

UCC Program Review Committee Summary of Review

Program: Biological Sciences

Date of last review: AY 2015-2016

Date of this review: AY 2022-2023

The program offers the following degrees, minors, and certificates:

- B.S. Biological Sciences
- B.S. Microbiology
- B.S. Marine, Freshwater, and Environmental Biology
- B.S. Pre-Professional
- B.S. Pre-Physical Therapy
- B.S. Cellular and Molecular Biology
- B.S. Wildlife and Conservation Biology
- B.A. Human Biology
- B.A. Environmental Biology
- PhD Biological Sciences
- MsC/non-thesis MA Biological Sciences
- PhD Molecular and Cellular Biology
- Minor in Biological Sciences
- Certificate in Conservation Biology

Recommendation: This program is found to be viable.

See report for commendations, concerns, and recommendations.

The report was forwarded to the program director and college dean. Their responses are attached.

The Graduate Council's comments are included as well.

Ohio University Curriculum Committee

External / Internal Academic Program Review

Department of Biological Sciences (BIOS)

April 2023

Introduction

We, the review team consisting of Ellen Gordon, Assistant Professor of Instruction, Ohio University, and Macario Llamas, Assistant Professor of Instruction, Ohio University, and Ellen Ketterson, Distinguished Professor of Biology, Indiana University, visited the Biological Sciences Department at Ohio University on April 10 and 11, 2023. A complete self-study with data and a nuanced narrative was supplied to the review committee members well before the site visit. The schedule for the site visit included meetings with the dean's office, department leadership, tenured faculty, probational faculty, regional faculty, staff, graduate students, and undergraduate students. After full consideration of all the information from the self-study and two days of extensive discussions with members of the department, our unanimous judgment is that Ohio University's Biological Sciences Department is viable but in strong need of support in the form of additional tenure-track faculty lines and greater financial support for graduate students. We begin with an executive summary, then provide a narrative that demonstrates with detailed evidence the excellence found in multiple areas, as well as the bases for serious concern. We conclude with recommendations to avert lasting damage and commendations for the department's determination to deliver excellence despite challenges.

Executive Summary

The Biological Sciences Department at Ohio University has many strengths including an active faculty engaged in research, teaching, and service. The Department offers a Bachelor of Science and a Bachelor of Arts with a curriculum that fosters training in the diversity of expanding modern biological disciplines, ranging from natural sciences and health sciences to liberal arts in education. The Department also offers a solid foundation for its students to enter graduate or professional training programs. Faculty members have been successful in doubling funding and keeping a steady number of publications and presentations. Departmental service contributions appear to be stable over the review period.

A critical concern facing the department is whether and how the faculty at its present size can continue to teach the necessary courses, sustain funded research programs, and supervise undergraduate and graduate students. A second critical concern is how to address declines in student enrollment in the undergraduate and graduate programs. The department, with help from higher administration, must develop a plan to cover the considerable number of required courses, while also providing advice and mentorship for students who seek research opportunities.

1. The program as a whole

a. Is the current number and distribution of faculty sufficient to carry out the broad overall mission of the unit (Teaching; Research, Scholarship and Creative Activity; Service).

No. The biology department is facing multiple challenges that affect its teaching, research, and service capabilities. The loss of tenure-track faculty and the increase in class sizes, along with the reliance on non-BIOS TAs, could lead to a decline in the quality of the education offered by OU. The shortage of part-time instructors limits the department's staffing options and requires significant faculty time each semester to avoid failure to provide required courses. Furthermore, these staffing issues are impacting the department's service ability, especially in community outreach efforts, which could negatively impact external funding and partnerships. Finally, the decrease in the number of tenured and tenure-track faculty has created a situation in which the remaining research-oriented faculty must support enough graduate students to provide undergraduate research opportunities and honors degrees.

According to the self-study, the numbers of full-time faculty, both TT and IF, have declined steadily since 2016-2017. One need is for more research-oriented faculty owing to recent losses to retirement, more imminent retirements, and loss of junior faculty moving elsewhere. Research faculty bring in the graduate students needed to support faculty research and serve as teaching assistants. Research faculty can offer undergraduate research opportunities and mentor honors students. In time the alternative, fewer and fewer TT, the program would become a teaching-only department. IF are essential in providing teaching that is fully focused on undergraduates. PT are in short supply and seriously underpaid and in most cases are not the solution.

b. Is the level of the unit's RSCA appropriate for the program given the size of the faculty and the resources available to the unit? Is the unit's level of external funding at an appropriate level?

Yes. Despite the increased expectations in teaching and service, the faculty of the BIOS department have managed to remain productive and retain or gain external funding. In fact, research funding for current faculty has doubled from 2015-2016 to 2021-2022. While the number of publications per year remained constant, conference presentations declined, presumably due to the pandemic. However, the decline in tenure research faculty and financial strain have left the remaining TT faculty feeling deeply concerned about their ability to preserve their research programs while meeting increased instructional needs. Many institutions are seeking to increase external funding for research. If this is a priority at OU, there needs to be support for budget creation and management, and faculty must have time to prepare proposals and carry out funded research.

Based on both the self-study report and the site visit, it is clear that faculty morale is low. Faculty have doubts regarding the department's future RSCA because of increased teaching loads for research-active faculty, and because of increased reliance upon IF and part-time faculty who are not expected to perform in this arena.

c. Is the level of service, outside of teaching, appropriate for the program given its size and the role that it plays in the University and broader communities it interacts with? Is the unit able to fulfill its service mission?

Yes. The department has carefully documented its service activities which span the full range from the department to the university. However, the “public” service has steadily declined which correlates with the faculty strain in other areas.

Faculty are being asked to do more in-house administrative tasks than formerly due to the centralization of administrative staff. In particular, the constant need to recruit PT faculty to avoid defaulting on high enrollment courses is taking a toll on administrative (service) time and represents a substantial risk for the department.

d. Does the unit have an appropriate level of financial resources, staff, physical facilities, library resources, and technology to fulfill its mission?

No. The financial resources are not appropriate in several areas, particularly graduate student stipends. To thrive - perhaps even to survive - as a research-active department, the department needs more tenure track faculty, more graduate students, and an administrative staff employee.

Following a decrease in staff numbers located within the department owing to centralization, the faculty are losing time that would be better spent on instruction and research to carry out time-consuming administrative tasks.

Labs for faculty and graduate students seemed appropriate, but the physical facilities have had issues with aging furnishings and flooding.

2. Undergraduate Program

a. Is the unit fulfilling its service role, adequately preparing non- majors for future coursework and/or satisfying the needs for general education?

Yes. The department adequately prepares non-majors for future coursework and offers a number of courses that allow students to satisfy general education requirements. BIOS significantly contributes to the university’s general education or service course requirements. Approximately 15% of their undergraduate courses meet general education or pre-nursing requirements. These courses serve 11-13% of OU students each year. Many of these courses are large enrollment courses (280-780 students) that are being successfully taught by faculty. The department teaches several anatomy courses, which can fulfill general education or pre-nursing requirements. It is important to note, however, that the department does not currently have any faculty with that area of expertise.

The department developed an Advising and Resource Room (BARR) that supports students enrolled in introductory courses. BARR is led by peer mentors who are successful upper-class students. Students can drop by during walk-in hours to receive tutoring and assistance. Students

who perform poorly on the first exam in BIOS 1700 are required to attend advising and develop an action plan to improve their performance. This is a valuable resource.

b. Is the program attracting majors likely to succeed in the program? Is the number of majors appropriate for the program? Is the program attracting a diverse group of students?

Yes. The average time it takes BIOS students to graduate is 4.31 years – this indicates that students are successfully completing their courses and moving through the program in a timely manner.

Approximately 950 undergraduate students are enrolled in the program, which has nine major tracks. Like the university, the number of BIOS students has steadily declined since the last review period. Despite the decline in enrollment, the number of required courses that must be staffed has held steady. Thus, the department is currently experiencing a shortage of full-time faculty and BIOS TAs and must resort to part-time faculty and non-BIOS TAs to teach their courses. Further many upper-level courses are no longer offered. One solution might be fewer required courses, as many of the tracks appear to have a large degree of overlap and could be consolidated or combined. For example, there seems to be some overlap in the environmental offerings with three related tracks.

The program is attracting a diverse group of students. The student demographics are representative of OU's greater undergraduate population, in terms of race and ethnicity. They do have a higher proportion of female students compared to OU's general population (~69% female BIOS students vs. ~55% OU female students).

c. Does the undergraduate curriculum provide majors with an adequate background to pursue discipline-related careers or graduate work following graduation?

The department keeps limited records of their job placement rates. However, they do track students who apply to professional schools. Approximately 57% of the students who applied to medical school (MD or DO) were accepted. This is much higher than the national average. They also have a high admittance rate for other professional programs: physical assistant (40%), physical therapy (78%), dentistry (62.5%) and optometry (100%). This suggests that the students who apply to these programs are, overall, well-prepared in their field.

The department has a pre-professional advisor, Ann LaComb. This advisor is available to help students navigate their major requirements and the application process for professional schools. The undergraduate students we spoke to spoke very highly of Ann and felt that she was an invaluable resource and an individual they could turn to when they needed guidance.

d. Are the resources and the number of and distribution of faculty sufficient to support the undergraduate program?

No. The department is experiencing a shortage of faculty and BIOS teaching assistants. Increasingly, they are relying on part-time instructors and non-BIOS TAs – unfortunately, this often results in a last-minute scramble to recruit individuals to teach their introductory courses.

Unless the university approves additional hires and the department can recruit more graduate students, the program may soon be unable to staff these crucial general education courses that serve the university. The department also lacks faculty with expertise in certain subjects. As explained in a previous section, the department teaches anatomy courses, but does not have a full-time instructor whose expertise is in anatomy.

e. Are pedagogical practices appropriate? Are program learning outcomes adequately assessed?

Yes. The department prefers traditional and well-established teaching methods such as laboratory exercises and assignments. Individual instructors are given latitude to develop methods that work best for them. Individual teaching methods are assessed through peer and student evaluation.

The department has identified six learning outcomes for their undergraduate program. They have developed assessments to track and measure each of these learning outcomes. For example, to assess students' knowledge of general principles of biology (a learning outcome), the department administers a standardized exam at the beginning of introductory biology (BIOS 1700). Students take the same exam again after they have completed a required four-course sequence of introductory biology and genetics. The department is also collaborating with the Chemistry department to obtain records of standardized exams to assess student's knowledge of chemistry, which is another Biological Science's learning outcome.

f. Are students able to move into discipline-related careers and/or pursue further academic work?

Yes. The department does not hold post-graduation records of their undergraduates, but as stated in a previous section, many students are successfully admitted into health-related graduate programs. The committee considered whether even more students might be admitted with certain changes. While the department offers necessary courses for pre-professional programs, such as medicine, dentistry, and nursing, the committee heard that course content can be overlapping which can cause confusion for students. Additionally, the department lacks sufficient collaborative research opportunities for its students. The faculty shortage prevents stands in the way allowing more students to develop their skills and pursue their research interests.

3. Graduate Program

a. Is the program attracting students likely to succeed in the program? Is the number of students appropriate for the program? Is the program attracting a diverse group of students?

According to the self-study report, there are currently 54 graduate students. More than half are in EEB, the fewest are in physiology. The gender ratio is equal. The number of qualified applicants exceeds the number admitted, but nevertheless the total number of graduate students is down in part because students who are made offers do not choose to enroll. As a result, there are fewer graduate students than the number needed to serve as teaching assistants. Based on conversations with current graduate students, the way to enhance recruitment success will be to improve the

situation for those currently in training. As it is, their low morale may stand in the way. While the graduate student numbers are in decline, this will hopefully improve after new TT hires if that is accompanied by better financial support.

If Ohio University wishes to retain its status as an R1 university, it must see the graduate student situation as dire. It is no exaggeration to say that graduate students are what make faculty research possible. Teamwork involving graduate students and faculty is what trains the next generation in conducting original research and results in knowledge expansion. Further, without graduate students, OU would not be able to teach its curriculum without adding significantly more faculty.

b. Does the graduate curriculum provide an adequate background to pursue discipline-related careers following graduation?

The program does this well. Every graduate student that we spoke to said that everyone ends up getting discipline-related jobs. The department may nevertheless want to seek ways to prepare students for careers that go beyond the academy, such as more opportunities for internships or ways to shorten time to degree, currently between 5 and 6 years. Are there components to the training that could be done in less time for Ph.D. students?

c. Does the program provide adequate mentoring and advising to students to prepare them for discipline-related careers?

The curriculum is fully developed, with milestones clearly described. The milestones are rigorous. Not all courses listed in the books are being taught owing to faculty overload.

The graduate students that the committee met with reported that information about requirements and procedures is not being clearly communicated. For example, they do not know what courses to take, what forms to fill out, how to submit their thesis, etc. They stated that information used to be passed down from cohort to cohort – however, they do not have as many advanced graduate students to seek advice / knowledge from. The department needs to put together or revise a graduate student handbook that includes all this information. Another solution is to provide each graduate student with a mentor – an advanced graduate student who they can use as a resource for program procedures and requirements.

d. Are the resources and the number of and distribution of faculty sufficient to support the graduate program?

Retirements, upcoming retirements, and loss of junior faculty are all happening right now. There is an urgent need for more hiring if OU is to sustain its graduate program in BIOS.

Every student asked reported that they are working >20 hours a week. They believe this is due to the lack of TAs (teaching assistants) and the increase in class size.

e. Does the program offer appropriate financial support to graduate students?

No. The graduate stipend is below the average stipend for comparable schools. The students are granted \$24,000 which is considered the lower 10% according to the U.S. Bureau of Labor

Statistics. Given the current cost of living, this is affecting the students' morale and satisfaction. Graduate students reported being unable to afford necessities such as rent, food and health care. A recent increase in compensation came with a requirement for students to work during the summer. This is the time when many students need to be off campus doing field work or focused on lab work.

In the meetings with the students, many described their struggles and their inability to supplement their income by taking on a part-time job. Although that would be undesirable, many students are struggling to cover their basic needs, which may affect educational effectiveness.

The Chair is aware of the problem and stated that the department does not have the funds to fix the situation. The only viable solution is for the higher administration to provide BIOS department with more funds for stipends. Without quality graduate students, OU cannot maintain its standing as a research university or provide quality education for its undergraduates.

f. Are program learning outcomes adequately assessed?

Expectations are clearly expressed and numerous. The review committee was not able to determine whether outcomes are adequately assessed

g. Are students able to move into discipline-related careers?

Yes. According to the students we spoke with, everyone has succeeded in landing discipline-related jobs.

4. Areas of concern

OVERALL

Department Leadership and Departmental Issues

The current chair is respected by his faculty and staff, and he impressed the review committee with his candor and commitment. The current faculty and staff are also deeply committed to OU's mission, and they impressed the review committee with their talent and their pride in the accomplishments of their undergraduate and graduate students. But many faculty feel that the department's accomplishments are underappreciated by the higher administration. They also feel that their legitimate need for new lines, increased graduate student stipends, and adequate staff support have gone unheeded. All this has eroded the department's trust in the administration, and there is an urgent need for improved communication between the college and the biology department's faculty and staff. In the absence of better communication, misunderstandings will inevitably lead to confusion, conflict, and further decreases in morale among faculty and staff. In the worst case it will lead to a dysfunctional work environment that reduces productivity and collaboration.

While the change in the department chair must have created tensions, we did not detect any worrisome intradepartmental conflicts. The strain is between the department and the administration, because so many recent decisions have been seen as demanding more while providing little. There has been a steady decline in the number of research and instructional

faculty, while the number of courses has stayed constant. With fewer experienced researchers available to mentor and guide students, the quality of research output will decrease, affecting grants and funding. The department must replace its retiring personnel. This will be a great opportunity to recruit research faculty who will expand the department in new directions and create collaborative research with other departments.

Regional faculty

Our meeting with the regional faculty helped the review team understand their challenges in terms of decreased enrollment. One concern they have is that they believe the administration views regional campuses as a feeder for the Athens campus, much like a junior college. They do not believe that is correct. They see that many of their students will never be sufficiently free of local responsibilities to leave home. They tend to be older, have care-taking obligations, and less financially able to attend a residential campus. The faculty believe they serve a population that would otherwise go unserved and are strongly committed to their mission. A second concern of the regional faculty is support for a path to promotion to full professor. Typically, they stall at the associate level. Their assignment is 80% teaching, 10% service, and 10% research. From their standpoint if they are succeeding at their assigned positions, promotion should follow.

DEI and Outreach

While there may be a satisfactory number of female faculty and students in the biology department, there is still a strong need to expand diversity and inclusivity efforts to other underrepresented groups. For example, some faculty believe that students from regional campuses are being underestimated. This creates a negative environment for collaboration and discourages the potential of all students.

For instance, the department could focus on recruiting and enrolling more students and hiring more faculty members from diverse backgrounds, including individuals from different races, ethnicities, and socioeconomic statuses. Additionally, like other departments in OU, they could invest in programs and initiatives that foster a more inclusive environment, such as mentorship programs, cultural awareness training, and support for diversity-related events and activities. It is important to recognize that diversity is more than just gender and take a more intersectional approach to promote a truly inclusive environment that values and celebrates diversity in all its forms.

Facilities

Many offices and labs had issues with the aging furnishings. The undergraduate instructional faculty office space stood out as needing attention due to water damage. Currently, it is being underused as storage.

UNDERGRADUATE

Curriculum Efficiency

The department has done an excellent job streamlining the degrees into 7 major tracks. However, due to the limited availability of tenured and instructional faculty, it will be best if the

department could eliminate any further unnecessary coursework or redundancies between tracks to reduce the workload stress and provide a more coherent and efficient learning experience to the students.

Research Opportunities

It is also evident that due to the current administrative, academic, and research responsibilities from faculty, they do not have enough time to offer collaborative research experiences for undergraduate students. It is essential that the department addresses this concern to provide students with research opportunities that encourage their intellectual growth and critical thinking, and that promotes their engagement in the scientific inquiry taking place in OU graduate program.

Assessments and Evaluations

There is a potential lack of clarity and understanding about whether the department is effectively evaluating and measuring the effectiveness of the department's educational efforts. Without proper evaluation, it becomes challenging to understand the department's strengths and identify areas of improvement in terms of achieving high quality education in line with the department's and learning objectives.

Limited Interdepartmental Collaboration

The problem of limited interdepartmental collaboration between the biology department and departments such as chemistry, environmental sciences, and HCOM hinders the potential for interdisciplinary collaboration and integrative and comprehensive approaches to research and education that could benefit all disciplines involved. This lack of collaboration may prevent the department from fully exploring the interconnected nature of biological sciences and leveraging the collective expertise and resources available across multiple departments.

GRADUATE

As with the faculty, the reviewers observed a concerning low level of morale among the graduate students. The low stipends and lack of procedural advising were one of their top concerns. All graduate students that reviewers spoke with reported they were working more than the 20 hours they are contracted to work for their teaching assistant assignments.

5. Recommendations

OVERALL

-Departmental Strategic Plan: There is a strong need for a strategic plan with a clear consensus on where the department will be geared in the next three to five years. To address this issue, the university could consider implementing targeted recruitment strategies to attract new research faculty, providing incentives for retired faculty to continue mentoring or engaging in research activities part-time, and investing in training programs for early-career researchers to support

their professional development. We recommend that the department hire additional tenure track faculty and hire or relocate an administrative staff employee that can help ease the burden of administrative work. Furthermore, the plan must address the issue of outdated space and technology, the department should also address the maintenance of the facilities and equipment. Specific needs include a lack of hoods in the microbiology labs and a cold room that has been out of commission for too long. The department should meet to discuss their current strengths, their opportunities, and propose a long-term plan that targets these priorities.

Recommendations for departmental relations: It is essential to establish clear communication channels to improve the department culture and ensure that everyone is informed on departmental activities. It could be biweekly/monthly meetings or email. Also, the creation of a “liaison” committee that fosters communication between leadership and faculty regarding curriculum, administration, policies, and planning.

Recommendations for DEI: Like other departments in OU, the faculty could join a national initiative and regularly invite DEI themed outside speakers. Establish an endowment income to fund financial aid for low-and middle-income families. Furthermore, faculty in main campus create opportunities for faculty members to interact with students from other campuses through joint research projects, student symposiums, and other collaborative initiatives. The department could also develop guidelines to change the faculty's perspective and create a more positive and collaborative environment that benefits all students and faculty members.

UNDERGRADUATE

-Given how stretched the faculty are currently, the department might wish to consider implementing a more streamlined curriculum that eliminates unnecessary coursework and overlaps.

-Revision along these lines would leave more faculty time to foster supportive and collaborative research opportunities for students. This can involve investing in mentorship programs, research workshops, and providing more resources for students to pursue independent research.

-We strongly recommend the department summarize the results of their assessments of learning outcomes. They can draw insights regarding areas of concern or those that need improvement.

-In another recommendation, the BIOIS curriculum could be strengthened by “improved interactions and shared curricular development with the Environmental Sciences, Chemistry and HCOM,” particularly in the areas of evolution, ecology, biochemistry, and bioinformatics. As new faculty are added, we support more opportunities for faculty to coordinate more research options for undergraduates and encourage cross-program integration and collaboration.

GRADUATE

-Increase graduate stipends to a pay that is competitive with comparable schools, at least \$30,000.

-Oversight of time required of TAs – steps should be taken to ensure that graduate students do not exceed the number of hours they are contracted to work.

-Better information transfer in the form of a graduate student handbook or assigned peer mentors.

-Increase alternative career training options.

6. Commendations

OU is a beautiful campus, in a beautiful part of the world, located in a region that benefits greatly from its offerings. BIOS is a strong program comprised of dedicated, talented, and accomplished faculty and staff. All the essentials are here, but new faculty are needed who will bring their own perspectives and who will add energy to existing faculty. Existing faculty of all categories need to be made to feel valued for their commitment to education and research despite challenging times.

7. Overall judgment: Is the program viable as a whole?

Yes. The program is worth supporting as one that effectively supports RSCA, prepares undergraduates for life and careers, and trains graduate students as the next generation of biology professionals. However, if Ohio University wishes to retain its status as an R1 university, it must see the tenured and tenure-track situation in BIOS as dire. Upcoming retirements are inevitable, and there are not sufficient numbers of faculty remaining to cover teaching. Junior faculty are said to be looking elsewhere. Insufficient numbers of research faculty will mean too few graduate students to cover courses. Now is the time to act.



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Chair of Biological Sciences Response to report prepared by the 7-year review committee.

I have read the report written by the 7-year review committee and offer my responses to their evaluation of the department.

The reviewers noted two major concerns. *First*, whether the faculty given its current roster can teach the necessary courses, maintain consistently funded research programs, and have the ability to mentor undergraduate and graduate students. *Second*, how will the department address declines in enrollment in the undergraduate and graduate programs. The two concerns are intertwined, because the number of research active faculty will influence our ability to attract graduate students and continue to mentor undergraduate research.

As pointed out by the reviewers BIOS has suffered a loss of expertise either through retirements or younger faculty leaving to other institutions. In particular, the departure of two Associate Professors diminished our graduate recruitment efforts since each individual mentored between 4 – 5 graduate students through a combination of TA's and RA's. Moreover, at least four faculty members are close to retirement age or have announced their retirement and have ceased recruiting students. The number of faculty leaving the department and the lack of opportunity to replace faculty have compromised research productivity, graduate recruitment, and mentorship of undergraduates in research projects. The department is aware of the concerns raised by the reviewers. We have worked towards implementing changes to maintain the mission of the department.

Areas of Concern:

1. Department Leadership and Departmental Issues

The reviewers highlighted the concern that the accomplishments of the faculty are underappreciated by the administration. This is accompanied by the feeling that the need for new faculty lines, increases in graduate student stipends and a dedicated departmental administrator has been ignored by the higher administration.

I agree there is a lack of trust between members of the department and the CAS Dean. Much of the frustration has been building since the Dean's office appeared to be unwilling to invest in the Department (this goes as far back as Dean Robert Frank). The frustration was not eased by the imposition of a summer teaching requirement for incoming BIOS graduate students. The reviewers encouraged greater communication between the department and CAS. Since I began as interim chair, I have been impressed by the attention that Dean Sarah Poggione has shown regarding the challenges facing the department. She advocated for an additional tenure track line as a recruitment package for the Ecology/Evolution position. She has also worked with BIOS to provide competitive start up packages for the new faculty. I have worked to increase the transparency in how decisions affecting BIOS by the Dean's office were made.

Another Department issue identified by the reviewers was the urgent need to replace retiring faculty. The recruitment of younger, early career faculty provides the opportunity to shift the research focus of the department in newer, vigorous growing disciplines in Biological Sciences.

The department had been approved to search for a Physiologist and a Conservation Biologist in AY 2022-2023. The Conservation Biology search resulted in the hiring of two faculty. The physiology search is nearing completion with negotiations ongoing with the applicant.

The department also put forward a request to hire individuals with expertise in comparative biology/anatomy, functional genomics, and a microbial biology/zoonotic diseases. These positions fill gaps in the expertise of the faculty (e.g., having an anatomist teaching anatomy courses), replace retiring faculty (e.g., Soichi Tanda is a geneticist), as well as position the Department to obtain research expertise in hot areas of biology.

2. Regional Faculty

The One Ohio paradigm has presented challenges in integrating the Regional Faculty into the Athens Campus. Among them is the issue of parity in promotion across the Main and Regional Campuses. There are two key issues that require addressing are the roles of Regional Faculty in training students and the mission of BIOS, and pathways to promotion from Associate Professor to Full Professor. The chair of the P&T committee has been working on this latter topic. In particular, there is the issue of achieving consistency in criteria for promotion at all levels that balance the different cultures of the Regional Campuses and the Main Campus.

3. DEI and Outreach

BIOS faculty are acutely aware of the need to increase diversity in the department. In the past two searches we advertised the position in venues that advocate for BIPOC in science, e.g., SACNAS (See below). We have had limited success but will redouble our efforts in future searches. The reviewers noted numerous opportunities for the department to enhance diversity through outreach and targeted recruitment. The College of Arts and Sciences has an Inclusive Excellence Committee, which provides guidance in enhancing diversity and inclusion. I had a meeting with Paula Miller in late April/early May to discuss approaches for improving diversity and inclusivity within the department.

4. Facilities

We are aware of the problems of the facilities. At the moment there is a substantial amount of deferred maintenance for both LSB and Irvine. Funds from the University need to address deficiencies in safety (e.g., fume hood in the microbiology labs) and support the research mission of the faculty (e.g., ensuing problems with the Cold Room in LSB).

Responses to the reviewer's recommendations.

Overall:

1. Biological Sciences requires a Strategic Plan.

I agree with the recommendation made by the reviewers. In fact, I found the most recent revision of the strategic plan, mission statement and vision statement was 2005. Substantial changes in both the field of Biology and the membership of the faculty have occurred in the ensuing 18 years. I will form a "Strategic Planning Committee" made up of TT and IF faculty from the three sections to revise the Department's Strategic Plan and associated documents. The goal will be to provide a roadmap for the direction of growth in the department in the next 3 – 5 years. The plan will describe research priorities for new hires and strategic investments in technology and infrastructure. It is encouraging that the University is conducting a space use survey to identify space needs for enhancing research productivity.

2. Intradepartmental relations.

One issue that has plagued the department is that faculty are housed in different buildings. At one point BIOS faculty occupied three different buildings: Irvine Hall, Wilson Hall West (and the basement of Wilson West), and LSB. The reviewers recommended more communication from leadership and the faculty. One suggestion made by the reviewers was to create a Liaison Committee to facilitate communication between the Chair and the faculty. Since I became chair, I have asked the faculty what is lacking in the department with respect to communication. One consistent answer was that there is limited interactions among the faculty and limited opportunities to meet with the chair. In fact, one faculty member commented to me that they did not know the research activities of most of the other faculty. I have two solutions to this factionalized aspect of departmental culture. First, to hold a day long symposium to allow faculty the opportunity to summarize their research program to the other members of the department. Second, many other departments have more social gatherings and interactions outside of the laboratory/classroom. I propose to have weekly meetings between the Chair and various members of the faculty, either one-on-one or in small groups. The goal would be to meet over coffee in the Chair's office to discuss successes, recent barriers to productivity, or other related topics. In addition, I propose to develop a biweekly coffee hour where faculty can come together and chat with one another. I have seen this work quite well at other Biology Departments.

3. DEI

The reviewers provided suggestions to increase diversity and inclusion. I have advocated that the department participate in societies and entities that promote diversity, such as SACNAS (Society for the Advancement of Chicanos/Hispanics and Native Americans in Science). SACNAS holds an annual recruitment meeting that BIOS should attend. The idea of inviting DEI themed seminar speakers to campus is a fabulous idea and one that several faculty have already embraced. Note that many of the students in the major are first generation and come from areas of Ohio with high poverty rates. The department has scholarship funds that could be targeted toward those students.

Undergraduate

1. Streamline the curriculum

There are opportunities for streamlining the curriculum. However, the different tracks within the department are a major recruitment tool. For example, the Wildlife Biology and Conservation track provides graduates with the credentials to apply for Federal and State Wildlife Positions. The curriculum committee could conduct a review of the tracks and determine whether there are some redundant courses that could be eliminated.

2. Foster supportive and collaborative research opportunities for students

As BIOS recruits more research active faculty, we will have the ability to generate additional research opportunities for students.

3. Summarize results of assessments of learning outcomes.

I believe we are in the process of summarizing learning outcomes.

4. Improve the interactions and shared curricular development with Environmental Sciences, Chemistry, and HCOM.

I think this is one area where BIOS is doing well. Several faculty are involved with the Environmental Studies Program in the Voinovich School of Leadership and Public Service – both as part of the MSES program and the Undergraduate Certificate in Environmental Studies. We also have interactions with BIOS and PBIO faculty as part of the Seminar in Conservation Biology. One possible area of growth is the development of dual listed courses that rely on the expertise of faculty from BIOS and PBIO or CHEM. For example, Shawn Kuchta and John Schenk co-taught a course in Comparative Methods.

Graduate:

1. Increase Graduate Stipends

The faculty wholeheartedly agree that graduate stipends should be increased. In addition, the fees graduate students have to pay should be reduced. BIOS has limited control over stipend levels, but we have advocated the need to increase stipend levels to the Dean's office.

2. Vigilance regarding the time obligations of graduate students spent on TA assignments.

I believe this is an issue with graduate students having to TA the introductory biology sections. The IF coordinating the laboratories should make sure students are not exceeding the expected hours devoted to TA activities.

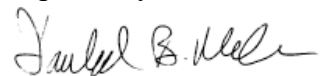
3. Handbook for outlining the major steps for progress towards the degree.

BIOS has published the bylaws of the graduate program. All incoming graduate students are required to read and acknowledge they have read the bylaws. However, what is lacking in the bylaws is a clear timeline that identifies the key forms that need to be completed and the important dates for completing core requirements for either the MSc or PhD. I will have the Graduate Chair implement this addition to the bylaws.

4. Increase alternative career training options.

BIOS faculty acknowledge that recent graduates of the program (either MSc or PhD) often select a career path outside of Academia. Given the increasing number of students opting out of academia, BIOS has an opportunity for faculty to develop a seminar course designed to identify alternative careers for graduate students and preparation for those careers.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Donald B. Miles". The signature is written in a cursive style with a large initial 'D' and 'M'.

Donald B. Miles
Professor,
Chair, Biological Sciences
Ohio University
Athens, Ohio 45701
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College of Arts and Sciences
Office of the Dean
Wilson Hall, College Green
Athens OH 45701-2979

June 29, 2023

Dear Members of the UCC Program Review Committee,

This is my response to the 2023 report submitted by the Program Review Committee for the programs associated with the Biological Sciences Department. The review notes the engagement of the faculty, the solid foundation that they provide for undergraduate and graduate students. The review committee's report also notes a few key areas of concern and some associated recommendations related to faculty staffing as well a graduate program support.

Faculty Staffing

As the department chair, Dr. Don Miles, noted in his response to the review, I have worked with him to develop a biological sciences hiring plan for this year and next year. We were able to hire three tenure-track positions this academic year, and we are in the process of reviewing tenure-track position request for the next academic year. Using a data-informed approach, the college is working to project anticipated retirements of tenure-track faculty to ensure continuing graduate student success as well as the continuation of the significant research being carried out by the department's faculty and students. We understand the need to anticipate and hire in advance of expected retirements.

Graduate Programs

We have worked with the department to use increases in their graduate stipend budget to increase stipends for teaching assistants in their PhD program. We expect to continue to work with the department to allocate. We support the department's commitments to improve graduate students mentoring and advising about the path to degree as well as career options in t the field.

Other Areas for Improvement

The review report and the response of the biological department chair also note a number of other issues and areas for improvement. The college is appreciative of the Dr. Miles' efforts as department chair to improve communications within the department and between the department and other units. The college is also committed to these efforts to promote greater awareness of college level processes and decisions. With regard to administrative support and facilities the college is working on plans with units across campus to address these issues.

I want to thank the review committee for their thoughtful report and to the department faculty and leadership and its leadership for its thorough conscientiousness self-study and commitment to the program review process.

A handwritten signature in black ink that reads "Sarah Poggione". The signature is written in a cursive style with a small dash above the letter 'i' in "Poggione".

Sarah Poggione
Interim Dean
College of Arts & Sciences
Ohio University



The Graduate Council Program Review committee reviewed of a UCC review of the Biological Sciences area.

The Biological Sciences offerings are deemed viable from the review report provided.

- It is clear that this area is facing faculty and graduate student resource challenges.
- The area is receiving additional resources and possibly streamlining offerings, so additional analysis would be helpful in the near term to see if these challenges persist.

Please do not hesitate to contact me if you have any questions about this review.

Sincerely,

A handwritten signature in black ink, appearing to read "Gabe Giordano".

Dr. Gabe Giordano
Chair, Review Committee - University Graduate Council