

Post-APR Action Plan - Department of Chemistry and Biochemistry

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Recommendation	DEPARTMENT ACTION	COLLEGE ACTION	PROVOST'S OFFICE ACTION	Action Plan
Departmental Direction				
The department should develop a multi-year plan to increase research prominence and enhance graduate recruitment	X			<p>Dept: The department faculty will develop a vision for the next decade, identifying areas of research and pedagogical strength to be enhanced and the development of a strategic hiring plan and action plan to address issues related to graduate student recruitment and retention.</p> <p>Deadline: January 2021</p>
Increase the number of tenure-track faculty by two	X	X	X	<p>Dept: The Department agrees with the recommendation and will advocate to increase the number of tenure-track faculty members to enhance the department's research portfolio with specific emphasis on the interface between chemistry and human health, a historically strong area for the department.</p> <p>Dean: The college has developed 10-year hiring vision that includes both replacement and expansion. The Dean supports the strategic hiring of faculty members in accord with the recommendation of the department chair and its faculty. Hiring needs by the Department of Chemistry and Biochemistry will be given full and equitable consideration by the college.</p> <p>Provost: Hiring requests will be considered through the budget process.</p> <p>Deadline: ASAP and depending on funding availability</p>
Increase the number of teaching assistants	X	X	X	<p>Dept: The department will advocate to increase the budget allocation for graduate teaching assistants (TAs). This budget allocation can currently support 27 TAs while the teaching needs require 33 TAs. The shortfall is currently addressed by using undergraduate teaching assistants in freshman labs, which raises significant pedagogical concerns.</p> <p>Dean: Proposed increases in the number of teaching assistants by the Department of Chemistry and Biochemistry will be given full and equitable consideration by the college.</p> <p>Provost: Increases in number of teaching assistants will be considered through the budget process.</p> <p>Deadline: ASAP and depending on funding availability</p>

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Increase graduate student stipends	X			<p>Dept: The department will advocate to increase the budget allocation for graduate TAs. This budget allocation can currently support a graduate stipend of \$24,376/yr, about \$6,000 lower than the level of graduate stipends in neighboring graduate programs in chemistry and biochemistry. This has an adverse impact on our ability to competitively recruit high quality graduate students to our program.</p> <p>Dean: Graduate student stipends are above the minimum stipend levels as listed by the Graduate School. Further increases of graduate stipends is at the discretion of the department and limited to available funding.</p>
Resources and Scholarly Work				
Improve departmental resources	X	X	X	<p>Dept: The department will continue to advocate for increasing resources to improve research and teaching in the department. This includes advocating for better pay and benefits for our lecturers which are not properly compensated for their excellent teaching performance, and improved research infrastructure.</p> <p>Dean: The college continues to invest in the department through numerous initiatives, such as Summer STEM (designed to increase summer enrollment and tuition return), workshops for applying for National Science Foundation (NSF) graduate research fellowships, CNMS Summer Research Assistance program, financial support for training programs (e.g., Chemistry/Biology Interface (CBI), etc. The needs of the Department of Chemistry and Biochemistry are given full and equitable consideration by the college.</p> <p>Provost: Resource requests will be considered through the budget process.</p> <p>Deadline: ASAP and depending on funding availability</p>

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Increase extramural funding of faculty through entrepreneurial approaches	X	X		<p>Dept: The department increased the number of federally funded faculty members by 3-fold in the last five years. The challenge is to maintain and increase the level of federal funding. While entrepreneurial approaches have an important role to play, there is no alternative to hard work and persistence in writing, submitting and revising proposals in response to reviewer comments. The department will increase mentoring efforts of beginning faculty and focus on collaborative research with faculty in other departments at UMBC and other institutions to further build the research portfolio.</p> <p>Dean: The college has made significant investments in the support of faculty success. Examples of these initiatives include an Entrepreneurial Skillset Training program for all incoming faculty, Entrepreneurship Opportunity for Associate Professors in CNMS, NSF Career Award workshops, National Institutes of Health (NIH) RO1 proposal training, and the Natural Sciences Fellowship Program. In addition, the college has established a Science and Math Advising Resource Team (SMART). This team of five staff is dedicated to the professional advising of students with declared majors in biology, chemistry, and biochemistry only. The creation/expansion of SMART is intended to further reduce the service/advising workload on the Track/Tenure-Track faculty in Chemistry and Biochemistry.</p> <p>Deadline: Ongoing</p>
Establish a departmental awards committee for faculty	X			<p>Dept: The department will establish an awards committee in the 2019-20 academic year.</p> <p>Deadline: December 2020</p>
Alter Upper level laboratories to develop student skill in asking and answering research questions	X			<p>Dept: The department will advocate for increasing resources to the teaching laboratory budget allocation to enable the development and implementation of new lab experiments to improve the student skill set. The department identifies the analytical chemistry lab CHEM 300 as a top priority for update. A plan to modify the lab course is being developed by analytical chemistry faculty and will be presented to the Department Chair. The pace of implementing the plan depends on availability of resources.</p> <p>Deadline: May 2020</p>
Undergraduate and Graduate Programs				
Staff				

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Institute departmental staff meetings	X			<p>Dept: The department chair will hold a monthly meeting with the departmental staff.</p> <p>Deadline: October 2019</p>
Increase efficiency of the staff	X			<p>Dept: The department chair and associate chair will review current practices with the staff, identify and implement steps to increase efficiency in operations.</p> <p>Deadline: May 2020</p>
Responses to Department Proposed Future Directions				
Establish approaches to increase support from industry or donations	X			<p>Dept: The department will further increase relationships with local industry and work to establish an Innovation Council with members from local companies. The Innovation Council will be formed by the end of the 2020-21 academic year.</p>
Establish approaches to support (mentor) Assistant and Associate Professors	X			<p>Dept: The department will continue to implement a faculty mentoring plan which was adopted by the faculty in 2018.</p>
Explore opportunities to freshen the undergraduate curriculum	X			<p>Dept: The undergraduate committee will continue to implement changes to our offered undergraduate lecture and laboratory courses while maintaining our American Chemical Society (ACS) approved degrees. One specific course, CHEM 300, will be prioritized. This analytical chemistry lecture and lab course has a strong data analytics component. Modernization of this course will enable us to improve student training in data science, a priority area at UMBC. Plans for modernizing the course are being developed at this time.</p> <p>Deadline: May 2020</p>
Establish a culture to diversify the department	X			<p>Dept: The department will continue to use all mechanisms to diversify the faculty ranks. While the faculty are diverse on many fronts, we do not have faculty from under represented minority groups.</p> <p>Deadline: Ongoing</p>
Approaches to increase public awareness	X			<p>Dept: The department will continue to improve its website and work closely with the College of Natural and Mathematical Sciences to better inform the public of research and teaching accomplishments of our faculty and students.</p> <p>Deadline: Ongoing</p>