

# 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, Artis College of Science and Technology  
Date: March 24, 2023  
Subject: Annual Dean's report (August 1, 2022 – March 24, 2023)

Please find here my report for the 2022-2023 academic year. It is an honor to serve as Dean of the Artis College of Science and Technology. As I arrived on August 1, 2022, this report will only cover the period since that date. I wish to thank my predecessors, Interim Dean Art Carter and Dean and Interim Provost Orion Rogers, for handing off to me a college in excellent shape!

My report begins with a brief discussion of how I managed the transitional period, and continues with the major initiatives undertaken, including outreach to high school students and philanthropy. 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 Deans 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. I also thank my dean colleagues for welcoming me into the club and providing much support and encouragement.

## **1. Transition**

### **a. Faculty and staff meetings**

Shortly after I arrived in August 2022, I invited all full-time tenured, tenure-track, special purpose (SP) and administrative and professional (AP) faculty to meet with me individually for 30 to 60 minutes. Almost all faculty took up this offer and over the course of the fall (with a few meetings in the spring) I was able to meet each faculty member and learn their interests and challenges. Additionally, I met with all staff members and with the administrative assistants/secretaries. I also visited RU Carilion twice in the fall for the same purpose. I came away with a strong sense of the faculty's commitment to teaching and their students and the robust undergraduate research environment that has flourished across the College. Hopefully, each of them learned about my interests and background as well.

### **b. ACSAT Leadership Team**

I reduced the size of the Leadership team to just department chairs/directors, associate dean, and the two office staff. We meet every other week, with an agenda that is focused on two areas: 1)

communication of information from Academic and University leadership for chairs to inform their departments and 2) strategic discussions that include all items listed in Section 3.

I meet with each department chair/director once a month for a regularly scheduled meeting, and as needed. I have also met with the faculty of the Departments of Biology, Chemistry, Geology, and Geospatial Science on their invitation.

## **2. College Initiatives**

### **a. Differential load**

Following on President Danilowicz's decision to explore differential load (workload reassignments), the Leadership Team and I developed a process for ACSAT faculty to apply for a workload reassignment for the 2023-2024 year. Applications were submitted in early December to the chairs. Chair recommendation came to me, and then to the Provost. A total of eight reassignments allowing faculty to create programs designed to address recruitment, retention, or student outcomes were approved.

### **b. Environmental/Sustainability Programs**

In collaboration with Dean Smith, we brought together faculty from across the university to explore creating Environmental/Sustainability degree programs. Ongoing monthly meetings have identified some curricular options, and work will continue through the spring.

### **c. T&P expectations**

Departmental guidance regarding tenure and promotion expectations had not been reevaluated for many years, upwards of multiple decades for some departments. I initiated a conversation with the Leadership Team to have all departments update their guidance. The Leadership Team agreed that T&P expectations should be in two parts: Part A defines college-wide expectations with Part B elaborating on these expectations with a disciplinary perspective. Based on our conversations, I wrote the initial draft of Part A, which was then thoroughly debated by the Team. That final document was shared with all of the faculty in the College. A special College Meeting will be held in April 2023 to discuss Part A and then vote on its adoption. Each department has begun working on its specific Part B expectations document.

### **d. Relocation of IT**

The three full-time faculty members of the Information Technology program petitioned Dean Bhadury and I to relocate the program into the Davis College. They suggested that returning the program to the Business School, the typical location of IT programs at most universities, might reverse the 20 year trend of diminishing enrollment. Dean Bhadury and I worked together to ensure a smooth transition, consulting with our Leadership Teams and the impacted departments. With the provost's approval early in the Spring Semester, we are now finalizing the arrangements so that IT will join COBE for Fall 2023.

### **e. RUC – biology and biomedical science programs**

The Department of Biology presented me with a recommendation to end the Biology and Biomedical Science degree programs delivered at RU Carilion. Their recommendation was based on relatively low enrollments, small laboratory rooms that limit class size (making them much costlier than delivery of these courses on main campus), limited instrumentation in the classrooms and

laboratories, substantially fewer research-grade instruments than on main campus, and significant departure of full-time faculty making it very difficult to schedule courses, even with online options. My assessment of the situation at RUC, based on first-hand observation and numerous conversations with faculty and staff at both sites, was in agreement with the Department's recommendation. I presented this recommendation to the Provost, who agreed. We are accepting no new students into these programs for Fall 2023. Conversations concerning permanent closure of the programs are ongoing, as are explorations of expanding the size of the cohorts into the Medical Laboratory Science program at RUC.

f. Virginia Tech partnerships

With Dr. Francis Webster (chemistry), we initiated a conversation with the head of the Food Science program at Virginia Tech about a 3+2 program. Conversations with VT College of Science Dean Kevin Pitts, though quite cordial, identified no significant opportunities for partnering. Recent conversation that Dean Matt Smith and I had with graduate admissions officers at Virginia Tech provided an alternative pathway for partnership, and those will be further explored.

g. Underprepared and undermotivated students

The lingering educational impacts of the Covid-19 pandemic are evident in underperformance by students across the College. The Leadership Team has had some preliminary discussions about how to address the underprepared and undermotivated student. We have created a Microsoft Teams site populated with relevant articles. We hope to create a series of workshops and best practices over the coming year to provide tools for our faculty to address our students in need of assistance.

h. Bird Strikes

Dr. Karen Powers has identified the large glass wall in the Reed-Curie Atrium as a danger for our local bird populations. With her, we worked with facilities, especially Jorge Coartney, to install preventative film that will identify the physical glass wall as a danger to birds. The film will be installed in April 2023.

i. Artis Residential Community

Dr. Jake Fox and David Horton were leading the academic component of what was hoped to be the Artis Living Learning Community for Fall 2022. However, failures within a variety of units across campus led to no identifiable cohort in the assigned residential hall. Conversations about this situation led to development of a compact between Academic Affairs, Student Affairs and Residential Life along with Dean's office in ACSAT to create the Artis Residential Community (ARC) for Fall 2023. Dr. Fox is the Academic Program Lead for establishing this living-learning community. We hope that the ARC will help improve retention and build a sense of community amongst our incoming fall class.

ii. Budget

The Leadership Team spent a considerable amount of time working through the President'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.

### **3. High school outreach**

#### **a. Southwest Virginia Governor's School**

The Southwest Virginia Governor's School (SWVGS), a high school junior and senior year program for accelerated students in science and math, is losing the lease on their current facility in Pulaski at the end of the 2022-2023 academic year. The School's leaders approached Radford University to inquire if we might be able to host SWVGS within the ACSAT facility. Working with Provost denBoer and Vice President Jennelle, we visited their location and assessed their needs. I worked with the ACSAT Leadership Team to determine how we could accommodate their needs. David Horton and I hosted three separate visits of various representatives from CWVGS of our facilities. We made an exceptionally strong case for why Radford University would be an excellent home for the school. Unfortunately, the SWVGS Board decided to locate at New River Community College primarily for geographic reasons.

#### **b. BLAST (Virginia Space Grant Consortium)**

The Virginia Space Grant Consortium approached me to inquire about the possibility of Radford University hosting a summer BLAST program, a three-day camp for rising 9<sup>th</sup> and 10<sup>th</sup> graders interested in the STEM areas. I brought together faculty who have previously been involved in high school outreach activities to put together a proposal. David Horton took on the organizational lead. Our proposal was accepted in January, with a grant of \$45,000, and we will host our program in July 2023. The other institutions hosting a BLAST camp are UVa, ODU, VT, and William and Mary.

### **4. Philanthropy**

Vanessa Connor, the liaison from Advancement to the Artis College of Science and Technology, has brought me up to speed regarding philanthropic efforts within the College and University. She has introduced me to a number of donors and potential supporters of the College. We worked on two major initiatives.

#### **a. Revamped Dean's Advisory Council**

We developed a new purview for the Dean's Advisory Council. The Council will take on a more participatory role in guiding the initiatives of the College, more actively engaged in outreach to companies and government agencies, and take a stronger role in philanthropy. This includes an annual philanthropic contribution. The new agreement has been shared with past Board members to very positive review. It will be formally presented at the Spring meeting and go into effect for the 2023-2024 year.

#### **b. Artis College fundraising targets**

Based on my conversations with faculty (discussed in the Transition section) and conversations with Advisory Board members, Vanessa and I established two new funds that will be a focus for the College's fundraising efforts. These funds focus on supporting students research activities with the express intent of reducing barriers for student wishing to engage in summer research or field experiences. The Artis College Research Opportunity will be our focus for crowdfunding this spring.

- i. Artis College Adventures – a fund to support student participation in our major travel programs, include RARE Amazon, RARE Appalachia, the Artic Research program, and the Patagonia Research Program. Our goal is to provide financial resources so that all students interested and qualified to participate in these transformative experiences can do so, that money will not be the prohibiting factor.
- ii. Artis College Research Opportunity – a fund to support student participation in research, especially to engage in summer research

## 5. Evaluation of Faculty and Staff

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

- 82 Faculty annual evaluations
- 33 reappointment reviews
- 11 tenure and/or promotion recommendations
- 8 chair/director reviews
- 4 emeriti recommendations
- 2 recommendations for Faculty Professional Development Leave
- 3 staff annual reviews

## 6. Hiring

The Artis College conducted a search and hired two special purpose faculty right after I arrived in August. We conducted two searches for assistant professors in biology this spring. I interviewed all candidates for these positions.

The Interim Chair of Biology and the Director of the School of Computing and Information Science will end their terms this year. I conducted searches for both positions and have made my recommendations to the provost.

We have just begun the search (internal candidates) to appoint a permanent Associate Dean of the College. We will have this search completed before the end of the semester.

## 7. Committee Service

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

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|--------------------------------|---|
| President’s Leadership Council | Capital Campaign Steering Committee               |
| AALT                           | Academic Program Review and Enhancement Committee |
| Dean’s Council                 |   |

## 8. Hosting events at Reed/Curie/Center for the Sciences

The Artis College of Science and Technology hosted a number of events. David Horton and I coordinated the use of our facilities and arranged for appropriate faculty, staff, and student participation. These events included

- SCHEV visit (March 20, 2023)

The Artis Experience as part of Partners in Excellence celebration (Nov 11, 2023)  
Weekly Planetarium shows for more than 700 members of the local and regional community  
20 “Days of Science” for K-12 students from across the region (Planetarium, Museum, Greenhouse)

## 9. Events and College Representation

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

REALISE Update Meeting(Aug 15, 2022)  
Tartan Tour (Sep 7, 2022)  
President Inauguration (Sep 30, 2022)  
Fall 2022 Professional Development session: Appreciative Teaching and Advising with Dr. Jenny Bloom (Oct 7, 2022)  
Open House (Oct 22, 2022)  
Enrollment Summit (Nov 4, 2022)  
School counselors and community college advisors luncheon (Nov 10, 2022)  
Partners in Excellence (Nov 11, 2022)  
Open House (Nov 12, 2023)  
Graduation (Dec 10, 2022)  
Dominating White Ways: Exploring the Commonplace Nature of White Supremacy and its Power to Co-opt Us (Jan 13, 2023)  
HSC Student Success Event: Dr. Laurie Schreiner (Feb 1, 2023)  
Truist Global Capitalism Lecture (Feb 16, 2023)  
32<sup>nd</sup> Annual Blue Ridge Highlands Regional Science Fair (March 4)

## 10. Scholarship

I completed two major scholarly projects this year.

“Thinking Like a Physical Organic Chemist,” Steven M. Bachrach, Oxford University Press, published April 2023.

While the manuscript was completed in November 2021, since coming to Radford University I edited the galleys, created the index, and designed the cover art in conjunction with a graphic designer.

“The Topology of Molecules with Twelve Fused Phenyl Rings ([12]Circulenes): Rings, Infinitenes, and Möbius Infinitenes,” Steven M. Bachrach, *Journal of Organic Chemistry*, revised version to be submitted by March 30, 2023.

I completed all of the computations for this study prior to coming to Radford. I wrote the entire manuscript and revised it while at Radford University. My byline on this paper is Radford University.

### Work in progress

I am beginning to write another peer-reviewed manuscript based on research done prior to arriving at Radford University, tentatively titled “Cyclometaphenylenes: Searching for a Möbius Structure”. I am also at the early stage of writing another book, this one using different compounds as a jumping off point for discussing the art of chemistry for a lay audience.