Radford University | Artis College of Science and Technology

To: Faculty, Staff, and Students in the Artis College of Science and Technology

From: Steven M. Bachrach, Dean

Date: March 22, 2024

Subject: Annual Dean's report (March 25, 2023 – March 22, 2024)

Please find here my report for the 2023-2024 academic year. It is an honor to serve as Dean of the Artis College of Science and Technology.

My report highlights areas that I have worked on over the past year. I want to emphasize that all of these efforts require the workings of a fine team. I want to thank the Department Chairs/Directors and the members of the Dean's staff for their hard work and their openness to consider new ideas. I am also very grateful to the dedicated faculty and staff of the Artis College who provide a nurturing learning environment to our Radford students.

1. College Initiatives

a. T&P expectations

In Spring 2023, the faculty of the Artis College of Science and Technology adopted a two-tier tenure and promotion expectation document. The first part establishes a baseline of expectations in teaching, scholarship, and service at the college level. The second part establishes the expectation at the department level. Over the summer the Department of Biology completed their T&P document that was then approved by the Leadership Team and the Dean. The other departments are working on their departmental documents for submission by the end of the spring 2024 semester.

In Fall 2023, the College Leadership team and I developed the College-level expectation document for promotion to professor. This document was discussed at the College faculty meeting in November and then approved by a vote of the faculty. Each department is developing their individual departmental expectations for submittal to the Leadership Team this semester.

b. Two-option plan

In response to the College faculty's collective commitment to undergraduate research as being a core component to our educational experience, the Leadership team and I worked on a proposal to identify ways to properly account for faculty time invested in research mentorship. The key element in this discussion was my contribution to consider research mentorship as a form of teaching, in fact, perhaps the best teaching that our faculty deliver to our students.

The Leadership Team and I developed the two-option proposal that allows tenured faculty to select into the (a) Teaching Option or the (b) Research Mentoring Option (RMO). The Teaching Option continues the status quo, i.e., faculty engage in twelve contact hours per semester in lecture and/or laboratory instruction. The Research Mentoring Option reduces the lecture/laboratory load to nine contact hours per semester with the other three-hour load associated with instructing students in the art and practice of original research, developing research skills, and engaging in the dissemination of science. Here research is defined both as project-based learning within a class or lab or in the more traditional mentorship within a faculty member's research laboratory. The RMO is for a three-year term. Reappointment is possible if the faculty member has met a series of objectives that include the number of students engaged in research and the number of publications and presentations made by students. Further reappointment adds an expectation for seeking external grant funding.

This proposal was extensively discussed by the Leadership Team. Each chair then brought the proposal to their respective department for discussion and suggestions. A penultimate draft was then brought to a full college faculty meeting in November for open discussion. A final draft was then voted on by the faculty and approved.

Some faculty will begin their term on the Research Teaching Option in fall 2024. Implementation is on a department-by-department basis, with some departments having difficulties in finding a way to reduce the number of courses and sections taught to allow for the alternative workload assignment. Curriculum revisions are under way in each department per the request of the provost with an eye towards being more efficient for our students to complete their degrees, and to find ways to increase undergraduate research opportunities.

c. Relocation of IS

The Information Systems (IS) faculty and its degree program was successfully transferred to the Davis College of Business and Economics.

d. RUC – biology and biomedical science programs

Following the recommendation of the faculty within the Department of Biology we paused accepting new students in biology and biomedical sciences at the Radford University-Carilion (RUC) site starting fall 2023. I worked with the Department of Biology, admissions,

and student affairs to properly message this change and to ensure that all continuing students would be able to complete their degrees in Roanoke.

The Department of Biology worked with colleagues at Virginia Western Community College (VWCC) to create an articulation agreement whereby students that complete the AA degree at VWCC can seamlessly transfer to RU to complete their BS in biology. The Department of Biology is continuing conversations with VWCC colleagues to provide an alternate pathway to a BS in MLS with the junior year at main campus and the senior year at RUC.

The Department and I are pursuing a request from President Danilowicz to explore a biotechnology degree program to be delivered in Roanoke. We are currently engaged in conversations with partners at VWCC and biotechnology start-ups to discuss the needed skills and content required/desired of new biotech employees that can inform our curriculum development. We had a useful meeting and tour of the Fralin Biomedical research Institute to understand the possible collaborations that might be developed with this group.

e. <u>S-STEM grant with Virginia Tech</u>

I was approached by Dr. Bevlee Watford, Associate Dean, College of Engineering at Virginia Tech to partner on an NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) grant. This grant will provide about ten scholarships for science students in their senior year at Radford University to then pursue their master's degree in engineering at Virginia Tech. I worked with Tom Cruise in Sponsored Projects, Allison Pratt in Financial Aid, and Damian Allen in Institutional Research to provide all of the necessary supporting documents and data from Radford University. This grant was submitted in February 2024.

f. <u>Department reorganization</u>

With recent and anticipated retirements of faculty in the Department of Geology, and with considerable curricular synergies among the Department of Geospatial Science and the Department of Geology, the faculty of these two departments had engaged in merger discussions for a few years. With an eye towards developing administrative efficiencies, I engaged the faculty of four departments (anthropology, physics, geology, and geospatial science) in discussions on possible mergers. We determined that the most effective merger would come about with the joining of geology and geospatial sciences. I led many meetings of the involved faculty – collectively, by department, and individually – to ensure that all voices were heard, and all issues addressed. We developed a new department name (Department of Geospatial and Earth Sciences) and Drs. Andrew Foy and Cristine Small led the drafting of the appropriate documents for approval by the College Leadership team, the College Faculty, and Faculty Senate. All documents have been submitted to SCHEV and the Board of Visitors for their approvals.

I initiated a search for a chair of the new department. The faculty recommended two candidates who I interviewed. I forwarded my recommendation to the provost and president. They interviewed this candidate, and I am happy to announce that Dr. Stockton

Maxwell will serve as the chair of the Department of Geospatial and Earth Sciences starting in the fall. I wish to thank Dr. Jon Tso for his long service as chair of geology and Dr. Charles Manyara for his long service as chair of geospatial science.

g. Artis Residential Community and RISE

Associate Dean Christine Small took on the responsibility for coordinating the Artis College's efforts with the Artis Residential Community (ARC) and our participation in the RISE initiative as part of the QEP. Full details of these activities can be found in Dr. Small's annual report (circulated separately). Dr. Small established a steering committee and hired a graduate student assistant for these activities. The following are a representative sample of the events held associated with the ARC and/or Rise; Dr. Small played some role in all of these events, though not necessarily the lead role:

- 37 students living in Peery Hall as part of the ARC
- Weekly "Food for Thought" program in the atrium
- Science Expo attended by over 400 students, with over 230 students turning in bingo cards representing their interactions with the activities provided by faculty and majors
- A number of themed planetarium shows for the ARC and RISE students
- Re-establishing the Peery hall Makerspace in collaboration with Dr. Jobriath Kauffman
- Gingerbread house decorating attended by 30 students
- Artis College Student Hours – collective offering of office hours by Artis faculty, including at the weekly "Food for Thought" programs
- Upcoming events: Chuck Wagon Wednesday, Solar Eclipse activities and Earth Week celebration

h. Teaching evaluation

As part of the college-wide discussion of tenure and promotion expectations, the Leadership Team and I identified an opportunity to develop more robust standards and methods for evaluating teaching. We wish to develop tools that go beyond student evaluations for effectively assessing the quality of teaching within the Artis College. I appointed Dr. Brett Taylor as chair of an ad hoc committee to make proposals for improving our teaching evaluation process. Dr. Taylor and I invited faculty from every department to participate in this committee. The committee intends to report out their first proposal by the end of the spring semester 2024.

i. Budget

The Leadership Team spent a considerable amount of time working through the provost's request to identify cost savings. Each chair identified items in their budget, and collectively we discussed values and objectives. I then considered all of their recommendations and created a prioritized list for the College.

This same process was used for identifying position priorities and to create the College's ETF requests.

j. MLS reaccreditation

Program Director Laura Link worked with the MLS faculty on the reaccreditation of the degree program. The site visit was an overwhelming success and the program was reaccredited for another 5 year term.

k. Math & Stats Help Center

As part of the differential workload program, Drs. Kaufman and Dave established the Math/Stats Help Center in Fall 2023. This is a drop-in help center staffed by faculty and math majors, providing assistance for all math and statistics courses, but especially for the 100-level classes. More than 230 students came to the Help Center in the fall. The faculty team is looking to increase activity through stronger promotion of the center and by hiring more teaching assistants.

2. High school outreach

a. BLAST (Virginia Space Grant Consortium) and Summer Bridge

We hosted our first BLAST program, a three-day camp for rising 9th and 10th graders interested in the STEM areas, through a grant from the Virginia Space Grant Consortium. David Horton organized the camp and worked with faculty in four departments in creating the educational programming. The camp was a tremendous success with especially gratifying comments received from the teacher-chaperones and from the leadership of the Virginia Space Grant Consortium. We will host a second program in summer 2025.

A rewarding outcome of the BLAST program was the peer-reviewed publication from Dr. George Harakas based on the programming he developed (Logan Dovidio and George N. Harakas**,** *Journal of Chemical Education*, **2024**, DOI: 10.1021/acs.jchemed.3c01341)

The Artis College hosted 20 rising senior high school women for the annual Summer Bridge program in July 2023. This week-long summer camp was organized by David Horton with many faculty developing projects for the students. This program continues to be supported in large part from generous grants from American Electric and Power.

b. Challenger Center

I was contacted in fall 2023 by Jason Getz, Community Relations Director for the Challenger Center. The Challenger Center memorializes the astronauts in the Challenger disaster by developing simulation centers that are educational resources for middle school through high school students. Jason was interested in the possibility of creating a center at Radford University. Working with Rob Hoover (Finance), Angela Joyner (outreach), and Penny White (development), David Horton and I met with Jason and explored the possibilities for locating and funding such a Center. We are considering a visit to a Challenger Center in Kentucky as the next step of the investigatory process.

3. **Philanthropy**

I welcomed Jon Zeitz to the Artis College team as our liaison from development. We have been setting goals and meeting people, along with building out our newly reorganized Dean's Advisory Council. We worked together on the online fundraiser for the Artis College Research Opportunity – a fund to support student participation in research, especially to engage in summer research.

Our major fundraising activity will be a reception on April 18, 2024 at Long Way Brewing to celebrate the Student Engagement Forum. I secured sponsorship of the event enabling all donations from attendees to support the Artis College Research Opportunity fund.

4. **Evaluation of Faculty and Staff**

Over the year, I wrote the following evaluations or reviews:

72 Faculty annual evaluations
23 reappointment reviews
4 tenure and/or promotion recommendations
8 chair/director reviews
1 emeriti recommendation
3 recommendations for Faculty Professional Development Leave
3 staff annual reviews

5. **Hiring**

Following an internal search process, I appointed Dr. Christine Small as the Associate Dean of the Artis College. She began her appointment in July 2023. I thank Dr. Jake Fox for his excellent service in that role for the prior two years.

Following an internal search process, I appointed Dr. Hwajung Lee as director of the School of Computing and Information Sciences. She began this role in July 2023. I thank Dr. Art Carter for his many years of service as Director.

Following an internal search process, I appointed Dr. Jamie Lau as Chair of the Department of Biology. She began this role in July 2023. I thank Dr. Christine Small for serving as Interim Chair this past year.

An important role I served this past year was as mentor for these three leaders in their respective new roles.

The Artis College conducted a search for an assistant professor in geology this spring. I interviewed all candidates for these positions.

6. Committee Service

As Dean, I have represented the College on the following leadership committees:

- President's Leadership Council
- Academic Affairs Leadership Team
- Dean's Council
- Project Committee, sub-committee of the Roanoke Campus Planning Committee
- Search Committee, Dean of Nursing (Chair)
- Capital Campaign Steering Committee
- Academic Program Review and Enhancement Committee
- University Planning and Budget Advisory Committee
- RUC Operations Committee

The Artis College Leadership, comprised of the Dean, Associate Dean, department chairs and directors, and program directors, meets every other week. I have a standing meeting with each chair/director once a month.

I participated in the interviews of candidates for registrar, assistant provost, and associate provost.

7. College Representation

I represented the College at the following events over the past year.

Capital Campaign meeting (Apr 13, 2023)
Employee Service Awards (Apr 26, 2023)
Ceremonial Signing Biology/VWCC articulation agreement (May 1, 2023)
Graduation (May 5-6, 2023)
Board of Visitors reception (June 8, 2023)
New faculty Reception (Aug 15, 2023)
Convocation (Aug 18, 2023)
Enrollment Management Forum (Aug 14, Aug 25, Aug 31, 2023)
Science Expo (Sep 8, 2023)
Programs of Distinction Forum (Oct 6, 2023)
MLS accreditation visit (Oct 26, 2023)
Open House (Oct 28, 2023)
Truist Global Capitalism Lecture (Nov 2, 2023)
Day of Gratitude (Nov 3, 2023)
School counselors and community college advisors luncheon (Nov 9, 2023)
Open House (Nov 11, 2023)
Graduation (Dec 8-9, 2022)
Meeting with Carilion Leadership (Jan25, 2024)
Radio Free Radford Interview (Feb 15, 2024)
Wicked Society Leadership breakfast Feb 26, 2024)

32nd Annual Blue Ridge Highlands Regional Science Fair (Mar 2, 2024)
Biotech exploratory meeting (Mar 15, 2024)

8. Scholarship

I completed one major scholarly project this year:

"The Topology of Molecules with Twelve Fused Phenyl Rings ([12]Circulenes): Rings, Infinitenes, and Möbius Infinitenes," Steven M. Bachrach, *Journal of Organic Chemistry*, **2023**, *88*, 7962-7976.

Work in progress

I have completed about a dozen chapters for my next book that features different chemical compounds as a jumping off point for discussing the art of chemistry for a lay audience.