studies (VCU) is a member of the faculty and is appointed by and reports to the Chair of the Department of Chemistry and Biochemistry. The VCU is broadly responsible for ensuring high quality teaching and grade equity in all undergraduate courses, managing the scheduling and staffing of undergraduate courses, overseeing undergraduate curricula and assessment efforts, and coordinating the advising and recruitment of students interested in chemistry and biochemistry. The VCU leads the associated faculty and staff involved in fulfilling the Department's undergraduate teaching mission. The VCU is a member of the Chair's Cabinet. The VCU normally has a reduced teaching load in recognition of significant administrative responsibilities.

a. Duties

1. The VCU ensures high quality of teaching and grade equity in all undergraduate courses. The VCU does this by:
    a) Collaborating with faculty in each teaching division to facilitate the organization, presentation, and grading of undergraduate courses in those divisions

    b) Determining the coverage and format of the general chemistry courses,

providing centralized resources, and developing reports to assist with normalizing grades

c) Assisting the Chair with reviewing the classroom instructional efforts of the faculty for undergraduate courses

d) Ensuring consistency among courses taught at the regional and Columbus campuses, including efforts in innovative teaching

e) Assisting the Chair with responding to complaints raised by or for students in undergraduate courses

2. The VCU manages the staffing and scheduling of all undergraduate courses. This includes collaborating with the faculty in the teaching divisions and instructional staff, as well as the Classroom Scheduling Office for the University.
    a) With insufficient CBC faculty to serve as instructors for all course offerings, the VCU will also employ associated faculty, senior lecturers, and temporary lecturers. Such an appointment is made after careful consideration of the candidate's credentials and after the candidate gives a presentation that permits an assessment of his/her technical and classroom skills. Lecturer positions are not faculty positions, and as such, do not carry the possibility of becoming tenured positions.

    b) With insufficient CBC graduate students to serve as teaching assistants for all lecture and laboratory sections, additional instructional staff may be selected by the VCU to assist with leading and coordinating laboratory and recitation sections. The VCU oversees the training and evaluation of these individuals.

    c) The VCU seeks to provide maximum service to the students while minimizing cost to the Department when determining if additional sections of a class should be offered. The VCU provides the Chair with reports regarding undergraduate course enrollment and evaluation.

3. The VCU oversees the undergraduate curricula and assessment efforts by serving as a voting member of the Undergraduate Curriculum Committee and the Undergraduate Instructional Assessment Committee. She/He may chair these committees or may recommend designees to the Chair. The VCU normally also serves on the College Curriculum Committee in order to maintain close coordination of activities within that group.

4. The VCU is responsible for coordinating the services provided by the Department for the undergraduate teaching program. These services include:

a) Laboratory organization: planning laboratory schedules in coordination with lab supervisors and instructors, developing new labs to improve student learning, and holding weekly staff meetings to assure that teaching assistants are well informed of their responsibilities and assignments

5. The VCU is an ex-officio member of the Chair's Faculty Advisory Committee. She/He should be involved in discussion in the FAC but does not have a vote.

D. Vice Chair for Graduate Studies

1. Appointment

The Vice Chair for Graduate Studies (VCG) is a member of the faculty and is appointed by and reports to the Chair of the Department of Chemistry and Biochemistry. The VCG is broadly responsible for administering graduate programs in the Department of Chemistry and Biochemistry (namely, the Chemistry graduate program and the Biochemistry M.S. program). The primary mission of the office of the Vice Chair is the development of a strong national and international reputation for the graduate programs sponsored by the Department of Chemistry and Biochemistry. The VCG will assist graduate students in submitting national fellowship applications such as NSF fellowships. Programs to mentor underrepresented minorities and women graduate students are also the responsibility of the VCG. The VCG is a member of the Chair's Cabinet, Chair of the Graduate Studies Committee, and makes the final decisions on admission of graduate students to the graduate program. The duties of this office include the supervision and evaluation of the performance of staff assigned to the Graduate Studies Office; the preparation annually of a budget for the recruitment of graduate students, recruiting, hiring, and assignment of Graduate Teaching Associates in consultation with the Vice Chair for Undergraduate Studies. The VCG normally has a reduced teaching load in recognition of significant administrative responsibilities.

a. Duties

1. Administering the Graduate Studies Office and its staff, that is responsible for all graduate academic programs in the Department.

2. Planning and implementing innovative approaches to graduate student recruiting.

3. Making offers of admission to students admitted to the Department's graduate program.

4. The VCG is responsible for ensuring placement of students into research groups in a manner that is fair and equitable amongst faculty. Limits on the number of students assigned to a single group may imposed by the VCG, in consultation with the Graduate Studies Committee and the Division, based on

levels of external funding, junior faculty status, or to maximize the distribution for the wellbeing of the department.

5. The VCG serves as Chair of the Graduate Studies Committee, and in that role, is responsible for the graduate curriculum and the academic progress of all graduate students enrolled in the Department. The Graduate Admissions Committee works with the VCG to recruit the most highly qualified students possible for the program, and the Graduate Studies Committee is responsible to the VCG for the enrollment, progress and evaluation of performance of all graduate students matriculated in the program. The VCG is also responsible to the Chair for evaluation of the quality of graduate instruction.

6. The VCG will coordinate a variety of graduate level activities, including: nominations for University Fellowships, the Henne Research Competition, Presidential Fellowships, John S. Swenton Award for Outstanding Teaching, and other internal and external graduate student awards and fellowships.

7. The VCG assists the Chair in reviewing the classroom instructional efforts of the faculty for graduate courses.

8. The VCG is an ex-officio member of the Chair's Faculty Advisory Committee. She/He should be involved in discussion in the FAC but does not have a vote.

E. Department Manager and Director of Human Resources and Finance

1. Appointment and Duties

The Director of Human Resources and Finance is a member of the permanent staff and reports to the Chair. She/He is a senior staff member and a member of the Chair's Cabinet. She/He manages, plans, directs and oversees all fiscal and human resources staff. She/He is responsible for developing general funds budget reports to inform decision making, provides budget models and budget projections, forecast resource changes based on enrollment fluctuations and performs other duties as delegated by the Chair.

F. Director of Operations

1. Appointment and Duties

The Director of Operations (DO) is a member of the permanent staff and reports to the Chair. The Director of Operations is a senior staff member. The DO is a member of the Chair's Cabinet. She/He is the direct supervisor to the staff members who lead the machine shop, electronic shop, glass shop, facilities management, safety and the hazardous waste disposal operations of the Department. The DO monitors compliance with university policies and coordinates compliance with the Director of Human Resources and Finances. The Director of Operations coordinates renovations and serves as liaison between Facilities and Operations. The DO oversees renovation

projects and works with the project managers to ensure project success. She/He performs other tasks as delegated by the Chair.

G. Director of Research Support Services (DRS)

1. Appointment and Duties

The Director of Research Support Services (DRS) is a member of the permanent staff and reports to the Department Chair through the Vice Chair for Research and Administration. The DRS is a member of the Chair's Cabinet. The DRS is a senior staff member of the Department, and directly supervises and provides support for the multiuser instrumentation facilities of the Department. She/He is the direct supervisor to those staff members of the multiuser instrumentation facilities.

H. Business Analyst and Industry Liaison

1. Appointment and Duties

The Business Analyst and Industry Liaison is a member of the permanent staff and reports to the VCR. She/He works toward maximizing the Department's potential in garnering corporate funding and collaborations for faculty research, as well as licensing of faculty members' innovations. She/He works with the OSU Technology Commercialization Office, the Industry Liaison Office and the Office of Sponsored Research in increasing and facilitating corporate agreements. She/He also performs other duties as delegated by the VCR.

I. Grants Coordinators

1. Appointment and Duties

The Grants Coordinators are members of the permanent staff and report to the VCR. Their role is to facilitate the submission of external grants by faculty, including large multi-PI center/facilities/training grants, to help faculty manage the current funds, and identify potential funding opportunities. The grants coordinators also alert faculty of approved spending and help with cost projections.

J. Other Staff

The Department's teaching, research and service missions are supported by staff located at its North and South campus locations. These staff members provide services that include coordination and management of fiscal matters, human resources, research infrastructure, teaching laboratories, analytical support laboratories, computer support, laboratory safety, degree program administration and outreach.

VII. ORGANIZATION OF THE DEPARTMENT

A. Teaching Divisions

The Department is organized into five teaching divisions for convenience in the staffing of curricular offerings and in establishing the requirements for graduate degrees of students pursuing research in related areas of Chemistry and Biochemistry. Each faculty will be a member of one or more teaching division. The divisions are (1) Analytical, (2) Biochemistry, (3) Inorganic, (4) Organic, and (5) Physical. Responsibilities of the teaching divisions are established by the faculty of the Department as a whole.

B. Committees

The Chair is responsible for appointment of faculty, staff, and students to all departmental committees except those for which specific methods of selection are described below. The Chair is ex-officio on all department committees, non-voting on the committee of the eligible faculty. Committee assignments typically will coincide with the academic year unless otherwise noted. The Chair may also, from time to time, create ad hoc committees. The number of faculty/staff on each committee may vary from year to year with the exception of the Faculty Advisory committee. The composition and duties of the Department's standing committees are:

1. **Faculty Advisory Committee (FAC)**
   This FAC is composed of six faculty members. Faculty will elect representatives to serve a term of three years on the FAC. The terms will be staggered so that approximately one third of the committee shall be named or elected or re-elected every year. All associate professors and professors are eligible to serve on this committee with the exception of those who just completed their term on the FAC and the Vice Chairs. Prior FAC members will be eligible one year after completing a term. The FAC is constituted to provide advice to the Department Chair on all matters concerning the Department. The committee will meet once a month with the Department Chair. Meetings, which may be called by the Department Chair or by a majority of the committee, will be scheduled in a timely manner by the Department Chair. Additional meetings may be called by either the Department Chair or the majority of the committee.

   In cases where special expertise is required, the Department Chair may appoint an additional member of the committee. The Department Chair is also a member, ex officio, of this committee. The FAC has no formally appointed chair.

   The FAC is specifically charged with advising the Department Chair on policy issues, and on matters of salary and performance evaluations. This committee is also responsible for biannual evaluation of the Department Chair.

2. **Committee of Eligible Faculty (CEF)**
   The Committee of Eligible Faculty is constituted by all tenured faculty of higher rank

than the candidate(s) being reviewed, excluding the Chair, the Dean and Assistant and Associate Deans of the College, the Executive Vice President and Provost, and the President. This committee evaluates all candidates for promotion and tenure and reports their recommendations to the Chair of the Department. The chair of the Committee of Eligible Faculty is appointed by the Department Chair.

a. Promotion and Tenure Subcommittee (P&T)
A subset of the Committee of Eligible Faculty comprises the Promotion and Tenure subcommittee. This subcommittee is responsible for organizing faculty promotion and tenure reviews and presenting each case to the entire CEF. The P&T subcommittee will be composed of:

- The Committee Chair. This is a professor appointed by the Chair.
- A Procedures Oversight Designee (POD). This professor is assigned to ensure the review procedure is properly executed, including considerations of Affirmative Action issues. The POD is further described in the Department's Appointments, Promotion, and Tenure document, Section VI.B.2.
- An ad hoc member of the P&T committee whose disciplinary specialty is close to that of the candidate. This member will vary depending on the candidate under review.

The chair and POD serve three year terms.

3. Graduate Admissions Committee (GAC)
The Graduate Admissions Committee is responsible for reviewing applications for admission to the Department's graduate programs and for recommending selected students for admission to the graduate school. These recommendations are made to the VCG. The VCG will make the final decisions on admissions. If the VCG makes decisions different than what the GAC recommends, the decision should be reported to the GAC. Admission is based on a set of academic metrics and the size and distribution of the entering class is estimated by the ability of the faculty to support the students as Research Associates (RAs) along with the need for fulfilling the Department's requirement of teaching assistants (TAs). They will also select and recommend entering graduate students for award of teaching associateships and fellowships.

Membership consists of faculty from the five teaching divisions and a committee Chair appointed by the Department Chair. The committee Chair reports directly to the Vice Chair for Graduate Studies, who is a non-voting member of the committee. This committee is charged with developing a budget for student recruiting. This budget will be presented to the Department Chair who, in consultation with the Cabinet, will approve or modify it.

4. **Graduate Studies Committee (GSC)**
   The rules of the Graduate School provide for the supervision of all graduate students in Chemistry and Biochemistry by the graduate faculty of the Department. The Graduate Studies Committee will apply the "Rules of the Graduate Program" (see Appendix I). These guidelines are subject to annual review. Students are governed by the guidelines in place at the time they enter the Program.

   In addition to the duties listed above, the committee is responsible for soliciting and reviewing nominations for and making recommendations on the award of departmental and university graduate fellowships. It also approves the selection of an advisor for beginning graduate students, monitors student progress and reviews petitions for continued TA support and extensions of graduate standing. In extraordinary cases, the GSC may assign a new advisor to a student. Membership consists of one graduate faculty member from each of the five teaching divisions and the Vice Chair for Graduate Studies, who will serve as Chair of this committee.

5. **Undergraduate Curriculum Committee**
   The Undergraduate Curriculum Committee is responsible for the curricular offerings, degree programs, and awards of the Department at the undergraduate level. The committee reviews all proposed changes in undergraduate courses within the Department, including additional courses, deletions of courses, and modifications to existing courses. It also is responsible to the faculty for all issues associated with the undergraduate degree programs in Chemistry and Biochemistry.

   The committee will have faculty representatives of each teaching division appointed by the Chair, with the Vice Chair for Undergraduate Studies. The VCU serves as chair of this committee or will designate a committee chair. The VCU also normally serves on the College Curriculum Committee in order to maintain close coordination of activities with that group.

6. **Undergraduate Instructional Assessment Committee**
   The Undergraduate Instructional Assessment Committee is responsible for developing and implementing a framework for the on-going assessment of undergraduate courses, minors, and majors in the Department. The committee also oversees the assessment of the expected learning outcomes for the general education requirements in courses designated as general education courses. The committee assists the committee chair in evaluating and presenting the data for the annual assessment report for the departmental programs.

   Membership consists of the Committee Chair, appointed by the Department Chair, the VCU and instructional faculty and staff appropriate for the course(s) and/or program(s) under review.

7. **Assistant Professor Mentoring Committees**
   The Chair will appoint a mentoring committee of three tenured faculty members for each assistant professor. Members of this committee provide guidance to assistant

professors throughout the year. The members are responsible for reviewing proposals of their advisee before submission, visiting the lectures of the advisee to provide guidance and feedback, providing advocacy roles such as assisting in garnering invitations to speak at sessions in national/international meetings and other conferences that will provide enhanced visibility of the assistant professor's work. The Department Chair will appoint a chair for each of these committees. The committee chair is responsible for making sure that the assistant professor has at least five classroom visits by faculty colleagues during his/ her time as an assistant professor. The mentorship of the junior faculty will be included in the annual performance reviews of all senior faculty members.

A member of the Mentoring Committee may be selected to serve as the ad hoc member of each candidate's P&T Committee during the time of the sixth-year review of the assistant professor.

8. **Associate Professor Mentors**
   The Chair will appoint a faculty mentor to each associate professor. This mentor will provide guidance and feedback to his/her mentee on progress toward promotion in areas of research, teaching and service. The mentor is responsible for making sure that the associate professor mentee has the necessary classroom visits (five strongly preferred) by faculty colleagues during his/her time as an associate professor. The mentorship of the associate professor will be included as a review criterion in the annual performance review of the senior faculty member.

9. **Associated Faculty Mentoring Committee**
   The Chair will appoint a mentor for each associated faculty member. A departmental mentoring committee for the associated faculty will include the individual mentors of each associated faculty member and at least three other faculty members who are integrally involved in the instructional mission of the Department. This committee will be chaired by the VCU. The mentors will provide guidance to associated faculty throughout the year. This committee is expected to work with the associated faculty member in charting a path toward success in scholarship, teaching and research. One goal for the mentoring committee is to ensure uniform and thorough support of the associated faculty. The committee is responsible for providing reviews of the progress of the associated faculty to the Chair. This committee is expected to work with the associated faculty member in charting a path toward success in scholarship, teaching and research.

10. **Safety Committee**
    Safety rules and policies of the Department of Chemistry and Biochemistry are described in the departmental Chemical Hygiene Plan (CHP, Appendix V).

    The Safety Committee will consist of a subset of members of the faculty, staff and representatives of the Joint Safety Team (JST). The committee is co-chaired by a faculty member appointed by the Department Chair and the department safety officer. The Safety Committee is responsible for establishing rules regarding safety and

hygiene in the conduct of research and teaching activities in the Department. The committee is responsible for planning and preparation of programs to educate the students, staff, and faculty in safe practices in their teaching, learning, and support duties. In particular, the committee oversees the planning for and compliance with federal (OSHA, etc.) and state regulations regarding chemical hygiene and safety in the Department.

The Safety Committee shall conduct annual reviews of the CHP and recommend changes to and implementation of new safety policies as required and needed by the Department. Revisions and new policies will be adopted by a majority vote of the faculty.

Enforcement issues will be handled according to the guidelines described in Appendix V.

11. Joint Safety Team

The joint safety team (JST) is the leadership committee of graduate students who are aggressive in supporting a safe laboratory culture for the Department. The JST is registered as an OSU student organization, such that the members elect a President, Vice President, Secretary and Treasurer. Each research group that has a research laboratory must also have a laboratory safety officer (LSO). The faculty member of the research group appoints the LSO for his/her research group. This graduate student or postdoc is tasked to assist his/her research group in maintaining a safe laboratory culture but have a safe laboratory environment, use safe laboratory practices and maintain the research group's chemical inventory. The JST holds meetings of the LSOs every semester to discuss improvements that should be made and discuss any challenges must be addressed within the Department. The JST is responsible for friendly reviews of research group laboratory safety and also responsible for assisting the Chair in providing awards for excellent laboratory safety. The JST has assigned membership on the safety committee and also reports directly to the Chair of the Department.

12. Awards Nominations Committee

The Awards Nominations Committee is responsible for nominating members of the faculty for various awards and prizes. The Vice Chair for Research and Administration will chair this committee. In selecting nominees, this committee will select the individual considered most likely to win the award. The second criterion will be to nominate as many members of the faculty as possible for various awards.

13. Space Committee

The VCR is the Chair of the space committee. The space committee reviews the laboratory space annually and makes suggestions on space assignment changes that should be considered. These recommendations are provided to both the FAC and the Chair. The Chair makes the final decisions on space assignments. The Director of Operations is an ex-officio member of this committee.

14. Diversity, Equity, and Inclusion Committee

The Diversity, Equity, and Inclusion Committee is charged with developing and advocating for policies that will help the Department achieve greater diversity at all levels - faculty, staff, and students. The Committee is also responsible for evaluating the progress of the Department toward its diversity goals every two years and submitting their report to the Chair. The Diversity Committee is chaired by a faculty member selected by the Chair and includes faculty, staff, and two members of the JDT.

15. Joint Diversity Team

The joint diversity team (JDT) is the leadership committee of graduate students who are advocates for diversity, equity, and inclusion culture in the Department. The initial JDT chair and members will be selected by the Department Chair. Later, it is expected that the JDT will be registered as an OSU student organization, such that the members will elect a President, Vice President, Secretary and Treasurer. Each research group that has a research laboratory must also have a laboratory diversity officer (LDO). The faculty member of the research group appoints the LDO for his/her research group. This graduate student or postdoc is tasked to assist his/her research group in maintaining a laboratory culture that embraces and promotes diversity. The JDT holds meetings of the LDOs every semester to discuss improvements that should be made and discuss any challenges must be addressed within the Department. The JDT is responsible for disseminating information to the LDOs and for assisting the Chair in providing awards for excellence in diversity, equity, and inclusion. Two members of the JDT will be assigned membership on the Diversity Committee.

16. Research Support Services (RSS) Committee

The RSS committee serves as a liaison between the Department faculty and the DRS and Managers in order to be sure the Departmental multiuser facilities are appropriately supporting the users' research needs as described in the POA appendices. This may include soliciting feedback from faculty colleagues within the Department and the broader university; offering advice and feedback to the DRS and Managers for optimizing resources; assisting with hiring new RSS staff members, and facilitating departmental instrumentation upgrades and new instrument purchases via proposal or other means. The committee chair and members will be appointed by the Chair consisting of five faculty members who use the multiuser facilities. The DRS serves as an ex-officio member.

17. Faculty Search Committee(s)

The Chair will meet with the faculty and the FAC on a monthly basis as appropriate to discuss the Department's needs in hiring new members of the faculty. The Chair will then appoint ad hoc recruiting committees as dictated by available resources. The committee(s) will be charged with conducting the procedures established in the Department's APT document to recruit outstanding new faculty to the Department.

18. Other Committees

In addition to the standing committees, there are a number of committees functioning at any time and whose membership and duties may vary as needs change.

VIII. FACULTY MEETINGS

The Chair will provide to the faculty a schedule of Department faculty meetings at the beginning of each academic term. The schedule will provide for at least one meeting per academic term and will normally provide for monthly meetings. A call for agenda items and a completed agenda will be delivered to faculty by e-mail before a scheduled meeting. Reasonable efforts will be made to call for agenda items at least seven days before the meeting, and to distribute the agenda by e-mail at least three business days before the meeting. A meeting of the Department faculty will also be scheduled on written request of 25% of the Department faculty. The Chair will make reasonable efforts to have the meeting take place within one week of receipt of the request. The Chair will distribute minutes of faculty meetings to faculty by email – within seven days of the meeting if possible. These minutes may be amended at the next faculty meeting by a simple majority vote of the faculty who were present at the meeting covered by the minutes.

Special policies pertain to voting on personnel matters, and these are set forth in the Department's Appointments, Promotion and Tenure document.

For purposes of discussing Department business other than personnel matters, and for making decisions where consensus is possible and a reasonable basis for action, a quorum will be defined as a simple majority of all faculty members eligible to vote.

Either the Chair or one-third of all faculty members eligible to vote may determine that a formal vote conducted by an electronic means is necessary on matters of special importance. For purposes of a formal vote, a matter will be considered decided when a particular position is supported by at least a majority of all faculty members eligible to vote.

When a matter must be decided and a simple majority of all faculty members eligible to vote cannot be achieved on behalf of any position, the Chair will necessarily make the final decision.

The Department accepts the fundamental importance of full and free discussion but also recognizes that such discussion can only be achieved in an atmosphere of mutual respect and civility. Normally, Department meetings will be conducted with no more formality than is needed to attain the goals of full and free discussion and the orderly conduct of business. However, Robert’s Rules of Order will be invoked when more formality is needed to serve these goals.

IX. DISTRIBUTION OF FACULTY DUTIES AND RESPONSIBILITIES

The university's policy with respect to faculty duties and responsibilities is set forth in the Office of Academic Affairs Policies and Procedures Handbook. The information provided below supplements these policies.

The Chair, with appropriate consultation, is responsible for ensuring equitable assignment of responsibilities to the faculty. All faculty members are expected to make contributions in all areas of faculty responsibility. Significant differences in the assignment of responsibilities to individual faculty members may exist, reflecting temporary factors, individual faculty strengths, interests, and abilities to contribute to the overall mission of the Department.

A. Faculty Duties and Responsibilities, Columbus Campus

1. Tenure Track

Faculty must have at least a 30% FTE appointment in the Department to be eligible to serve as advisor and preceptor to graduate students of the Chemistry Ph.D. or Biochemistry M.S. programs. All members of the faculty are expected to contribute to all facets of the graduate and undergraduate teaching, service, and research missions of the Department, including serving on Ph.D. candidacy and examination committees.

The faculty will evaluate the quality of classroom teaching in the Department using a suitable individual, division, department, or university-approved instrument, and peer review. All course offerings will be so evaluated and results will be forwarded to the relevant Vice Chair.

Emeriti faculty members can attend meetings of the faculty upon invitation from the Chair but do not have voting privileges. Consistent with the rules of the Graduate School, emeritus faculty may continue to act as advisors for their advisees in progress at the time of retirement with the approval of the Graduate Studies Committee and notification to the Graduate School. For these faculty emeriti to engage in graduate teaching or advising activities not in progress at the time of retirement, approval of the Graduate Studies Committee, the Chair, the College Dean, and the Dean of the Graduate School is required.

Many faculty members voluntarily take on a variety of professional activities that fall outside the Department's guidelines on faculty duties and responsibilities. These activities often benefit the Department or University and may be taken into account in considering a faculty member's total workload.

2. Scholarly Activity, Columbus Campus

All faculty members are expected to engage in scholarly activity. These activities will generally take the form of inquiry into fundamental scientific questions but may also include research in pedagogy.

Results of research activities are expected to result in publications in peer reviewed scholarly journals and theses and dissertations for undergraduate and graduate students. The results are also expected to form the basis of invitations to professional meetings and citations of publications.

Since Chemistry and Biochemistry research and related teaching is primarily funded from external sources, all faculty members are expected to seek such funding to support their research programs.

Faculty members are expected to serve on administrative, advisory, and evaluation committees for the University, for government agencies, and for professional societies.

Faculty members are also expected to review papers for professional journals and research proposals for funding agencies.

All items described above will be criteria included in the annual performance evaluation.

3. **Industrial Sponsorship of Graduate Research**
   Faculty have the right to manage research sponsored by industry which may impose, as part of the contract, rules governing disclosure to protect intellectual property generated at The Ohio State University. Although it is advisable that postdoctoral associates rather than graduate students participate in these studies, graduate student participation is allowed. In these cases, however, faculty will identify to the Graduate Studies Office annually those graduate students involved in proprietary research. These students will be interviewed by the Vice Chair of Graduate Studies on behalf of the GSC to ensure that the progress of the student to graduation and employment in the profession is not being impeded by issues of non-disclosure and that the activities of the student are in line with the university's conflict of interest policy. If the GSC concludes that the students' progress is impeded by the industrial sponsorship, it has the power to remedy the situation.

   The GSC will ensure that the results of thesis and dissertation work can be published in a timely fashion and that the dissertation is fully public.

4. **Service**
   Members of the faculty are expected to serve on departmental and university committees in addition to student advisory and examination committees. Faculty may also serve in professional committees outside the university, such as editorships, reviewing proposals, organizing symposia and serving in elected position in national organization such as the American Chemical Society (ACS) or the American Association for the Advancement of the Sciences (AAAS). Activities in these committees will be part of the annual performance evaluation. All faculty members are expected to attend and participate in faculty meetings, recruitment activities, and other Department events. Service of committee members to the department will be evaluated by each committee chair based on the time commitment and level of performance.

B. Associated Faculty – Nontenure Track Faculty (< 50% appointment)

Within the Department of Chemistry and Biochemistry appointment as a non-tenure-track Associated Faculty is for individuals who have a split faculty-staff appointment and a professorial title. The faculty portion of the appointment cannot be more than 40%. These Associated Faculty members are expected to demonstrate excellence in teaching. They are also expected to engage in externally recognized scholarly activity, and participate in Department, College, and/or University level service activity commensurate with their faculty appointment percentage.

1. **Scholarly Activity**
   Associated faculty can engage in traditional research in any area of chemistry or biochemistry, as well as the area of science education. However, all research activity should be documented by measurable outcomes that include:
   - Papers published in peer review journals
   - Contributed and invited talks at national and international meetings
   - Efforts in securing external grant funding (either independently or collaboratively)
   - Mentoring undergraduate students who write and defend senior honors theses, or distinguish themselves through their research activity in other ways
   - Publishing educational materials such as textbooks or lab manuals that are distributed outside of the university
   - Other areas of scholarship, provided they are discussed and approved by the Vice Chair for Undergraduate Studies and the Department Chair

   Curriculum development and improvements in classroom/laboratory teaching are counted as teaching accomplishments rather than research, unless those innovations lead to one or more of the outcomes on the above list.

   The expectations for quality and impact of research performed by associated faculty members are comparable to the expectations for tenure track faculty members. However, the expected quantity of research outcomes is less than that of a tenure track faculty member.

   Each year associated faculty members will complete an annual report to document their contributions in teaching, research and service, using the same template as tenure-track faculty. These reports will be reviewed annually by the Department's Associated Faculty Mentoring Committee, a subset of whom will meet individually with each associated faculty member to discuss progress toward promotion.

   Since the Associated Faculty appointment comes with expectations for scholarly

activity, the job must be structured in a way that provides the time and resources necessary to carry out research. Therefore, an associated faculty appointment will be structured as follows:

- Associated faculty members can mentor undergraduate students, but not graduate students.

- Teaching assignments will be structured in a way that preserves the time needed for research/scholarship. In a typical appointment, 50% of the faculty component (or 20% of the overall appointment) would be dedicated to research. The allocation of this dedicated research time will be determined by the Vice Chair for Undergraduate Studies, in consultation with the Department Chair. For example, the equivalent of 10 full weeks during the summer dedicated to research is approximately 20% of a yearly appointment.

C. Courtesy Faculty Appointments and Visiting Faculty

Faculty with courtesy appointments and Visiting Faculty have 0% appointment in the department. Teaching assignments, if any, will be determined by the Vice Chair for Undergraduate Studies, in consultation with the Department Chair.

D. Lecturers and Senior Lecturers

The standard teaching load for full-time lecturers is two large section courses (courses with >100 students) in fall semester and two similar sections in spring semester.

E. Regional Campus Faculty

Regional Campus Faculty have the right to vote for the Chair of the Department of Chemistry and Biochemistry and the Chair will appoint a mentoring committee for Assistant Professors or a faculty mentor for Associate Professors. The Regional Campuses of The Ohio State University have a different mission than the Columbus Campus. Thus, there is a different weighting of the teaching, service, and research functions.

Chemistry and Biochemistry faculty (tenure track) at the regional campuses:

- will use the same instruments to measure student satisfaction of teaching as members of the Columbus campus

- may establish research groups involving undergraduates or staff on the Columbus campus and in that capacity use Department instrumentation on the Columbus campus

- may periodically teach on the Columbus campus with the approval of the Vice Chair for Undergraduate Students and the regional campus Dean.

Regional campus faculty members are encouraged to spend their FPLs and summers involved in research on the Columbus campus.

The Vice Chair for Undergraduate Studies will coordinate consistency between courses taught at the regional and Columbus campuses, including efforts in innovative teaching.

F. Parental Modification of Duties

The Department of Chemistry and Biochemistry strives to be a family-friendly unit in its efforts to recruit and retain high quality faculty members. To this end, the Department is committed to adhering to the College of Arts and Sciences' guidelines on parental modification of duties to provide its faculty members flexibility in meeting work responsibilities within the first year of childbirth/adoption. See the OHR Parental Care Guidebook and the college pattern of administration for details.

The faculty member requesting the modification of duties for childbirth/adoption and the Department Chair should be creative and flexible in developing a solution that is fair to both the individual and the unit while addressing the needs of the University. Expectations must be spelled out in an MOU that is approved by the Dean.

X. DEPARTMENT FACULTY TEACHING LOAD

The university's policy with respect to faculty teaching load is set forth in the Office of Academic Affairs Policies and Procedures Handbook, Volume 1, Chapter 2, Section 1.4.3. The information provided below supplements these policies.

A full-time faculty member's primary professional commitment is to Ohio State University and the guidelines below are based on that commitment. Faculty who have professional commitments outside of Ohio State during on-duty periods (including teaching at another institution; conducting research for an entity outside of Ohio State; external consulting) must disclose and discuss these with the Chair in order to ensure that no conflict of commitment exists. Information on faculty conflicts of commitment is presented in the OAA Faculty Conflict of Commitment policy.

The following statements do not constitute a contractual obligation and are subject to modification as conditions warrant.

A. Range of Teaching Responsibilities in the Department

The faculty of the Department of Chemistry and Biochemistry teach students in two principal modes: (1) undergraduate and graduate students in lecture and laboratory courses, and (2) graduate and undergraduate students and postdoctoral researchers in extensive individual instruction in research. This inseparable program of classroom instruction and individual research instruction in research universities is the primary way in which fundamental new knowledge is generated in this country. All tenure-track faculty members are expected to participate in both modes of instruction (teaching), at both the graduate and undergraduate level. Faculty members who are not research active as determined by department norms and the Department Chair will be expected to engage in additional classroom teaching or service.

Moreover, each faculty member is expected to:

- teach a variety of courses: large-enrollment freshman and sophomore courses, smaller- enrollment advanced undergraduate and graduate courses, and research courses

- establish and maintain vigorous research programs involving graduate and undergraduate students and postdoctoral researchers

- participate in undergraduate and graduate curriculum development.

1. **Base Teaching Load**
   The base teaching load for a 100% FTE tenure track faculty member in the Department, consists of two courses that are lecture or laboratory courses and additional individual research training of graduate students in the 8999 course. Additionally, individual research instruction of undergraduate students may be undertaken under the 4998, 4998H, 4999 and/or 4999H courses.

2. **Mitigating Factors**
   Adjustments to the base load may be approved by the Chair in consultation with the Faculty Advisory Committee, who shall annually review faculty annual reports to determine how each faculty member can best contribute to the Department's mission. The Chair and FAC will work together to strive for transparency in assigning adjustments in teaching loads. Nevertheless, all faculty members will be subject to a minimum teaching requirement. Example mitigating factors that may justify reduced teaching assignments: new (untenured) faculty, administrative posts, release time. For example, when a faculty member leads a major center grant, release from 0.5- 1 course per year is expected. The extent of the reduced load would be determined based on the size of the additional workload of the faculty member.

B. Teaching Release Time Guidelines

The baseline cost of full release from teaching for a semester is 20% of the 9-month salary and benefits. This may be adjusted downward for partial relief of teaching. No more than one semester may be released in this manner, per academic year. If the course release is purchased by funds outside ASC, then 60% of the recovered salary goes to the Department to cover supplementary teaching and other activities at the discretion of the Chair and 40% is returned to the faculty member as discretionary funds.

C. Special Assignments (SA)

Information on special assignments (SAs) is presented in the Office of Academic Affairs Special Assignment Policy. The information provided below supplements these policies.

Untenured faculty will normally be provided SAs during their probationary period as designated in their offer letters. Faculty members interested in a special assignment must submit a proposal to the Chair in January for the following academic year. The Chair will

evaluate the expected faculty workload for the following year and weigh that against the anticipated gain for the faculty member in taking the SA. Based on this information the chair will make the decision on whether to offer the SA. Reasonable efforts will be made to provide SA opportunities to all productive faculty on a rotating basis, including their potential benefit to the Department, and the need to assure that sufficient faculty are always present to carry out Department work.

XI. COURSE OFFERINGS AND TEACHING SCHEDULES

The Department Chair will annually develop a schedule of course offerings and teaching schedules in consultation with the faculty, both collectively and individually. While every effort will be made to accommodate the individual preferences of faculty, the Department's first obligation is to offer the courses needed by students at times most likely to meet student needs. To ensure classroom availability, reasonable efforts must be made to distribute course offerings across the day and week. To meet student needs reasonable efforts must be made to assure that course offerings match student demand and that timing conflicts with other courses students are known to take in tandem are avoided. A scheduled course that does not attract the minimum number of students required by Faculty Rule 3335-8-17 will normally be cancelled and the faculty member scheduled to teach that course will be assigned to another course. Finally, to the extent possible, courses required in any curriculum or courses with routinely high demand will be taught by at least two faculty members across offerings to ensure that instructional expertise is always available for such courses.

A. Cross-Listing Graduate Courses

The Graduate Studies Committee may consider requests by departments other than Chemistry and Biochemistry for cross-listing of graduate courses under a Departmental number.

Typical reasons for cross-listing are:

- to make students aware of offerings in other departments that may be of value to Chemistry and Biochemistry students in their graduate studies
- to make courses outside the Department available for graduate curricular requirements
- to consolidate enrollments in two or more departments where enrollments from a single department would be insufficient to justify teaching the course
- to avoid duplication of graduate offerings in two or more departments.

XII. ALLOCATION OF DEPARTMENT RESOURCES

The Chair is responsible for the fiscal and academic health of the Department and for assuring that all resources—fiscal, human, and physical—are allocated in a manner that will optimize achievement of Department goals. The Chair will discuss the Department budget at least

annually with the faculty and attempt to achieve consensus regarding the use of funds across general categories. However, final decisions on budgetary matters rest with the Chair.

Research space shall be allocated on the basis of research productivity including external funding and will be reallocated periodically as these faculty-specific variables change.

The allocation of office space will include considerations such as achieving proximity of faculty in subdisciplines, proximity to research space and grouping staff functions to maximize efficiency.

The allocation of salary funds is discussed in the Department's Appointments, Promotion and Tenure document.

A. Assignment of Research Space to Individual Faculty Members

It is the policy of the Department of Chemistry and Biochemistry to use space within the Department so as to maximize the potential of every faculty member and student in the Department. The Chair has final authority to assign all laboratory space to members of the faculty. These assignments will be made in consultation with the Vice Chair for Research and Administration who is the chair of the space committee, the Faculty Advisory Committee (FAC) and interested faculty.

In the course of faculty recruiting, the Chair will consult with the Faculty Advisory Committee (FAC) and relevant teaching divisions as to the most appropriate space to offer candidates.

It is expected that space allotments will vary over time as individual groups expand and contract.

It is understood that group sizes will vary over time due to changes in external funding, personal choice, and success in graduate student recruiting. Faculty members who feel they need additional space can submit a request in writing to the Chair at any time. At the discretion of the Chair, the Space Committee may be charged with reviewing the request and consulting with all other faculty members influenced by the request. The Space Committee can seek external expertise to help its deliberations. The Chair may accept, reject, or modify the recommendation of the committee.

The Chair may reassign laboratory space to faculty who do not have active research groups. An active research group is defined as a group that is publishing original research in a peer reviewed journal annually and has or is actively seeking external support annually.

1. Guidelines for Assigning Space

The following guidelines will be used in space deliberations:

- The Chair will strive to allocate a minimum of 600 sq. ft. of space per active research group (including office space).

- All students will have the space necessary to conduct their research and graduate in a timely fashion.

- Groups of faculty with related interests should be located in the same general area.

- Research groups should be contiguous.

- Space assignments should minimize renovation costs to the Department and minimize disruption to individual groups.

- Newly built and renovated space should be used to strengthen faculty resources, including specifically the recruitment of new faculty.

- Faculty actively engaged in experimental research will be assigned a minimum of 400 sq. ft. of laboratory space. The space committee will determine which faculty members are actively engaged in research.

- The Chair will consider the needs for space for special equipment on a case-by-case basis.

B. Limits on Assignment of GTAs to Individual Faculty

[Restated in Appendix II.C]

Faculty must provide at least one-sixth (1/6) of the annual support of each TA. Thus, one "year" of departmental TA support (a "TA slot") amounts to 5/6 of the student's annual stipend (plus benefits, tuition and fees).

GTA allocation to research active faculty follows a "TA = RA + 2" formula. Thus, a faculty member supporting two (2) graduate students as GRAs may access up to four (2 + 2) TA slots, up to a maximum of 6 per faculty. This formula will be enforced as an average over a three year period. Untenured assistant professors are not subject to this limit. Tenured faculty may recruit additional graduate students into their groups to the extent that they have other means of supporting them (e.g., via GRAs). In consideration of extraordinary teaching or service, this formula may be modified by the Chair, in consultation with the VCG and VCU.

C. Allocation of Travel Funds

The Department adheres to University rules and regulations regarding use of travel funds.

The Department will support faculty travel by automobile for the purpose of graduate student recruitment. The Department will cover one night's lodging and standard per diem expenses for graduate student recruitment.

Travel requiring travel by air will need prior approval for reimbursement.

These guidelines will be reviewed annually and amended if necessary by financial constraints.

XIII. LEAVES AND ABSENCES

The university's policies and procedures with respect to leaves and absences are set forth in the Office of Academic Affairs Policies and Procedures Handbook and Office of Human Resources Policies and Forms website in accordance with the Faculty Rules approved by the Board of Trustees. The information provided below supplements these policies.

A. Discretionary Absence

During on-duty periods faculty members are expected to be accountable for interaction with students, service assignments, and other responsibilities even if they have no formal course assignment that period. In accordance with Faculty Rule 3335-5-08, on-duty faculty members who need to be away from campus to conduct research or other university business may do so with permission of their chair. Faculty unpaid leaves and faculty paid leaves due to university business that exceed ten consecutive work days require approval by the Department, College, and the Office of Academic Affairs and must requested at Workday.

In the event that professional demands require a faculty member to miss a regularly scheduled class, it is the responsibility of the faculty member to ensure that his/her assigned class is covered by a qualified substitute. Prior notification of the Vice Chair for Undergraduate Studies is required when a faculty member will be absent from a regularly scheduled class meeting for undergraduate courses. Prior notification of the Vice Chair for Graduate Studies is required when a faculty member will be absent from a regularly scheduled class meeting for graduate courses. Approval of the substitute by the Vice Chair is necessary when the substitute is not a faculty member.

B. Absence for Medical Reasons

When absences for medical reasons are anticipated, faculty members are expected to complete an Application for Leave form as early as possible. When such absences are unexpected, the faculty member, or someone speaking for the faculty member, should let the Chair know promptly so that instructional and other commitments can be managed. Faculty members are always expected to use sick leave for any absence covered by sick leave (personal illness, illness of family members, medical appointments). Sick leave is a benefit to be used—not banked. For additional details see OHR Policy 6.27.

C. Unpaid Leaves of Absence

The university's policies with respect to unpaid leaves of absence and entrepreneurial leaves of absence are set forth in OHR Policy 6.45.

D. Faculty Professional Leave (FPL)

Information on Faculty Professional Leave is presented in the Office of Academic Affairs Policy on Faculty Professional Leave. The information provided below supplements this policy.

The FPL proposals will be reviewed by the Chair and the FAC. The Chair's recommendation to the Dean regarding an FPL proposal will be based on the quality of the proposal and its potential benefit to the Department and to the faculty member as well as the ability of the Department to accommodate the leave at the time requested.

XIV. SUPPLEMENTAL COMPENSATION AND PAID EXTERNAL CONSULTING ACTIVITY

Information on faculty supplemental compensation is presented in the OAA Policy on Faculty Compensation. Information on paid external consulting is presented in the university's Policy on Faculty Paid External Consulting. The information provided below supplements these policies. All arrangements for extra compensation require administrative approval. Units must secure approvals before the extra work is carried out in order for the faculty member to be compensated for the work.

The Department expects faculty members to carry out the duties associated with their primary appointment with the university at a high level of competence before seeking other income-enhancing opportunities. All activities providing supplemental compensation must be approved by the Department Chair regardless of the source of compensation. External consulting agreements must also be approved. Approval will be contingent on the extent to which a faculty member is carrying out regular duties at an acceptable level, the extent to which the extra income activity appears likely to interfere with regular duties, and the academic value of the proposed consulting activity to the Department. In addition, it is university policy that faculty may not spend more than one business day per week on supplemental compensated activities and external consulting combined.

Faculty who fail to adhere to the university's policies on these matters, including seeking approval for external consulting, will be subject to disciplinary action.

Faculty with an administrative position (for example, chair, vice chair, associate/assistant dean, center director) remain subject to the Policy on Faculty Paid External Consulting and with appropriate approval, are permitted to engage in paid external work activities. However, faculty members with administrative positions are not permitted to accept compensation/honoraria for services that relate to or are the result of their administrative duties and responsibilities.

Should a Department faculty member wish to use a textbook or other material that is authored by the faculty member and the sale of which results in a royalty being paid to him or her, such textbook or material may be required for a course by the faculty member only if (1) the Department Chair and Dean or designee have approved the use of the textbook or material for the course taught by the faculty member, or (2) an appropriate committee of the Department or

College reviews and approves the use of the textbook or material for use in the course taught by the faculty member.

XV. FINANCIAL CONFLICTS OF INTEREST

Information on faculty financial conflicts of interest is presented in the university's Policy on Faculty Financial Conflict of Interest. A conflict of interest exists if financial interests or other opportunities for tangible personal benefit may exert a substantial and improper influence upon a faculty member, staff member, or administrator's professional judgment in exercising any university duty or responsibility, including designing, conducting or reporting research.

Faculty and staff members with external funding or otherwise required by university policy are required to file conflict of interest screening forms annually and more often if prospective new activities pose the possibility of financial conflicts of interest. Individuals who fail to file such forms or to cooperate with university officials in the avoidance or management of potential conflicts will be subject to disciplinary action.

In addition to financial conflicts of interest, faculty must disclose any conflicts of commitment that arise in relation to consulting or other work done for external entities. Further information about conflicts of commitment is included in section XV above.

XVI. GRIEVANCE PROCEDURES

Members of the Department with grievances should discuss them with the Chair who will review the matter as appropriate and either seek resolution or explain why resolution is not possible. Content below describes procedures for the review of specific types of complaints and grievances.

A. Salary Grievances

A faculty or staff member who believes that his or her salary is inappropriately low should discuss the matter with the Chair. The faculty or staff member should provide documentation to support the complaint.

Faculty members who are not satisfied with the outcome of the discussion with the Chair and wish to pursue the matter may be eligible to file a more formal salary appeal (the Office of Academic Affairs Policies and Procedures Handbook.

Staff members who are not satisfied with the outcome of the discussion with the Chair and wish to pursue the matter should contact Employee and Labor Relations in the Office of Human Resources.

B. Faculty Misconduct

Complaints alleging faculty misconduct or incompetence should follow the procedures set forth in Faculty Rule 3335-5-04.

C. Faculty Promotion and Tenure Appeals

Promotion and tenure appeals procedures are set forth in Faculty Rule 3335-5-05.

D. Sexual Misconduct

The university's policy and procedures related to sexual misconduct are set forth in OHR Policy 1.15.

E. Student Complaints

Normally student complaints about courses, grades, and related matters are brought to the attention of individual faculty members. In receiving such complaints, faculty should treat students with respect regardless of the apparent merit of the complaint and provide a considered response. When students bring complaints about courses and instructors to the Department Chair, the Chair will first ascertain whether or not the students require confidentiality. If confidentiality is not required, the Chair will investigate the matter as fully and fairly as possible and provide a response to both the students and any affected faculty.

If confidentiality is required, the Chair will explain that it is not possible to fully investigate a complaint in such circumstances and will advise the student(s) on options to pursue without prejudice as to whether the complaint is valid or not.

Faculty complaints regarding students must always be handled strictly in accordance with university rules and policies. Faculty should seek the advice and assistance of the Chair and others with appropriate knowledge of policies and procedures when problematic situations arise. In particular, evidence of academic misconduct must be brought to the attention of the Committee on Academic Misconduct.

The Code of Student Conduct is Faculty Rule 3335-23.

XVII. LIST OF APPENDICES (the appendices appear on the following pages)

Rules and Guidelines of the Department of Chemistry and Biochemistry

Rules and Guidelines of the Department of Chemistry and Biochemistry

Revised May 11, 2021

I. APPENDIX I: Rules of the Graduate Program

A. Preceptor Selection

All faculty members will be invited to make a short presentation to first year graduate students during the first half of the Autumn term. First year students must attend a minimum of five full sessions, two within their major area of study and three others, in order to obtain a satisfactory grade in CHEM 6780. Waivers will only be granted to students for illness or other extraordinary circumstances by the Vice Chair for Graduate Studies (VCG). The faculty presentations will be scheduled by the graduate office. First year graduate students must also conduct a further exploration portion of the selection process. This is self-directed by each individual student and is ongoing throughout Autumn Semester. Students can participate in a variety of activities including, but not limited to, a short rotation in each advisor's group, attendance at group meetings, participating in lab tours, conducting interviews with the advisor and/or the advisor's group members, and reviewing publications and other pertinent data (funding, # of PhD graduates, # of GTAs vs. GRAs per semester, et al). After conducting these explorations students must obtain signatures verifying those activities from a minimum of four faculty members. These faculty members are selected by the graduate student and approved by the VCG. The VCG has the discretion to add additional faculty to the list or to remove faculty who cannot serve as an advisor, such as one who is not a faculty member (as defined in the POA document). A faculty member may choose to accept attendance at their presentation as satisfying the interview requirement.

First year graduate students who have attended the faculty presentations and interviews may submit their advisor preferences to the office of the VCG in mid-November, by the date announced by the Graduate Studies Office. The graduate office will communicate the student preferences to the Division Secretaries who will call a meeting of the divisions to discuss the student and faculty preferences. The result of the meeting will be communicated to the GSC who will make final preceptor assignments based on this information. The announcement of final preceptor assignments to students will be made by the Graduate Studies Office. These announcements should take place before winter break so that students may begin work in the research lab during this time.

Only members of the Chemistry and Biochemistry faculty (as defined in the POA document) may be assigned as an advisor to students in departmental graduate programs.

The GSC will appoint a new advisor of record for all students whose preceptors leave the active faculty as a result of retirement or resignation. Students in this category who remain in the Department when their preceptor retires or resigns will be required to finish their existing projects within 6-12 months unless they petition and receive an extension. If this work is insufficient for a complete thesis, they will begin a new project under the supervision of their newly appointed preceptor within six months of the appointment of the new preceptor. This policy will be waived for students who leave Columbus to finish their original projects with their preceptors at another institution.

Students may resign from a research group at any time. Faculty may resign as the advisor of any student at any time. In these cases, the GSC may appoint a new preceptor; choose to

allow the student to use data previously generated by the student as the basis of a thesis; or if the student's progress is unsatisfactory, dismiss the student from the program. The student in this situation can make a copy of all of their own data and their notebooks but must return the original documents to the previous advisor in accordance with the Office of Research policy on Research Data. The previous advisor retains the right to publish any of this information. The student will not publish this data anywhere, except the thesis, without concurrence of the former preceptor.

B. Teaching Assistantships

Graduate students admitted to the Chemistry and Biochemistry Graduate Programs by the departmental Graduate Admissions Committee are offered a position as a Graduate Teaching Associate by the Vice Chair for Graduate Studies, with the assurance that all students who maintain good standing will receive support in the form of a Graduate Associate stipend for five years.

C. Graduate Admissions

Graduate program applicants are reviewed by the Graduate Admissions Committee (GAC). The Chair of the GAC will report to the VCG. The program does not require either Chemistry or Biochemistry Subject GRE. The department Chair will define the maximum number of standard international offers that can be made. Non-native speakers of English must, in general, have a minimum overall TOEFL score of 79 on the Internet-based test and 550 on the paper-based test in order to be eligible to apply. Applicants who achieve a total score of 100 and a 22 or higher on the speaking section of the Internet-Based TOEFL will be most competitive. The minimum allowable score on the IELTS is a 7.0. Direct admission of non- native English speakers is possible under special circumstances. A faculty member may petition the GAC, after obtaining permission from the department chair, to have non-native speakers of English accepted into the Department, and into their groups based on special needs in his/her research group. The admission of any additional students through this method will only be permitted if it does not result in an increase in the number of international offers above the maximum set by the chair. Once a direct admission to a research group has been granted, the particular student will need to be evaluated by the GAC. Only students whose academic performance and other criteria for admission fall within average or above those of typical students of the program will be granted admission. Faculty members who directly admit a student must guarantee support of the student as a Graduate Research Associate for at least one year. If the student chooses to switch to another group during this time or before he or she is English certified, the original advisor will still be financially responsible for the student, unless the new advisors agrees to support the student as a GRA. However, if a cost to the department is incurred in the form of a GTA or GAA appointment, the original advisor should make appropriate arrangements with the department chair for payment of the stipend and the tuition.

All non-native graduate students who are not certified in English after two semesters in the program will not be supported by the Department as GTAs or GAAs.

D. Oral Examinations

All members of an oral examination committee must be present for an examination to be official. Non- members of the committee may attend an examination only with the approval of both the candidate and the Chair of the committee. If this permission to attend the examination is granted, non-members of the committee may not speak or ask questions of the candidate without permission from the committee Chair and may not be present when the committee is deliberating.

APPENDIX II: Procedures and Priorities for Appointment of Teaching Associates

The Department of Chemistry and Biochemistry employs approximately 250 to 300 graduate and undergraduate students and a few non-students to assist in the instructional responsibilities of the Department. It is the purpose of this memorandum to describe the criteria used by the Vice Chair for Graduate Studies (VCG) to decide who will be employed in these positions.

Faculty must provide at least one-sixth (1/6) of the annual support of each GTA. Thus, one "year" of departmental TA support (a "TA slot") amounts to 5/6 of the student's annual stipend (plus benefits, tuition and fees).

A. Procedures

Each semester each member of the Chemistry and Biochemistry graduate faculty is asked to verify the Graduate Office records of those graduate students working in each group and asked to indicate whether they will be supported by fellowship, teaching associateship or research associateship during each term of the upcoming academic year. On the basis of this inquiry, a draft-teaching list is prepared and letters of appointment are drawn up for students who are to be supported by the Department.

Faculty must request TA support for graduate students by the deadlines set by the Graduate Studies Office of the semester for which the GTA service is to begin. In cases where an IGP student has an advisor in CBC, the request for a GTA position must be accompanied by evidence of English language certification. The student must also pass General Chemistry or Organic Chemistry proficiency exams. Typically GTA positions for IGP students whose advisor is not in CBC are not available.

B. Departmental GRA (dGRA) Awards

Coincident with the Graduate School rules on Semester, graduate students in the Department of Chemistry and Biochemistry are eligible for awards of a summer term *stipend* via a departmental Graduate Research Associate (dGRA) for every two semesters of satisfactory service as a Graduate Teaching Associate. These awards are granted to ensure that every graduate student in the department has the regular opportunity to devote full time to research leading to their graduate degree. dGRA stipends are the same as GTA stipends. The *stipend, tuition, and fees* are split (50:50) between the advisor and the department. Awards are conditional on good graduate standing, full-time enrollment (principally in Thesis Research), and resident attendance throughout the research semester. The dGRA support period is

intended for educational activity only, and permission must be sought and granted by the VCG, for the student to be absent from the Department during that time.

C. Limits on Assignment of GTAs to Individual Faculty

Faculty must provide at least one-sixth (1/6) of the annual support of each TA. Thus, one "year" of departmental TA support (a "TA slot") amounts to 5/6 of the student's annual stipend (plus benefits, tuition and fees).

GTA allocation to research active faculty follows a "TA = RA + 2" formula. Thus, a faculty member supporting two (2) graduate students as GRAs may access up to four (2 + 2) TA slots, up to a maximum of 6 TA slots per faculty. Untenured assistant professors are not subject to this limit. Tenured faculty may recruit additional graduate students into their groups to the extent that they have other means of supporting them (e.g., via GRAs). This formula may be modified by the Chair, in consultation with the VCG and VCU, in consideration of extraordinary teaching or service, as well as activities that raise the profile of the department nationally and internationally, including elected positions in professional societies, editorship of high-impact journals, and/or high-impact publications.

D. Priorities for Additional TA allocation

After allocating the base distribution of TAs to each faculty member, additional positions may be allocated based on the following priority schedule:

1. Students in the Department of Chemistry and Biochemistry Graduate Program
2. Graduate Students Enrolled in Other Graduate Programs with Chemistry and Biochemistry Faculty Preceptors
3. Undergraduate Student Instructional Aides (SIAs)

The duties of the SIAs are limited to ten hours per week, so two undergraduate Aides replace approximately one Graduate Teaching Associate.

The number of SIA positions funded each year may vary each year in order to balance the needs and obligations of the graduate teaching contributions. It would be unwise, however, to reduce the number to zero in any one year. A desirable number for program viability might be in the vicinity of 30–50 SIA positions in any one semester.

E. Non-Students and Other Casuals

Qualified and experienced applicants from the general community may be employed from time-to- time as casual teaching personnel. Their appointments are made as Instructional Assistants, with duties and stipend equivalent to a Graduate Teaching Associate. Instructional Assistant appointments are usually made on a semester-by-semester basis and do not carry tuition authorization or departmental GRA benefits.

APPENDIX III: Rules for Searching for a Department Chair

The process of searching for a department Chair will follow the guidelines listed in the College of Arts and Sciences guidelines POA document. If the Executive Dean determines that a new chair is to be selected, the Executive Dean will appoint a search committee should follow the general procedures outlined below.

A. Internal Search

1. Eligibility is limited to professors of the Department.
2. An initial (anonymous) ballot is taken to identify candidates with broad support among the faculty, including regional campuses.
3. The search committee identifies which candidates have strong support based on numerical tally of the ballots; this list of potential candidates is made available to all faculty, but not the number of preliminary votes.
4. The Search committee meets with the candidates to determine their willingness to be considered for the position.
5. The committee develops methods to allow the nominees to address issues of concern to the faculty and staff, such as town halls with faculty, staff, and graduate students.
6. A ballot is taken to determine which candidate(s) to recommend to the Dean; in the absence of clear finalist(s), an additional round of voting is carried out with the two (or three) top candidates from the previous round.

B. Notes:

The committee designed and implemented a balanced process to enable the candidates to share their views of the role of the Chair and their vision for the future with faculty, staff, and graduate students. In addition, the Chair of the search committee should invite anonymous comments from the faculty and staff to be conveyed to the prospective candidates. This is expected to be especially valuable in getting responses from the untenured junior faculty and others who are generally less vocal at public meetings. The Chair of the search committee should compile these comments and pass them on to the potential candidates for their consideration and for use as a framework for subsequent discussions with the faculty and staff.

APPENDIX IV: Rules regarding the Newman, Dow, Fox, Kimberly, Leet and Morris Professorships and new professorships to be named

The following rules for the naming of Chaired professorships will apply as the Dow, Fox, Kimberly, Leet, Morris and Newman professorships are vacated by their current occupants. These Chaired professorships are referred to below as departmental Chairs.

The funded term of each Chair is five years and can be renewed; however, consecutive terms cannot be served for the same chaired position. The department Chair will announce vacancies in the Dow, Fox, Kimberly, Leet, Morris and Newman Chairs as they develop and solicit votes from all eligible members of the faculty. All professors and associate professors are eligible for election except those holding Chaired professorships which currently provide financial support. Faculty may also vote for an external candidate if they wish to use the named professorship to

recruit a senior colleague to the University.

Confidential votes of the Chemistry and Biochemistry faculty will be counted and examined by a committee consisting of the current Chair's Faculty Advisory Committee (elected by the faculty). If one or more of the members of the committee are amongst the possible candidates based on the vote by the faculty, then the Chair will replace them with a member from the corresponding division. This committee will decide the next recipient of the Chair in question, based on the vote of the entire faculty, internal discussion, and comments from the department Chair.

Members of the faculty may not hold two funded departmental professorships simultaneously. Once the five-year funded term of a professorship elapses, the holder is eligible for other departmental professorships.

APPENDIX V: Safety Rules

A. Introduction

The Chair, faculty and staff of the Department of Chemistry and Biochemistry recognize that we must comply with a variety of State and Federal mandates including those issued by the Environmental Protection Agency (EPA), the Occupational Health and Safety Administration (OSHA) and the State of Ohio (Administrative, Building, and Fire Codes). Each employee of the Department, therefore, has an obligation to understand and comply with applicable environmental, health and safety regulations as well as those policies established by the University, the Office of Environmental Health and Safety (EHS), the College of Arts and Sciences, and the Department of Chemistry and Biochemistry.

All faculty, emeritus faculty, staff, postdoctoral researchers, graduate students, visitors and guests must:

1. Promote a culture of safety.
2. Read the Building Emergency Action Plan (BEAP) specific to their work place (this may involve more than one building/plan).
3. Observe health and safety related signs, warning signals, and directions.
4. Complete appropriate Department and EHS health and safety training.
5. Follow all standard operating procedures (SOPs).
6. Warn coworkers about defective equipment or unsafe conditions and notify appropriate personnel.
7. Use personal protective equipment (PPE) and safety engineering equipment appropriate to their work.
8. Dispose of hazardous materials in an environmentally sound manner and in compliance with all applicable regulations.
9. Not remove hazardous materials from the department without permission from their supervisor. Stop work that poses imminent danger to health and safety and notify appropriate personnel.
10. Participate in laboratory inspection and monitoring activities.
11. Report unsafe conditions to a supervisor or the Department Safety Committee.

All supervisors, Principal Investigators, and Managers are responsible for the safe operation of their laboratories or areas. They are required to:

1. Promote a culture of safety.
2. Designate a Laboratory Safety Officer for their research group.
3. Train employees to identify and mitigate potential hazards (specifically those hazards that are unique to their labs).
4. Review the OSHA Laboratory Standard and develop and implement a Chemical Hygiene Plan (CHP) through the EHS Online system.
5. Maintain and update a chemical inventory as required by the CHP and report DHS Appendix A chemicals to EHS every 30 days for Chemicals of Interest.
6. Ensure that all chemical containers are properly labeled. To dispose of any unlabeled materials, refer to "Disposal Policy for Materials of Uncertain Composition" later in this document.
7. Develop and implement standard operating procedures and safe work practices as required by their CHP's.
8. Analyze work procedures for hazard identification and then establish appropriate engineering controls, administrative controls, and PPE to eliminate or mitigate workplace hazards.
9. Ensure periodic self-assessment inspections to review and correct deficiencies.
10. Encourage prompt employee reporting of health and safety problems without fear of reprisal.
11. Stop any work that poses imminent danger.

The Chair of the Department Safety Committee should:

1. Promote a culture of safety.
2. Within the resources available, ensure that all environmental, health and safety obligations are fulfilled.
3. Communicate the importance of establishing a working environment that promotes the health and safety of all students and employees.

B. Inspections

The Chair, the Director of Operations, the Chemical Hygiene Officer (Safety Coordinator) and all members of the Safety Committee will have authority to:

1. Conduct unannounced and/or announced periodic inspections anywhere within the Department to monitor compliance.
2. Issue verbal and written warnings based on above inspections. The written warnings will be addressed to the individual in violation of the policies, with copies to the individual's supervisor and the Safety Committee.
3. Stop or curtail any work or process that is immediately or imminently dangerous to life and health until the issue can be resolved.

Lab Supervisors or their LSO's are required to be available for inspections carried out by EHS. Lab Supervisors must make corrections to the EHS inspection violations within 15 days of notification. Violations of any fire safety inspection must also be corrected within 15 days of notification.

C. The Enforcement Mechanism

Violations of accepted policies may be discovered by casual observation, inspection by a member of the Department Safety Committee or Chemical Hygiene Officer (Safety Coordinator), inspection by State Fire Marshall or University Environmental Health and Safety Division, OSHA inspection or reported accident, or formal complaint. The attached table provides the type of measures that can be applied for a given violation. Under normal circumstances, a first incident will result in actions taken at the first level (top of table).

Increasing incentive levels may be reached by continuing noncompliance for a single violation. If the violation is egregious in nature, it is also possible to reach higher incentive levels for a single violation. The incentives listed for each level are options that may be applied individually or in combination to achieve compliance with safety requirements.

The Department of Chemistry and Biochemistry will not assess fines as an incentive for compliance. Furthermore, if penalties or charges for remedial services are applied by agencies outside of the Department or University, individual liability for direct costs and fines should not exceed $1,000 for students and/or staff or $5,000 for faculty members of the Department at the highest level of severity. Progressively lower limits should be applied for incidents of lesser severity. These limits of liability should be viewed as guidelines and do not imply a level of financial responsibility.

D. Table of Incentives for Compliance with Fire, Safety and Chemical Hygiene Plan Requirements

Compliance Incentive Level	Students	Staff	Faculty
LEVEL 1 Laboratory Supervisor or CHO	Verbal Reprimand by Supervisor; Document Incident	Verbal Reprimand by Supervisor; Document Incident	Document Incident
LEVEL 2 Safety Committee	Written Reprimand Review Pertinent MSDS's and SOP's Safety Refresher; Reduce Laboratory Privileges	Written Reprimand Review Pertinent MSDS's and SOP's Counseling Session for Employee and Supervisor Safety Refresher	Written Reprimand Review Pertinent MSDS's and SOP's Appear before Safety Committee
LEVEL 3 Chair	Remove Lab Privileges until Safety Course Successfully Repeated	Initiate Disciplinary Action through Office of Human Resources	Initiate Disciplinary Action; Remove Dept. subsidies for Support Services
LEVEL 4 Chair's Faculty Advisory Committee	Removal of Departmental Subsidies for Tuition and Fees; Removal of GTA or GRA Status; Revoke Laboratory Privileges until re-instated by Chair; Postpone Graduation	Continue Disciplinary Actions through Office of Human Resources which may result in: Unpaid Leave of Absence, Possible Reassignment, Reduction in Grade	Suspend ability to recruit students; Reduce Lab Space Padlock lab until compliance met Notify OSURF/Granting Agencies of Non-compliance
LEVEL 5 OSU Administration	Request Dismissal hearing though the Graduate School Initiate Judicial Proceedings	Continue Disciplinary Action which may lead to Dismissal Initiate Judicial Proceedings	Initiate Proceedings under Faculty Rule 3335-5-04 which may lead to dismissal Initiate Judicial Proceedings

E. Disposal Policy for Materials of Uncertain Composition ("Chemical Unknowns")

Disposal of hazardous waste is dangerous and expensive even when the contents of the waste are identified. Fortunately, most of the chemical waste produced by the Department is identifiable. However, when the contents of a reagent bottle, reaction flask or gas cylinder are not identified, the process of disposal is much more dangerous, expensive and difficult. Without mitigating information, all unknown materials have to be treated as if they were potentially lethal and hazardous. In all cases, chemical unknowns cannot be disposed of until a general profile of the unknown has been generated. Even then, the cost of disposal is a premium. Additionally, there is a constant threat of personal injury or death to the individuals required to handle these potentially dangerous materials. No price tag can be attached to an avoidable personal injury.

The obvious goal is to reduce the number of "unknowns" to as close to zero as possible by following the Chemical Hygiene Plan and the Hazard Communication Protocol. Labeling all chemical containing glassware; disposing of all old, outdated and questionable chemicals and samples; recycling unneeded chemical reagents; maintaining separate waste containers for different classes of chemical wastes; and keeping a running log of the amounts and quantities of all wastes placed into disposal containers will reduce the number of unknowns and should be considered standard laboratory practice. This policy details the procedures

that should be followed when an "unknown" is discovered and a request for disposal is to be generated.

1. Procedure

It is the responsibility of the generator to identify each "unknown" as completely as possible before submitting an "unknown" to the Safety Office. The generator is defined as the Principal Investigator (PI) or Laboratory Supervisor initiating the disposal request.

The three steps to be followed by the generator are:

1. Complete an UNKNOWN PROFILE FORM, available from the Safety Office.
2. Attach the sheet to the material being submitted for disposal.
3. Call the Safety Office at 614-597-3569 or 614-597-3298.

2. Instructions for Completing the UNKNOWN PROFILE FORM

1. Container Identification Number

The Generator will supply a Container Identification Number which should include the Generator's surname, the year and a number unique to the container submitted. This number should be included on all information attached.

2. Generator Knowledge.

If the Lab Supervisor has adequate knowledge of the material, then "Generator Knowledge" can be a substitute for analytical tests and can greatly simplify the process of dealing with the "unknown". Provide a physical description to include the appearance, odor and quantity of the unknown; the source and/or history of the unknown; and, especially, a listing of potential elements for inorganic waste or compounds for organic waste, even if the percentages or absolute amounts are not known. The presence of specific hazard classes should be indicated with a "Y" when known. If the presence of a material is likely (but not certain), indicate with a "?". When compounds or classes of compounds are known to be absent, a "N" should be placed in the appropriate blank.

3. Analytical Tests

In the absence of generator knowledge, the results of screening tests should be provided by the Laboratory Supervisor to provide an indication of the major components present. Suggested screening tests include a determination of the pH and a general qualitative analysis. If radioactive contamination is suspected, the Office of Radiation Safety must be contacted to schedule an accurate test for Alpha and Beta emissions. Specific additional tests that will assist the Safety Office in the disposing the materials are strongly recommended but are at the discretion of the Laboratory Supervisor. Use of Departmental instrumentation to test unknowns in preparation for disposal will not be charged to the Laboratory Supervisor.

4. Signature

Each sample must be accompanied by a signature of the PI or Laboratory Supervisor or designated individual certifying the above information is the best "Good Faith Effort" to describe and identify the unknown.

Notice

Individuals who dispose of hazardous wastes in an inappropriate manner will face disciplinary action as outlined in the Departmental Safety Enforcement Policy.

APPENDIX VI: Rules for Course Textbook Selection

The selection of textbooks used for courses taught in the Department of Chemistry and Biochemistry shall be made with due regard for the objectives of the course, the needs of students taking the course, and the recommended procedures of the University. For courses which are offered in multiple sections or which are within a sequence, efforts shall be made to accommodate the expectations of everyone teaching the related courses.

In those cases where an OSU faculty or staff member is an author or co-author of a textbook under consideration, the process described in Section XIV of the POA must be followed.

For small enrollment classes, the Vice Chair may endorse a book selection or may appoint a faculty committee to review the selection of text. For large enrollment classes, the potential conflict is managed by appointment of a selection committee with the author/coauthor excluded from its membership.

Textbook selections for large enrollment course sequences will be made by a committee appointed by the Vice Chair for Undergraduate Studies after consultation with the faculty teaching these courses. A committee shall include, if possible, faculty who have taught the courses within recent semesters and faculty from the Regional Campuses. Experienced lecturers and Graduate Teaching Associates are eligible to serve on such a committee. The committee shall be responsible for screening all appropriate textbooks, soliciting recommendations from all faculty and lecturers, and recommending to the Vice Chair no less than two and no more than three books for the course sequence. The Vice Chair will then negotiate with the publishers to obtain the best possible price. The committee will then make a final recommendation that incorporates the potential cost to students for the text under consideration. The Vice Chair shall serve ex officio as a non-voting member of all selection committees.

APPENDIX VII: Departmental Diversity Action Plan

A. Introduction

The representation of women, African Americans, Hispanics and Native Americans among Ph.D. chemists and biochemists is below their representation within the population as a whole. The goal of this plan is to correct these imbalances within the Department of Chemistry and Biochemistry or, in other words, make our department more diverse.[1]

Not only is diversity a moral imperative, but there are several practical reasons for concern about a lack of diversity:[25]

1. Diversity has been shown to increase overall organizational performance.[2,3]

2. Our society invests heavily in education and research within STEM (Science, Technology, Engineering, Mathematics) fields, and this public investment must be allocated equitably.

3. Inequity in training translates into inequity in opportunity, especially consequential because workers with STEM backgrounds tend to earn more than those with non-STEM education.[6]

4. Our society looks to its scientific and engineering community as it makes critical decisions with regard to environmental and occupational safety, climate change, medical policy, and a host of other issues. If women and minorities are not represented in the STEM workforce, they have less of a say in these critical issues.

Reports from two National Science Foundation workshops vigorously defend the position that greater levels of diversity can be achieved while maintaining high standards for excellence.[4,5] With this background, the OSU Chemistry and Biochemistry (CBC) Diversity Committee has developed a plan specific to our department with an emphasis on the aforementioned goal.

B. Current Status of Department

The current status of the department and our progress in the last decade with regard to gender and ethnic distribution of faculty and graduate students is summarized in Table 1, showing incremental progress since 2008. The representation of women and minorities in our faculty and graduate student population is below the population as a whole, indicating that continued efforts toward diversity are needed.

While we have not reached our goal, the department has made persistent efforts toward diversity which has produced positive results. In April of 2014, C&E News reported that in the 2012-2013 academic year, women held 18% of faculty positions at the top 50 research universities.20 In that same year, women held 25% of faculty positions in our department (26.5% including regional faculty), where that number now stands. As noted in the C&E

News article, this put Ohio State at the top of the nation with regard to number of female faculty, and 6th among the top 50 departments in terms of percent women. C&E News posted similar data in 2016, with Ohio State tied for 2nd in the nation with respect to number of female faculty and tied for 5th in terms of percent women.[21]

With respect to underrepresented minority (URM) faculty, until recently OSU Chemistry and Biochemistry had one Hispanic and no African American faculty members. Since 2013, one Hispanic and two Black professors have joined the faculty. Of those three, one has already been promoted to associate professor. In 2017 C&E News reported on the URM faculty representation across the top 50 chemistry departments.28 OSU Chemistry and Biochemistry was tied for 1st for total number of URM faculty, and in essentially a three-way tie for 2nd with respect to percentage.[22]

Since 2008 the fraction of women graduate students in our department has slightly improved from 36.2 to 40.5%. The proportion of African-American domestic students and African international students has fluctuated between 3 and 5%, but the numbers are so small it is difficult to declare any positive or negative trend, and certainly remains an area in which improvement is needed.

In summary, recent data show that, even though we are national leaders, our faculty and student populations lack sufficient diversity. Progress is possible with continued efforts.

C. The Applicant Pool

The significant drop in the percentage of women and underrepresented minority individuals at each step of the progression from Ph.D. to postdoc to faculty applicant – the "leaky pipeline" – has been well-documented.[1] The committee believes that this is one reason for the current inequities in gender and ethnic distribution on the faculty. Thus, one focal point of our efforts is increasing the fraction of women and underrepresented minorities (URMs) in our applicant pool.

Several strategies will be adopted:

1. Increase the number of women/URMs who apply to faculty positions in our department by making our commitment to diversity apparent.

2. Identify promising female/URM scientists early in their careers and encourage them to join our faculty.

3. Promote a welcoming environment and mentor students and faculty from underrepresented groups to boost retention and ensure success.

4. Encourage our own minority and female undergraduates to pursue academic careers. Specific steps are recommended in this document.

Table 1: Gender and Ethnicity of Chemistry and Biochemistry Faculty and Graduate Students (2008-2018)

Category	year	Men		Women		Black		Hispanic		Native American		total number
		number	%	number	%	number	%	number	%	number	%	
Faculty (>50%)*	2008	30	85.7	5	14.3	0	0.0	1	2.9	1	2.9	35
	2012	36	80.0	9	20.0	0	0.0	1	2.2	1	2.2	45
	2014	33	75.0	11	25.0	2	4.5	2	4.5	0	0.0	44
	2018	42	75.0	14	25.0	2	3.6	2	3.6	0	0.0	56
Faculty (<50%)**	2008	4	80.0	1	20.0	0	0.0	0	0.0	0	0.0	5
	2012	7	87.5	1	12.5	0	0.0	0	0.0	0	0.0	8
	2014	3	75.0	1	25.0	0	0.0	1	25.0	0	0.0	4
	2018	5	71.4	2	28.6	0	0.0	0	0.0	0	0.0	7
Faculty (Regional)	2008	4	66.7	2	33.3	0	0.0	2	33.3	0	0.0	6
	2012	2	66.7	1	33.3	0	0.0	1	33.3	0	0.0	3
	2014	3	60.0	2	40.0	0	0.0	1	20.0	0	0.0	5
	2018	3	60.0	2	40.0	0	0.0	1	20.0	0	0.0	5
Faculty (Total)	2008	38	82.6	8	17.4	0	0.0	3	6.5	1	2.2	46
	2012	45	80.4	11	19.6	0	0.0	2	3.6	1	1.8	56
	2014	39	73.6	14	26.4	2	3.8	4	7.5	0	0.0	53
	2018	50	73.5	18	26.5	2	2.9	3	4.4	0	0.0	68
Students (domestic)	2008	87	69.6	38	30.4	4	3.2	3	2.4	1	0.8	125
	2014	112	70.9	46	29.1	8	5.1	3	1.9	1	0.6	158
	2017	76	65.5	40	34.5	6	5.2	4	3.4	0	0.0	116
	2018	76	63.3	44	36.7	4	3.3	4	3.3	0	0.0	120
Students (international)	2008	54	56.3	42	43.8	2	2.1	1	1.0	0	0.0	96
	2014	81	55.9	64	44.1	10	6.9	1	0.7	0	0.0	145
	2017	53	54.1	45	45.9	2	2.0	0	0.0	0	0.0	98
	2018	49	54.4	41	45.6	2	2.2	0	0.0	0	0.0	90
Students (total)	2008	141	63.8	80	36.2	6	2.7	4	1.8	1	0.5	221
	2014	193	63.7	110	36.3	18	5.9	4	1.3	1	0.3	303
	2017	129	60.3	85	39.7	8	3.7	4	1.9	0	0.0	214
	2018	125	59.5	85	40.5	6	2.9	4	1.9	0	0.0	210

*50% or greater appointment in Chemistry and Biochemistry

**Less than 50% appointment in Chemistry and Biochemistry

D. Recognition of Bias

A second factor that can influence gender and ethnic inequities is bias. It is important to recognize that we all have biases in regard to one segment of the population or another. Bias will detrimentally affect our attempts to diversify the department and should be detected and countered when possible. We must do this as individuals and collectively. The committee suggests that all faculty read about this issue in the NSF workshop reports with an eye on how the suggestions contained therein (and our own ideas) can be used positively as we try to diversify our faculty.[4,5]

Specific recommendations are given below to raise awareness of inherent bias.

E. Making Our Commitment to Diversity Apparent

Following the recommendations of our last report, a statement of our commitment to diversity was placed on our web site and has been included in all general chemistry syllabi. With respect to the web site, the statement is the second item under "ABOUT". This is in line with other chemistry departments and with the Arts and Sciences College web site, but one has to dig a bit to find it. However, we should do better. The word "diversity" should be somewhere on the main chemistry web page, so that it can't be missed by every potential woman or URM faculty candidate, prospective graduate student, or potential chemistry or biochemistry major, with a link describing our policies, commitment, resources, and achievements.

F. Faculty Distribution: Addressing Gender, Racial and Ethnic Inequities

Goals: By the end of 2021 increase the number of women and URM faculty in the Chemistry and Biochemistry Department at the Columbus campus by attracting a diverse pool of applicants, with the goal of including women as 50% of new hires in the department and adding at least one more URM faculty member. The more the better.

The importance of increasing diversity of our faculty – new hires and retaining current faculty – cannot be overstated. With regard to gender equity, a 2006 National Academy of Sciences study suggests that "if the number of women in a department grows to about 20%, a social tipping point occurs and women start to perceive their common interests and join together to press for improvements in policies relevant to their needs".[7] In a 2014 plan, the predecessor of this document, we made a commitment that 50% of our new faculty hires be women, and to hire at least one URM faculty. We have failed to reach that goal. Since the time of the report, we have hired 8 male [Nagib, Baker, Kohler, Zhang, Sevov, Sokolov, Wade, Schultz] and 2 female [Thomas, Hummon] faculty. None of the 2014-2018 hires (or final candidates) were URM. While it is possible to lapse into cynicism about putting forward the same goals, we propose to retain them as the yardstick by which we can measure our progress toward diversity and recommend stronger concerted efforts to address this deficiency in the future.

As national leaders with respect to female and URM faculty, we have held steady but not

made progress in recent years. If we achieve a "critical mass" in all faculty distribution diversity measures, improvements in other areas (recruitment of women and minority graduate students, work environment being conducive to success, and overcoming biases of which we may be unaware) will follow.

To achieve the diversity goals stated above, the following steps are either continued (in most cases) or initiated.

1. The goal is for Ohio State to be on the list of schools to which URM and female faculty candidates will apply. When a position is advertised, each committee will be charged with writing to prominent faculty members at top-50 research universities and soliciting applications and nominations of candidates with a focus on women (and URMs—see below). We will also solicit nominations from graduates of our program.

2. The type of faculty candidate we are likely to hire will read our ad in C&E News or be on our radar after taking the steps in the previous item. Searching or posting to the following specialized databases for female and URM job candidates has not been especially productive in the past, but we should not leave any stone unturned. When a faculty position opens, send an announcement of the position and a statement of our commitment to diversity to academic job seekers with chemistry and biochemistry backgrounds. For the purpose of getting the word out to the right community, we can cast a wide net here and let potential applicants decide if they have the required background or whether to encourage one of their colleagues to apply. Relevant databases include Future Faculty Database[8], Big Ten Alliance Doctoral Directory[9], Faculty for the Future[10], Ford Foundation Fellows[11], National Registry of Diverse and Strategic Faculty[12], SREB Compact for Faculty Diversity[13], Minority Faculty Applicant Database[14], Minority Postdoc DiverseScholar Directory[15], and Diversify Chemistry[30]. Most of these resources are free. The ASC Recruitment and Diversity Services has purchased subscriptions to some of the ones that are not free. Most will allow free posting of open job positions. We will also advertise new positions in the emails regularly sent out by the national NOBCChE organization.

3. Develop lists of women and URM who have been awarded prestigious graduate and postdoctoral fellowships (NIH, NSF and others) and contact them regarding career opportunities at OSU. Department staff will be assigned to provide support for this initiative.

4. Use faculty as "talent scouts" at meetings (ACS, SACNAS, NOBCChE, ABRCMS) for potential junior and senior faculty applicants.

5. Include women and URM on search committees when feasible. We will continue our practice of having a diversity advocate appointed to each search committee. The duties of the advocate will include monitoring the search to make sure it begins with a diverse pool of applicants, calling into question whether or not the

search should proceed if the application pool is not sufficiently diverse and ensuring that applications are considered without a gender or racial bias.

6. Later in this document we suggest ways to make our department more welcoming and supportive to underrepresented groups at all levels, from undergraduates to faculty. Genuine efforts in this direction will give us an advantage in recruiting women and URM who may have other competing offers. Studies indicate prospective students tend to place high value on social and cultural environments relating to their professional activity.[16,17]

G. Graduate Student Distribution: Gender, Racial and Ethnic Inequities

Goals: By 2021, to (1) increase the number of women in our graduate program from 40% to 45% (with an emphasis on domestic students, which currently lag international), (2) increase the number of URM in our graduate program from 5% to 10% and (3) achieve equal PhD graduate percentages across all sectors of our graduate student population (gender, race and ethnicity).

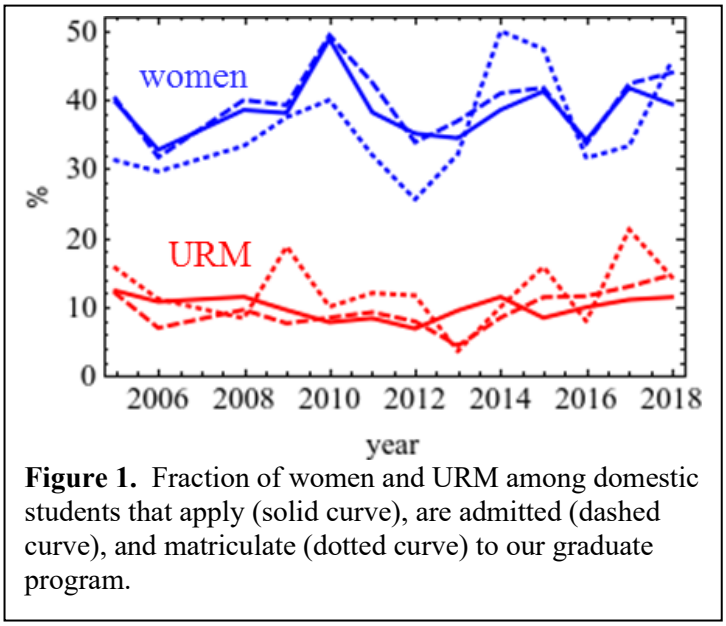

Figure 1. Fraction of women and URM among domestic students that apply (solid curve), are admitted (dashed curve), and matriculate (dotted curve) to our graduate program.

As shown in Table 1, we have made small but steady progress increasing the fraction of female graduate students. We have achieved about one-third of our goal of increasing the number of URM students. From 2008 to 2014, the total Black/Hispanic/Native American representation in our domestic grad student cohort increased from 6.4% to 7.6%, but it has subsequently fallen 4.8%. The numbers are so small it is difficult to claim any real progress.

To reach the goals stated above, we must consider the recruitment and retention of female and URM students. Specific recommendations regarding recruitment are listed below. It is also hoped that our improving faculty diversity will soon translate to better recruitment of female and URM students.

In Figure 1, the fraction of female and URM graduate students that apply to, are admitted, and accept our offers are given for the years 2005-2014. Our department has admitted (dashed curves) and recruited (dotted curves) female and URM students in numbers roughly proportional to their fraction of the applicant pool (solid curves). Comparing the fraction of women admitted to the program from Figure 1 with the total population (Table 1), we

conclude that attrition of female students is comparable to the attrition rate observed for the entire graduate population. However, attrition of URM students appears to be somewhat higher. Given the small samples, we do not wish to push the data further than warranted, other than to suggest that there is room to improve the diversity of our graduate student population by intensifying retention efforts.

The CBC department is about to embark on a significant step to increase underrepresented groups in graduate study in the chemical sciences. Led by Tom Magliery, Vice-Chair for Graduate Studies, CBC successfully competed to be one of only six departments chosen nation-wide to be partners in the Bridge Program sponsored by the American Chemical Society (ACS). Our department will receive applications submitted to the ACS Bridge Program and initially admit four students into the program each year, diagnose and ameliorate any academic deficiencies, and provide a support environment to guide them toward eventual success in a chemistry or biochemistry Ph.D. program.

Our ongoing activities that help with URM student recruitment and retention are listed below:

1. Cultivate relationships with URM graduates of our department. Maintain regular contact with these individuals, be they in academia or industry, and encourage them to send students to our program.

2. Send current URM students to their home institutions to recruit. Send faculty-student recruiting teams to these institutions. Send current URM students and faculty as "talent scouts" to meetings (ACS, SACNAS, NOBCChE, ABRCMS) to search for potential URM graduate students.

3. Establish partnerships with universities with high URM enrollments. We should have a goal of establishing at least one additional partnership with a university with high African American, Hispanic American and Native American enrollments (each) by the end of 2020[18]. A NOBCChE collaborative with several HBCU institutions was initiated in 2015 and represents one partnership model. We should invite students and faculty from these institutions to present seminars at OSU. We should make arrangements such that faculty from these partner institutions can use instrumentation at OSU of value to their research programs and students. Such use of instrumentation can be local or can be via cyber-enabling our cutting-edge equipment. The department should create incentives for faculty that encourage them to establish the aforementioned partnerships.

4. Continue the initiative of providing a first-semester fellowship to all entering URM graduate students. This initiative would not only help recruiting efforts, but might contribute to the goal of improving URM retention.

5. Strong mentoring of URM students, as implemented by the Vice-Chair for Graduate Studies. The department has implemented this step beginning 2011.

From that point until the present, only two URM students have left the program without a Ph.D.

6. Offer incentives for our faculty to spend a semester teaching at the nation's top HBCUs or initiate collaborative research with participants from these institutions. This has been a strategy used by a few other institutions to attract high quality URM graduate students.

7. One of the problems encountered by URM is the lack of a peer group with which to study and interact. In this regard the department should support our local student affiliate of the National Organization of Black Chemists and Chemical Engineers (NOBCChE). The department should encourage this organization to serve as the focal point for developing mentor programs for incoming URM students. We recommend that advisors of URM students be required to develop a mentoring plan with the student and discuss the plan with the Graduate Studies Office. Faculty serving as advisors to URM should be encouraged to obtain support for these students on supplemental fellowships (NSF, NIH, DOE) whenever possible.

8. Encourage faculty and postdocs to engage in mentorship training since strong research mentoring is linked to enhanced mentee productivity, self-efficacy, and career satisfaction, and is specifically demonstrated to be effective in helping URM mentees to successfully progress in their scientific careers. OSU has implemented a new evidence-based mentor training program ("Better Research through Better Mentoring") based on the National Research Mentoring Network (NRMN,) mentor development curriculum, which is offered as a series of workshops focused on either faculty (at all levels) or postdoc/grad student populations. Our goal is for at least 25% of CBC faculty to earn the Drake Institute for Teaching and Learning (UITL) endorsement for Research Mentor Training by completing all three workshops in the training series by 2022.

H. Undergraduate Diversity Initiatives

Diversification of the undergraduate student body is a constant effort by the Undergraduate Admissions office. Faculty and staff can be involved in aiding in the effective recruitment of gender and URM diversified undergraduate students to our majors. Strategic use of scholarship funds can ensure that our qualified female and URM Chemistry and Biochemistry majors are successful in their undergraduate endeavors. Collaborations with universities and community colleges in Ohio, including Columbus State, provide an opportunity to recruit women and URM populations to OSU. Collaborations with high school teachers with URM representation (research experiences for teachers, RET, or summer internship efforts) can be effective in bringing attention to URM students about being at the University.

The chemistry and biochemistry curriculum is challenging, and attrition among majors occurs every year on the way to a bachelor's degree. To minimize the attrition, the department invests considerable effort into programs such as dissemination of study strategies and peer mentoring. However, data indicate that these retention efforts are less successful with our undergraduate URM population. In Table 2, retention among students who matriculated in various years is defined as the fraction enrolled as chemistry majors in spring one year relative to that same cohort in spring of the previous year. Since most students follow the sequence of general, organic, and then physical chemistry, it would appear that general and physical chemistry are the most significant gatekeepers to the undergraduate chemistry or biochemistry degree, thus indicated where future retention efforts should be concentrated.

% retention, sp 2019		
Cohort	URM	non-URM
admit Au 2017	40.9	65.1
admit Au 2016	66.7	64.0
admit Au 2015	42.9	69.1

Table 2. In the spring semester of 2019, these are the percent retention of URM and non-URM undergraduate chemistry majors according to year of admission. For example, in spring of 2019, those admitted in Au 2017 were sophomores. Retention is defined as the number of majors in one year compared to the previous year.

In addition to the department's ongoing retention efforts, our NOBCChE organization has initiated guided study sessions in the past year.

These are specific recommendations for enhancing undergraduate diversity.

1. Participate in, or initiate STEM exploration programs to attract underrepresented groups to STEM majors in general, and chemistry and biochemistry in particular. These may include programs modeled after Bio Sci Day, which introduces the major to high school seniors admitted to Ohio State.

2. Continue to develop interest in chemistry or biochemistry majors through the CBC undergraduate blog, and monthly digests.

3. Make undergraduates aware of organizations like NOBCChE, and support NOBCChE efforts to reach out to URM undergraduates.

4. Explore a "Bridge to Baccalaureate" program with institutions like Columbus State Community College (CSCC) as a means to attract underrepresented groups to STEM careers.

5. Since many of our URM STEM students are transfers from Columbus State, seek to associate these students at transfer time with research groups, both for research opportunities and mentorship, through our partnership with the existing Destination OSU (DOSU) program when possible. Some of these students may be facing financial difficulties, so they should be considered in the pool for scholarships where appropriate. For example, Choose Ohio First Scholarships go first to minorities, women and first-generation college students. The program also

continues to have a > 90% graduation rate.

6. Continue efforts to inform all undergraduates of summer research opportunities, and underrepresented students about REU and SROP opportunities.

7. Continue to develop interest in STEM fields among high school students with the Breakfast of Science champions program.

8. Continue accumulation of data on retention rates and conduct exit interviews with students who leave the major. Additionally, track the separate retention rates of male and female students.

9. Appoint a committee to study the issue of recruitment and retention of undergraduate majors, with emphasis on female and URM populations. The committee will be tasked with formulating a policy to address the retention issue by utilizing the most current literature and possibly by establishing direct contacts with educational experts at OSU and elsewhere.

I. A Welcoming and Inclusive Environment

No one is free of bias. However, information and awareness can help promote a culture of inclusiveness in the workplace and in classes. We recommend the following measures, which will raise diversity issues more frequently in the department. The goal is to make inclusive behavior second nature by reminding faculty, staff and students of expectations and goals at regular intervals.

Like most academic and commercial institutions, a prime administrative concern is formal compliance with title VII and title IX to protect the institution from liability. For example, avoiding liability with respect to title IX entails the designation of an employee to coordinate compliance, adoption, and publication of a grievance procedure, and widespread notification that it does not discriminate. While liability is undeniably an important concern, prevention and construction of a truly inclusive environment require further steps. The distinction between compliance and prevention has been emphasized recently with respect to gender discrimination,[23,24] and it is apparent to us that it applies to racial and ethnic discrimination as well.

1. Set aside a portion of a faculty meeting each year in early autumn for diversity training, varying the content from year to year. The training may consist of a presentation about inherent bias by University or ASC experts in the field. Alternatively, through live, interactive theater OSU's InterACT program[19] can raise awareness of several issues relating to diversity. The early autumn time frame is chosen because that is the start of the season for faculty searches. Attendance should be mandatory.

2. Currently we require that all syllabi include information about disability accommodations and services. The department now requires a statement of a

zero-tolerance policy toward hateful speech and actions on the basis of race, gender, religion, sexual orientation, or national origin, appearing in the syllabus, or in a prominent location on the main page of the course Carmen page and designated as required reading. Students, TAs and faculty are encouraged to report incidents to the University's Bias Assessment and Response Team, BART. The "national origin" part is included because some of our international grad students feel unfairly treated by students and faculty.

3. Continuing in the vein of the previous item but on a positive side, syllabi or Carmen sites now make students aware they can participate in various STEM organizations, specifically mentioning NOBCChE for Black and Hispanic students, oSTEM for LGBT students, AWIS and WIMS for women in science.

4. Provide information similar to items (1-3) to all entering graduate students.

5. Staff should receive diversity training similar to item (1).

6. As mentioned earlier in this document, the word "diversity" should appear somewhere on the main department web page, and linked to a statement of our policies, resources and achievements.

7. Patterns of discrimination are often subtle. Therefore, to learn about the obstacles they face, the chair is tasked with annual meetings with female faculty, and URM faculty. As a 1999 MIT report states, "[Gender discrimination] did not look like what we thought discrimination looked like. ... [It] turns out to take many forms and many of these are not simple to recognize. ... discrimination consists of a pattern of powerful, but unrecognized assumptions and attitudes that work systematically against women faculty even in the light of obvious goodwill." Therefore, even with full title VII and IX compliance, department statements, workshops, and the best efforts of committees like the authors of this report, subtle effects are easily overlooked. The term "microagressions" describes the small slights that add up to an unwelcoming environment. As stated in an NSF workshop on gender equity, "A mountain is made of many molehills." There is no substitute for listening directly to female and URM faculty to learn about their experience.

J. Staff Diversity Initiatives

Goals: *To improve the current gender distribution in the areas of Teaching Staff and Shop Staff. To increase the percentage of URM occupying staff positions in the department.*

Table 3 indicates that whereas hiring of women seems equitable, the number of URM on the staff is low, both with respect to the entire university and the US population.

Table 3:

Category	number	Total FTE	men	women	Black	Hispanic	Native American	White	Asian	Undis-closed
Instructional staff, non-tenure track faculty	12	7.7	8	4	0	0	0	11	1	0
Unclassified (Instructional lab supervisor, program assistant, instrument maker, human resources associate)	64	60.75	36	28	0	3	0	49	7	5
Classified civil service (CCS)	13	12.75	4	9	1	1	0	9	2	0
Total	**89**	**81.2**	**48**	**41**	**1**	**4**	**0**	**69**	**10**	**5**

1. Gender and Ethnicity of Chemistry and Biochemistry Staff (December 2018)

The department will take the following steps to achieve the goals. We will include at least one woman on every staff search but avoid placing the additional burden of diversity advocate. We will assign a diversity advocate to each staff search when feasible. The duties of the advocate will include monitoring the search to make sure it begins with a diverse pool of applicants, calling into question whether or not the search should proceed if the application pool is not sufficiently diverse, and making sure that applications are considered without a gender bias.

2. Support for Diversity Initiatives

Efforts to increase diversity of the faculty and graduate student body must be a high priority item for the department. There are several ways in which the department can support the aforementioned initiatives: (1) Staff support must be provided to keep track of ongoing initiatives and to help with searches (such as identifying and contacting women and URM fellowship awardees). This support should not be diffuse. It should be in the hands of one individual assigned to work with the Chair of the Diversity Committee. (2) Funds should be allocated for the aforementioned student and faculty travel, for "matching" programs that might accompany establishing partnerships, and for seminars associated with pursuing targets of

opportunity and establishing long-term relationships with potential students or faculty members.

3. Assessment and Implementation

The key to the success of this diversity plan lies in its effective implementation and the collective efforts of individuals toward promoting its success. To this end we propose that each year, near the end of the summer, the Diversity Committee should assess progress toward the aforementioned goals and prepare a "diversity calendar" listing steps needed to implement the recommendations of this plan in the coming academic year. The timing is chosen to be shortly before the start of faculty searches, graduate student recruiting, and the start of autumn semester classes. The Diversity Committee will meet with the department chair and vice-chairs to review progress toward the diversity goals and discuss implementation of the diversity plan in the coming year. Progress toward diversity goals will also be reported at faculty meetings.

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17. “Biomedical Science Ph.D. Career Interest Patterns by Race/Ethnicity and Gender”, Kenneth D. Gibbs Jr., John McGready, Jessica C. Bennett, Kimberly Griffin, PLoS ONE 9(12): e114736.
18. Here are two examples of how this might work. (1) Jim Coe served as PhD thesis advisor to Kenneth Rodriguez. Dr. Rodriguez is now teaching at California State-Dominguez Hills. Our department is now establishing a partnership with CSDH (and their NIH- sponsored USTAR program) that involves supporting at least two undergraduate students in summer research at OSU. Largely because of efforts of Jim and Ken, we now have another graduate student from CSDH in our program. (2) Kaarina Lokko was a graduate student with George Wang. Kaarina received her BS from Oakwood University (an HBCU) and was a GK-12 (program under for which Susan Olesik serves as PI). Susan set up a collaboration with Oakwood that would funded one of their faculty members to do undergraduate research with the OSU Nanoscience and Engineering Center (NSEC). Hopefully initiatives of this type will increase the number of URM applicants to our department.
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APPENDIX VIII: Research Support Services

A. Departmental Support of Instrumentation through the Research Support Services

The Department of Chemistry and Biochemistry teaching and research missions are supported by several core facilities – the Research Support Services (RSS). The mission of the RSS is to provide management and maintenance of departmental shared instrumentation and production facilities to support excellence in the teaching, research and service missions of the Department of Chemistry and Biochemistry. These facilities are available to all departmental researchers – graduate students, postdoctoral scholars, research associates, and undergraduate chemistry majors. Examples of services available include surface analysis by XPS, AFM, SEM; nuclear magnetic resonance; mass spectrometry; Raman spectroscopy; femtosecond laser spectroscopy; high-precision machining; electronic diagnostics and design; scientific glassblowing; X-ray crystallography; and various other techniques.

1. Function of RSS Supported Laboratories

RSS Spectroscopic laboratories support shared departmental instrumentation purchased for the department through shared instrument grants or internal (state or university) funding.

a. Criteria for RSS inclusion (Appendix VIII.B): The instrumentation supported are placed in shared departmental space and overseen by department staff.

b. Management: The RSS staff scientists (Senior Research Associates or similar) are the administrators and managers of the instrumentation in the RSS facility assigned. They are the primary source of expertise in the maintenance of scientific equipment and in the operation of the instruments they supervise. Graduate Teaching Assistant appointments for support of management must be approved by the RSS Director and Chair if the need arises.

c. Maintenance and Repair: The RSS facility manager provides routine instrument calibrations, maintenance, and needed repairs to retain high-quality data on shared equipment. The continuity of these services is essential for avoiding extended down- times and costly repairs. The use of Production Shops in lieu of service contracts for repairs and designs when appropriate is recommended due to cost savings.

d. Training and Research Collaboration: In a multi-user environment, the RSS facility manager provides quality control of proper procedures for best data output while at the same time training the users for operation without damaging delicate components. The manager can provide general or advanced mentoring in experiment design, sample preparation, sample handling, data acquisition, data reduction, and data interpretation. The ability to discuss the application of the instrument to new problems is essential for prospective clients who may have no prior experience with the instrument and its capabilities.

e. Educational tool: The multi-user instrumentation is available primarily to researchers as hands-on experiences to enhance the educational exposure to instrument methods and development. In cases in which sample preparation, instrument operation, data collection and/or data interpretation are complicated and require extensive experience and knowledge, the manager may be the primary operator. Full data analysis service is generally not provided unless special arrangements are made with the RSS manager and director.

f. Prioritization of usage: Regulations for usage per instrument are determined by the RSS manager for damage avoidance, continuity of instrument quality, and fairness of access to each instrument.

2. Function of RSS Supported Production Shops

RSS production facilities provide design, fabrication, modification, repair and maintenance of the Department's instrumentation and glassware for local access to detailed machining, scientific instrument design, electronic repair, and scientific glassblowing.

a. Maintenance and repair: The RSS facilities provide the first response in maintenance and needed repairs for all instrumentation and glassware in the department. The physical proximity with iterative process requirements provide continuity of maintenance essential for avoiding extended down-times and costly repairs. The use of Production Shops in lieu of service contracts for repairs and designs when appropriate can save funds.

b. Collaborative design and production: The RSS facilities may provide custom fabrication in collaboration with research groups. These services may involve blue prints, sketches, or custom design ideas requiring substantial artistic and technical creativity.

c. Training: In some cases the customer may be trained to utilize the available facilities.

d. Prioritization of services: The Department customers maintain priority in completion of work. The RSS manager determines the best efficiency models which provide the best quality of work in the most reasonable time.

e. Management: Production Shop Manager (Instrument Maker, Research Associate). These staff members are experts in the skills necessary for instrument design and repair including machining, glass blowing, or electronics. They are leaders in their areas of expertise, train and share their knowledge and skills with facility users while providing proactive, timely, and responsive services.

3. Note on Non-RSS Departmental Instrument Management

a. If instrumentation is purchased by the department in the past as a shared instrument with the intention of the department paying for all costs, all repairs and

maintenance will be paid for by the department. Prior approval by the Chair is required for inclusion in this support.

b. Other shared: Instruments that are cost shared between two or more groups that do not meet criteria or not approved by the Chair for inclusion in RSS management should have arrangements for cost recovery of repairs, replacement among the users. The Production Shops are available for these repairs. Detailed logs of usage and issues should be maintained by these groups.

4. Budget Model for Cost Recovery of in Earning Units

The RSS facilities, earnings units, adhere to the policies of the University as well as University Purchasing policies.

a. Facility Rates – Cost recovery processes for all facilities as listed below; lowest rate possible; competitive with other institutions; and compatible with grant funds available. All rates are approved by the departmental faculty. All budget costs and revenues are reviewed annually.
    i. Rate Calculation: Facility rates (as charged to all federal grants) are calculated based on the indirect costs incurred by the facilities divided by the number of hours used or billable hours.
        1. Indirect costs include routine maintenance, parts, repair, office supplies, graduate assistant salary and benefit, manager continuing education and one conference per year. Costs do not include direct costs passed onto the customer (parts for work).
        2. The hours of usage are complete available hours, but are averaged over the past three years to reflect the actual usage of the equipment.
        3. Billable labor hours are determined by the average of three years of actual billed labor hours.
    ii. RSS Manager salary recovery
        1. The salary and benefits of the RSS Managers are included in the departmental general funds as available.
            a. These salaries are not calculated as part of the rate in the case of the spectroscopic facilities; i.e., the salaries are not calculated as part of the cost of the facility.
            b. Due to the labor services provided by the production shops a percentage of the salaries may be included as a cost and recovered by the rates of the facility.
        2. The department may transfer excess earnings units funds of the facility to reimburse the general funds of the salary and benefits.
        3. The RSS Managers are 100% FTE appointments. However, the RSS Manager may have a joint appointment as Research Scientist or Post-Doc under the advisement of a faculty member or university center. These arrangements will be in case there are not funds available for a staff position.

b. The department does not use general funds to cover expenses of RSS Facility unless necessary and approved by the Chair.

c. General billing guidelines
    i. The university requires approvals for all transactions for these earnings units. The production shops are utilizing Workday for all projects. The spectroscopy shops are utilizing the OSU-customized facility online manager (FOM) for this purpose.
    ii. Co-authors of departmental instrumentation grants can be subsidized up to 50% of the usage rate for that instrument. The Chair will determine the total amount of the subsidy as a percentage of the amount of the grant and will determine the allocation between the co-authors. Each subsidy will last for the period of the grant or until the allocation for the co-author is expended, whichever comes first.
    iii. The user of the RSS facility must provide correct and valid accounting information for billing. When incorrect or invalid accounting information is provided, the requestor may be charged $50.00 for the monthly billing cycle to cover the costs of determining the valid, correct accounting information and re- submitting the billing information to the Chemistry and Biochemistry Accounting.

B. Criteria for Departmental Instrumentation Acquisition

The Department may agree to support shared instrumentation through the Research Support Services which meet the majority of the following criteria.

1. Customer Base

At least five research groups, primarily within the Department, should be committed to using an instrument on a regular basis for an instrument to be considered a Departmentally Supported Instrument. Several federal agencies have determined that at least five research groups are required to meet the definition of a shared usage instrument. When the number of groups reaches or exceeds five, an instrument is managed more reliably by an individual external to the user groups as a number of practical issues need to be resolved such as priority scheduling and maintenance.

2. Costs of Purchase and Operation

Instruments included may have an initial cost above $250,000: The cost of an instrument should not be a sole criterion for inclusion as a RSS supported instrument. However, federal granting agencies consider that an instrument with an initial cost of less than $100,000 can be readily available via the normal research grant process. Instruments with costs above $250,000 are not as readily available without considerable justification under a multi-user environment.

3. Costs of Operation and Maintenance

There must be a business plan based on costs and projected usage to recover costs as per general departmental policy before an instrument can be acquired as a Departmentally Supported Instrument. Requests for funding also typically include the stipulation that continuing support of the instrument will be provided by local

resources. Instruments acquired without grant funding will require local funds for both purchase and operating costs. The cost of maintaining the instrument will frequently eclipse the initial cost to acquire that instrument. There has to be an acceptance of the users' responsibility to share the costs of the facility's daily operation, maintenance, management, and upgrades through hourly or sample fees.

4. Supervision and Expertise

Instruments which require supervision of the instrument's operation and training of users should be considered for inclusion as a Departmentally Supported Instrument. Supervision of users, initial and on-going training, continuous monitoring of instrument performance, and scheduling and completion of preventive maintenance can drastically decrease the annual costs of an instrument and dramatically increase to useful lifetime of the instrument. With regard to multi-user instruments, it is not reasonable to expect that a principal investigator should reduce the research output of his/her research group to provide support for all of the users. Department experience has shown that unsupervised usage results in high incidences of instrument failures and subsequent down- time of the instrument for all users.

5. Meets Specification and Functional

The instrument must be functional before it can be accepted by the Department. Final payment on new instruments in contingent on passing final acceptance testing for the instrument. A similar criterion should be applied to used equipment. The Department of Chemistry and Biochemistry should require under normal circumstances that all repairs on used equipment be completed prior to transfer to the Department.

6. Written Management Agreement

All instruments should be accepted on a provisional basis. A memo of understanding (MOU) should be prepared and signed by all parties concerned which states the terms of acceptance. These terms should include the ability of the RSS to provide adequate training, maintenance and access for the instrument; the ability of the users to provide adequate usage for the instrument to meet the proposed business plan, and the ability of the manufacturer to continue to supply adequate technical and material support to keep the instrument operational. The MOU and business plan should be reviewed periodically.

7. Meet Infrastructure Requirements

A RSS staff scientist (Senior Research Associate or similar), or a new hire, should be designated as the Manager before an instrument is accepted. Those acquiring potential RSS instruments must recognize that qualifications of the RSS Manager will require significant salaries to attract suitable individuals. There must be physical space available in an RSS facility to house the instrument, preferably contiguous to existing RSS instrument space. The details of supplying power, cooling, cryogens and gases need to be agreed to prior to acceptance. In the case of new instrumentation, it is best practice for the designated manager to be involved early in the proposal preparation.

C. Department Ohio Supercomputer Center Budget Model

The 25% of the annual cost of user charges to the Ohio Supercomputer Center (OSC) passed on to CBC by the College (beyond the OSC allowance currently set at $1,000) will be covered for assistant professors. This portion will also be covered by CBC for faculty with external funding that generates F&A in the year of the request or at least one of the prior 2 years up to $25K (meaning ASC would pay $75K and CBC up to $25K). For faculty without external funds, the department will cover the annual 25% of the OSC charges up to $1,000 in excess of the OSC allowance (meaning that ASC would pay $3,000 and CBC $1,000), giving the PI a total of $5,000 in OSC charges including the OSC allowance (currently $1,000).